
MONOGRAPHS

OF THE

WORLD

WAR

INFANTRY

SCHOOL

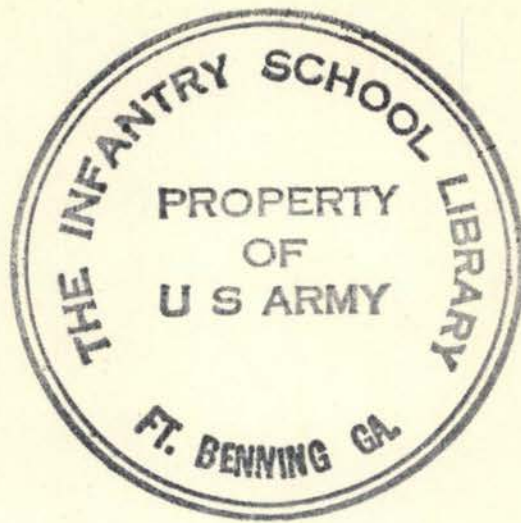
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**Monographs
of
The World War.**

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FOREWORD

THE IDEA FOR THIS BOOK CAME TO CERTAIN OFFICERS AFTER HEARING SEVERAL VERY EXCELLENT MONOGRAPHS WHICH WERE DELIVERED DURING THE MONTH OF NOVEMBER. THAT THE INFORMATION CONTAINED IN THEM MIGHT BE OF INTEREST TO ALL, WAS THE IDEA THAT ORIGINATED THIS BOOK.

A COMMITTEE WAS APPOINTED TO UNDERTAKE THE PUBLICATION OF SUCH A VOLUME. DUE TO THE LIMIT OF PRICE, MORE OR LESS IMPOSED ON THE COMMITTEE, THE COMMITTEE WAS RESTRICTED TO A PUBLICATION OF SOME SEVENTY-FIVE MONOGRAPHS. THERE WERE IN ALL, THREE HUNDRED AND FIFTY MONOGRAPHS ON SOME ONE HUNDRED AND TWENTY-THREE SUBJECTS. FROM THESE THE COMMITTEE SELECTED THOSE THAT IT WAS THOUGHT WOULD BE OF THE MOST INTEREST TO THE MAJORITY. WITH THIS IN MIND IT WAS DECIDED TO SELECT THOSE SUBJECTS ON THE WORLD WAR AND CERTAIN OTHERS THAT WERE OF GENERAL INTEREST TO-DAY AND THESE ARE CONTAINED HEREIN. IN ORDER TO AVOID DUPLICATION OF MATERIAL CERTAIN ORIENTING FEATURES OF INDIVIDUAL MONOGRAPHS HAVE BEEN OMITTED. THE COMMITTEE REGRETS THAT IT WAS UNABLE TO PUBLISH ALL OF THE MONOGRAPHS DELIVERED, BUT SUCH A BOOK WAS OUT OF THE QUESTION.

IN READING THIS BOOK IT MUST BE UNDERSTOOD AT THE BEGINNING THAT IT IS IN NO WAY AN OFFICIAL PUBLICATION. IT IS ON THE OTHER HAND A COMPILATION OF INDIVIDUAL MONOGRAPHS AND FOR THE STATEMENTS MADE AND THE OPINIONS EXPRESSED HEREIN, THE OFFICERS WHO WROTE THE MONOGRAPHS ARE ALONE RESPONSIBLE.

IN GETTING OUT THIS WORK THE COMMITTEE HAS RECEIVED VALUABLE HELP FROM SEVERAL SOURCES AND PERSONS. TO THESE PERSONS IT WISHES TO EXTEND ITS MOST HEARTY THANKS AND ESPECIALLY DOES IT WISH TO THANK MAJOR GANOE AND HIS ASSOCIATES FOR THEIR MANY HELPFUL SUGGESTIONS AND THEIR HEARTY CO-OPERATION AT ALL TIMES. TO THE PUBLISHERS, THE COLUMBUS OFFICE SUPPLY COMPANY, THE COMMITTEE DESIRES TO EXPRESS THEIR APPRECIATION OF THEIR CO-OPERATION AND EARNEST DESIRE TO MAKE THE BOOK A SUCCESS.

THE COMMITTEE.

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PART I

Strength, Organization Plans and Mobilization of the various Countries at the Outbreak of the War.

THE MILITARY STRENGTH AND ORGANIZATION OF FRANCE, GREAT BRITAIN AND BELGIUM AT THE OUTBREAK OF THE WORLD WAR.

—By—

MAJOR D. T. GREENE, INF.

FRANCE.

Soon after the defeat of France in the war of 1870 the new Republic passed a compulsory service law which has been changed from time to time by other legislative acts, but which in its essentials has remained the same throughout the years, the principal changes being made in the length of service required by the citizen in the different parts of the army. The last such act to be passed before the outbreak of the war was that of August 7, 1913. Under the terms of this act all of the male citizens of the country were held liable for service in the army upon reaching the age of twenty, classes were called on the 1st of October each year the length of service was 28 years. This period of 28 years was divided up as follows:

Service in the active army—3 years.

Service in the Regular army reserve—11 years, with, during this period two periods of training one of 23 days and one of 17 days.

Service in the territorial army—7 years, with 9 days training.

Service in the territorial army reserve—7 years with one days training usually devoted to a review.

To officer the forces thus obtained several systems were employed. The officers for the Active Army were obtained from one or the other of five sources. 1st. L'Ecole Polytechnic, (officers of the artillery and engineers). L'Ecole Speciale Militaire at St. Cyr. (officers for the Infantry and Cavalry). 2nd From Sous-officers who have been sent to special schools for training. 3rd. From 1st. Sergeants of more than 10 years service. 4th. From graduates from certain Civil schools and 5th. From the sous-leutenants of the Reserves.

The officers for the Reserves and Territorials were obtained from one or the other of four sources. 1st From officers of the active Army who had retired or resigned. 2nd From former students of L'Ecole Polytechnic and certain other schools. 3rd. From Sous-officers of the reserve and 4th from enlisted men of the active army who had been sent to special schools for training.

Under the terms of the law promotion was fixed as follows: Second lieutenants were promoted first lieutenants after two years service; Lieutenants to Captains as vacancies occurred, partly by seniority and partly by selection; Captains and Chef de Battalions were to be promoted as vacancies occurred, about one-half seniority and one-half by selection; all higher officers were promoted by selection.

The command of the Army was vested in the President as the Commander in Chief. The actual command of the Army was delegated by him to the Minister of War, who was assisted by a military cabinet, a civil cabinet and a special staff. There was also provided a Superior Council of the National Defence; A superior Council of War and the General Staff of the Army.

It was the duty of the Superior Council of the National Defence to examine all questions pertaining thereto that required co-operation between the different departments of the government. While the Superior Council of War was charged with all questions relating to the actual preparation for War.

In August the population of France was approximately 40,000,000. Of this number approximately 5,500,000 had military training.

In times of peace France was divided into Corps regions. Within these regions all the elements of the Corps were serving and all of the stores necessary for the equipment of the reservists were stored. Reservists were assigned to the elements of the Corps serving in the area in which they resided and the plan of mobilization was to have all of the reserve units and territorial units within the area mobilized before any movement of concentration took place. In this way the responsibility for the mobilization rested with the corpe commander. Upon receipt of the order for mobilization the commanders of the active regiments were responsible for the

bringing of the active regiments up to war strength and also with the formation of the reserve and territorial units corresponding to his active regiment. He was responsible for and had in storage the entire equipment necessary to equip the three units for which he was responsible.

The mobilization plans called for the formation of 93 divisions divided as follows: 46 active divisions; 25 reserve divisions; 12 territorial divisions and 10 cavalry divisions. In 1914 the reserve of the active army was composed of the classes from 1899 to 1910 both inclusive and excluding those men that were granted special delays, numbered about 2,000,000 men. Of this number it would require some 800,000 to bring the active units up to war strength. The territorials consisted of 14 classes, those from 1886 to 1899 and numbered some 2,000,000 men.

On August 1, 1914 the Metropolitan Army consisted of 21 Army corps, including one in Algiers, and 10 divisions of Cavalry, with a total strength of 884,000 men, of which some 817,000 were white and the other 67,000 were North African and other colonial natives. These 21 Corps were grouped into five field armies, and certain reserve divisions. The 1st Field Army was commanded by Gen. DuBail, with headquarters at Epinal, occupied that part of France between Belfort and the Mirecourt-Luneville Line, and consisted of the following Army Corps, and other troops:

- 7th Corps with headquarters at Besancon.
- 8th Corps with headquarters at Bourges.
- 13th Corps with headquarters at Clumont-Ferrand.
- 14th Corps with headquarters at Lyons.
- 21st Corps with headquarters at Epinal.
- 6th Cavalry Division.
- 8th Cavalry Division.

and Five Regiments of Heavy Artillery.

The Second Field Army, Commanded by a Gen. de Castelnau, occupied the sector from the Mirecourt-Luneville Line to the Moselle, and was composed of the following Army corps and other troops. Its headquarters was at Neufchateau.

- 9th Corps with headquarters at Tours.
- 15th Corps with headquarters at Marseilles.
- 16th Corps with headquarters at Montpellier.
- 18th Corps with headquarters at Bordeaux.
- 20th Corps with headquarters at Nancy.
- 2nd Cavalry division.
- 10th Cavalry division.
- One regiment of Heavy Artillery.

and the reserve division of the second group (the 59th, 65th and 70th).

The Third Field Army, commanded by Gen. Ruffey, with headquarters at Verdun, occupied the section from the Moselle to the line Verdun-Audun-le-Roman, and consisted of the following corps and other troops:

- The 4th Corps with headquarters at Le Mans.
- The 5th Corps with headquarters at Orleans.
- The 6th Corps with headquarters at Chalons.
- The 7th Cavalry division.

A complement of heavy artillery and the Reserve divisions of the third group (54th, 55 and 56th).

The Fourth Field Army commanded by Gen. Langley de Cary, with headquarters at Saint Dizier, occupied the sector St. Menchould-Commercy, and consisted of the following corps and other troops:

- The 12th Corps with headquarters at Limoges.
- The 17th Corps with headquarters at Toulouse.
- The Colonial Corps.

The 9th Cavalry division and a few batteries of heavy artillery.

The Fifth Field Army commanded by Gen. Lanrezac, with headquarters at Bethel, and occupying the sector between Verdun and Belgium border, was made up as follows:

The 1st Corps with headquarters at Lille.
The 2nd Corps with headquarters at Amiens.
The 3rd Corps with headquarters at Rouen.
The 10th Corps with headquarters at Rennes.
The 11th Corps with headquarters at Nantes.
4th Cavalry division.
Two Reserve divisions.
A group of Heavy Artillery.

The Cavalry Corps was commanded by Gen. Sordet and was stationed on the left flank near Givet. It consisted of the 1st, 3rd and 5th Cavalry divisions.

The first group of reserve divisions was stationed at Vasoule and consisted of the 58st, 63rd and 66th reserve divisions.

The fourth group of reserve divisions was stationed at Sissone and consisted of the 51st, 53rd, and 69th reserve divisions.

The 19th Corps was stationed in Algiers.

The Army Corps was the largest peace time unit, although the headquarters of the field armies were organized and the grouping of corps into field armies had been made. In general the corps consisted of: The corps headquarters, combatant troops and the trains. The combatant troops were: two (sometimes three) Infantry divisions; two cavalry regiments; three groups of mounted artillery; one group of horse artillery; one artillery park and one company of engineers, numbering in all some 1,000 officers, 40,000 enlisted men, 10,000 animals and 1,800 vehicles. The trains consisted of the combat, field and supply trains and they carried 300 rounds of small arms ammunition per man, 500 rounds of artillery ammunition per gun and eight day's rations.

The Infantry division was the smallest unit that was composed of all arms of the service. It consisted of a headquarters of 25 officers and 121 enlisted men, two infantry brigades, one regiment of field artillery (made up of three groups of three batteries each), one troop of cavalry, one company of engineers and group of stretcher bearers. Its total strength was 389 officers, 15,762 enlisted men, 2,831 animals and 527 vehicles.

The cavalry division consisted of a headquarters, six cavalry regiments, one group (of two batteries) of artillery, one detachment of engineers, detachments of infantry, cyclists, medical and supply troops. Its strength was 259 officers, 5,314 enlisted men, 5,099 animals and 227 vehicles.

The infantry regiment consisted of four battalions of which three were field battalions and one was a depot battalion. Its strength was 86 officers and 4,540 enlisted men.

Each Infantry battalion consisted of four companies, of 4 officers and 250 enlisted men each, a total strength, with 3 officers and 60 men in battalion headquarters, of 19 officers and 1060 enlisted men.

Each company was divided into four sections, corresponding to our platoon; three of these sections were commanded by officers and the fourth by the senior company sergeant major. In peace times there were only two junior officers assigned to the company and for the purpose of command two sections were grouped together and called a petolon.

Cavalry

Each cavalry regiment consisted of four troops or escuadrons and a regimental headquarters with a total strength of 32 officers and 677 enlisted men. The troop consisted of five officers and 160 enlisted men.

Artillery

The artillery was organized into both Divisional and Corps artillery and were both equipped with the 75. Heavy batteries were very few and what few there were were Army artillery. There were no light howitzers.

Each field battery consisted of three officers, 170 enlisted men, 4 guns, 12 ammunition wagons, 6 other wagons and 165 horses.

The batteries were formed together into groups. Each group consisting of three batteries with a total strength of 16 officers, 528 enlisted men, 12 guns, 70 vehicles and 514 horses.

Each division had one regiment consisting of three groups.

Each Corps had, as corps artillery, one regiment of four groups.

The total artillery for the corps was therefore 10 groups, or 30 batteries having in all 120 guns.

Engineers.

Engineers were formed into companies of four officers and 262 enlisted men. There was no regimental formation.

Stretcher Bearers

The stretcher bearers were formed into groups of 6 officers and 207 enlisted men.

FRENCH ARMY BASIC ORGANIZATIONS

Unit	Officers	Enlisted	Animals	Vehicles
Infantry, Company	4	250	2	1
Infantry, Battalion, 4 cos.	19	1,060	15	7
Infantry, Regiment, 3 field battalions, 1 depot	86	4,540	152	66
Cavalry, troop	5	160	162	2
Cavalry, regiment, 4 troops	32	677	743	33
Field Artillery, battery 4 guns	3	177	224	6
Engineers, company	4	262	27	8
Stretcher bearer group	6	207	74	22

ENGLAND.

In making a study of the military strength of Great Britain the first fact that will confront the student is that Great Britain is made up of England Proper, which includes England, Scotland, Wales and Ireland, and several colonies of varying degrees of independence, which are scattered all over the world, and which are permitted by the mother country to maintain armed forces of their own. Therefore in making the study it will be necessary to consider the armed forces of each of them separately. Let us then take up that of England proper first and then certain of the larger of her colonies.

ENGLAND PROPER.

COMMAND. By the act of Parliament in February 1904 the command of the Army by custom exercised by the King, was vested in the Army council. By law this council was to consist of the following members: 1. The Secretary of State for War. 2. The Chief of the Imperial General Staff. 3. The Adjutant General to the Forces. 4. The Quartermaster General to the Forces. 5. The Master General of Ordnance. 6. A Finance member and 7. A Civil member. To this was added, in 1914, the Director-General of Military Aeronautics.

The duties assigned to the various members of the council were as follows:

To the Chief of the Imperial General Staff—Operations.

To the Adjutant General to the Forces—Personnel, except that of Army Service Corps, Army Ordnance, Army Pay Corps, and Chaplains; discipline, mobilization, recruiting and control of the medical services.

To the Quartermaster General to the Forces—Supply, transportation, clothing, equipment, quartering, remounts, and the Army Veterinary service.

To the Master General of Ordnance—Armaments, the manufacture of all classes of ammunition, construction of fortifications, and control of the Department of Works.

To the Finance Member—Finance.

To the Civil Member—All questions dealing with the Territorial and volunteer forces and control of the department lands.

To the Director-General of Military Aeronautics—All questions dealing with aeronautics in the army.

ORGANIZATION.

The army itself was kept up by voluntary enlistments and consisted of the regular army at home, the regular army reserve, the special reserve, the territorial force, the territorial force reserve, a technical reserve, and a veteran reserve.

The regular army at home consisted of 76 infantry battalions, 45 cavalry squadrons, coast defence troops and Army and line of communication troops, organized into one cavalry division and 6 infantry divisions, with a total strength of approximately 165,00 officers and men.

The regular army reserve consisted of men who had been fully trained by service in the regular army.

The special reserve consisted of men who had been given the recruits training and were subject to call for 27 days each year. They were organized into units, for special service and included certain skilled tradesmen.

The territorial forces were organized for home defence only and corresponded in a way to the National Guard in this country. They were organized into 14 infantry divisions, 14 mounted brigades, 14 field artillery brigades, and coast defence troops. Their strength was deficient and the organization one on paper mostly.

The territorial force reserve, in 1914, was very deficient in numbers, consisting at that time of only 661 officers and 1,421 other ranks.

The strength of the British army, as of August 1914, was as follows:

Regular Army	10,800 Officers	236,632 Other ranks
Of which almost half were serving in other parts of the world.		
Army Reserve	10,800	145,347
Special Reserve	2,557	61,376
Channel Isles and Militia	176	5,437
Territorial Forces	10,684	258,093
Territorial Force Reserve	661	1,421
Bermuda and Isle of Man	18	312
A total strength of	<u>24,896</u>	<u>708,618</u>

THE DIVISION.

The division was a tactical and administrative unit, was self contained, and contained all arms of the service except the flying corps, and was provided with auxillary services for its maintenance in the field.

THE INFANTRY DIVISION.

Organization—1. Headquarters, consisting of the Commander and his staff; the commander of the Artillery; the commander of the Engineers; the Director of Medical, Veterinary and Ordnance services.

2. Three Infantry Brigades.

3. Four artillery Brigades, 3 of field artillery and 1 of howitzers.

4. One heavy Battery and Ammunition Column.

5. One divisional Ammunition Column (for all arms).

6. Three Field Ambulance companies.

7. One headquarters, Divisional Engineers.

8. Two Field Companies of Royal Engineers.

9. One Signal Company of Royal Engineers.

10. One Divisional Train (B & S).

11. One Veterinary Section.

12. One Squadron of Cavalry (soon withdrawn).

Its total strength was 585 officers, 17,488 other ranks, 5,595 horses, 76 guns, 11,676 rifles, 150 sabers and 24 machine guns.

THE CAVALRY DIVISION.

Organization.

1. Headquarters.

2. Four cavalry brigades of three regiments.

3. One artillery brigade.

Strength—439 Officers, 8,830 other ranks, 9,815 horses, 24 guns and 24 machine guns.

INFANTRY.

One brigade consisted of four battalions. There was no regimental organization as it is known in this country. The term regiment was given to the Infantry more for the purpose of raising the esprit de corps than

for a tactical reason and a regiment consisted of a varying number of battalions.

There were 18 brigades of infantry stationed in the British Isles.

There were 27 brigades stationed in India, counting the native troops.

In the British Isles there were 83 battalions stationed.

In India there were 52 and in colonies other than India there were 23 battalions. Making a total of 158 battalions of regular Infantry.

The battalion consisted of Battalion headquarters, Machine gun section and four companies. It was commanded by a Lieut. Col. Its total war strength was 29 officers and 955 other ranks. The machine gun section had two guns.

The company consisted of 200 men commanded by a Major or Captain and second in command was a Captain. The Company was divided into company headquarters and four platoons. In the battalion the platoons were numbered consecutively from 1 to 16. Each platoon was further divided into four sections each section commanded by a non-commissioned officer.

ARTILLERY.

All of the English artillery taken together was known as the Royal Regiment of Artillery and consisted of three component parts known as the Royal Field Artillery, The Royal Horse Artillery and the Royal Garrison Artillery.

The divisional artillery consisted of three brigades of Field Artillery, one brigade of Howitzers, and one heavy battery of field artillery. Each of the brigades of field artillery consisted of three batteries of six guns and two ammunition wagons per gun. To the brigade was also permanently attached one light ammunition column consisting of one ammunition wagon per gun and 13 other wagon for carrying infantry ammunition. A total strength, for the brigade, of 803 officers and men, 764 horses and 102 wagons, 18 guns all 18 pounders.

The howitzer brigade consisted of three six gun batteries and one light ammunition column. Each battery having two ammunition wagons per gun and the ammunition column one per gun and did not carry infantry ammunition. The total strength of the howitzer brigade was 763 officers and men, 719 horses, 89 vehicles and 18 guns. The guns were 4-5 howitzers.

The division ammunition train consisted of 113 general service wagons, of which 81 were for the purpose of carrying artillery ammunition and 18 to carry ammunition for the infantry, there was also one wagon to carry special stores. The strength of the column was 15 officers, 553 men, and 709 horses.

The field artillery battery had six guns and was commanded by a Major. The heavy field artillery was not brigaded and had only four guns to the battery.

The heavy battery consisted of the battery proper and an ammunition column. The battery proper consisted of 19 vehicles, including the guns. The ammunition column consisted of one ammunition wagon per gun and one other vehicle. The personnel of the battery plus the ammunition column was 6 officers, 192 men and 144 horses.

HORSE ARTILLERY.

2 batteries to the brigade and in time of peace the 28 batteries were organized into 14 brigades, which were stationed as follows:

In the British Isles—14

In India—11

In colonies other than India—3

In addition there was organized one depot and one riding establishment and the cadres, officers and men, for 9 ammunition columns.

The strength of the horse batteries varied according to three schedules. The higher had 5 officers and 170 enlisted men. Of this type there were 6 batteries. The lower consisted of 5 officers and 139 enlisted men, of this type there were 11 batteries. The Indian consisted of 5 officers and 175 men and of this type there were 11 batteries. The depot consisted of 5 officers and 201 men and the riding establishment of 6 officers and 129 men. The cadres of the ammunition columns consisted of 17 officers and 174 enlisted men. The total strength of the horse artillery was 5,538 officers and men distributed as follows:

In the British Isles 3,074, in India 1,923 and in Colonies other than India 531.

The Army Ordnance Service consisted of 251 officers, 2,341 men and 4,300 civilian employees. The enlisted men were organized into nine companies of varying strength and number of small detachments.

The Royal Army Medical Corps consisted of 1068 officers, 3,895 men and 463 nursing sisters.

The Army Service Corps consisted of 498 officers and 5,933 men.

BRITISH COLONIES.

INDIA.

The Indian forces, including both the white and native troops were organized into two Armies consisting of 9 infantry brigades and 8 cavalry brigades.

CANADA.

By permission of the home government Canada was permitted to raise and equip its own forces. The command of the Canadian forces was similar to the British. It consisted of the permanent militia and the active militia, both recruited by voluntary enlistment, with a three year enlistment period. In 1914 this force was organized into 7 mounted brigades, 10 brigades of field artillery, 23 Infantry brigades and the necessary auxiliary troops. They were armed partly with the Ross -303 rifle and partly with the Lee-Enfield -303.

AUSTRALIA.

Australia was also permitted to maintain its own troops. Under the Military Training Act training became compulsory for all male citizens between the age of 18 to 26, and in an emergency all between the ages of 18 to 60 were liable for call.

The forces were divided into the permanent force and the Militia. Service in the former was for five years and in the latter it was for three years.

In 1913 the permanent force consisted of 3 field batteries, 13 companies of garrison artillery, engineers and the nucleus of Department services.

The militia consisted of 50 battalions of infantry, 23 mounted regiments, 22 batteries of field artillery and the necessary auxiliary troops.

NEW ZEALAND.

New Zealand was also permitted to maintain a force of its own. Service was compulsory and all males between the ages 17 and 55 were liable. Those between the ages of 18 and 25 were undergoing training and those between the ages of 25 and 30 were in the reserves.

The permanent forces consisted of small training force and the term of service was eight years.

The Territorial force made up the balance of the forces. In it the term of service was for 7 years.

The strength of both forces together was 16 battalions of infantry, 12 mounted regiments, 9 batteries of field artillery, 9 batteries of garrison artillery and the necessary auxiliary troops.

UNION OF SOUTH AFRICA.

Maintained a force of its own under the same terms as the other British colonies. The force consisted of a permanent force of 5 mounted regiments and 5 batteries of field artillery. The enlistment period was for five years. There were several small coast defence batteries.

In addition to the permanent force there was also an active citizen force, the period of service in this force being four years. This force was organized into 9 mounted regiments, 4 dismounted regiments, 3 batteries of artillery, 12 infantry battalions and the necessary auxiliary troops.

BELGIUM.

Prior to 1913 the Belgium army was maintained under the law of 1902. Under this law the recruiting was on a voluntary basis supplemented by a draft to keep the forces up to the strength authorized. The peace strength called for under this law was 42,000 officers and men, and the service was 8 years with the active army and 5 years in the reserve. In 1910 the effective strength of Belgium was: Peace strength of the army 42,000, reserves 180,000, a Total war strength of 222,000, in addition there were available but unorganized 400,000.

In making any study of the Military strength of Belgium it must be born in mind that the neutrality of Belgium had been guaranteed by all the great powers of Europe and this fact influenced them in no small degree in deciding upon a military policy. However, in 1913 the clouds of war were seen to be gathering and it was de-

cided to make a re-organization of the armed forces. To carry this out a statute was passed which made defence of the country an obligation upon the family, and required that one son at least in every family must perform military service.

As soon as the statute was passed re-organization of the army was made necessary and the terms of this re-organization called for the formation of 6 army divisions, consisting of Infantry and Artillery, and one cavalry division. The effective strength called for by this plan was 350,000, of which about 100,000 would be fortress troops and the re-organization was to be completed by 1918.

In 1914 this re-organization was under way but the organizations consisted only of cadres and had a total effective strength, both active and reserve of only 117,000 officers and men, of which only 46,600 were in the active army. War came before the re-organization was more than started and the following defects existed

(1) The machine guns that had been ordered were of the heavy Maxim type, but only a few of them had been delivered so that some of the companies were armed with the Hotchkiss gun. Also no fixed form of transport had been decided upon for the machine gun.

(2) The division artillery of the 6 army divisions was to consist of a group of field artillery, armed with a 2.95 field gun and two groups of 9.5 inch howitzers. Only one such group of howitzers existed in the entire army.

(3) Numbers of cavalry regiments were being raised from 8 to 12. Of the four new regiments contemplated only three had been actually created. The number of brigades in the cavalry division was to be increased to three and it actually had only two.

(4) The air force consisted of only one squadron of 12 planes.

(5) The Infantry was armed with 1889 Mauser, which was far out of date as compared with the infantry weapon of the other powers.

Belgium being small would without doubt be forced to wage a defensive war and with this in mind the frontiers of the country had long been defended by strong fortresses. When first constructed these had been considered the strongest in Europe but due to various causes they had been allowed to fall into decay until the re-organization act of 1913 was passed. This act called for the restoration of these fortresses and the construction of some new ones. Under this plan the permanent fortifications were to consist of detached forts containing 145 armored turrets. The first line defences contained the following: 15 turrets armed with 15 cm guns, 28 armed with 12 cm mortars and 6 armed with 5.7 guns. Of these fortresses the largest and most powerful were those of Liege, consisting of 12 forts, of which 6 were first line and 6 second line; Namur, consisting of 7 main and 5 second line forts and the Fortified city of Antwerp.

References:—War Dept. Doc. 22; Encyclopædia Britannica, 12th Edition. Vols. 1 & 2; New International Encyclopædia Vol. 3; Nelson's Loose-Leaf Encyclopædia, Vol. 1; Papers of the Army War College, 1921.

MILITARY STRENGTH AND ORGANIZATION OF THE GERMAN AND AUSTRIAN ARMIES
AT THE OUTBREAK OF THE WORLD WAR.

By
Capt. Anthony J. Touart, Infantry.

THE GERMAN ARMY

The army of the German Empire is based on principals of military organization laid down in the Constitution which became effective in 1871, wherein, it is provided that every German capable of bearing arms belonged for seven years—in principle from the end of 20th to the beginning of his 28th year—to the Active Army.

Under this Constitution the German Empire was destined to become a nation in arms. It was laid down, however, that not to exceed one per cent of the population was to be in active service in time of peace. In 1871 the population of Germany was just over forty million and the strength of the peace army was fixed at 401,659 non-commissioned officers and men for the period of 1875-1880. It is advisable to note here that when the Constitution was adopted the following terms of service were provided: With the colors three years; in reserve four years; in the Landwehr five years.

In 1880 the army began to be increased, and from 1881 to 1913 the following additions to the personnel were made in the peace strength:

1881-1888	427,274
1887-1894	468,408
1890-1894	486,983
1894-1899	557,193
1899	Increased 10,000 apart from the non-commissioned officers.
1905	Increased 10,000 apart form the non-commissioned officers.
1911	Increased 10,000 apart from the non-commissioned officers.
1912	544,211 Privates.
1913	661,176 Privates.

In 1888 it was observed that Germany with its twelve-year system had available only twelve classes to set against the twenty classes of France and fifteen of Russia, so a law was enacted extending the period of service from 20-45 years of age, service from 39-45 year being in the Landstrum, a home defence force.

In 1893 the Government, which was constantly seeking to increase the size of the army, appreciated, that with the three years' service with the colors, there were not enough young men in the reserve and younger classes of the Landwehr to supply the first line in event of mobilization, consequently, the two-year color law in all branches, except cavalry and horse artillery which was continued at three years, was passed.

The effect of this latter law was to provide Germany twenty-four classes from which to draw men in the event of war, and with the army of the strength as authorized in 1913, would eventually afford Germany 5,400,000 trained men.

As a consequence of the various increases in the German Army, the reserve of trained men under 39 years of age available in 1913 is estimated from 1,880,000 to 5,000,000. The first estimate is that contained in Statesman's Year Book 1914, the latter is taken from History of the World War by Simonds, Volumn I. The London Times, in the Times' History of the War, Volumn I, gives 3,100,000, net, as the strength of trained men from 20 to 38 years of age. A calculation based on the numbers called for the eighteen-year period from 1895 to 1913 gives a result slightly in excess of the figures of the London Times. It may be safe, therefore, to assume that Germany had in 1913 a force of trained soldiers amounting to three million. The active army, that is men serving with the colors, under the 1913 Law amounted to about 870,000, distributed as follows: 34,000 officers, 110,000 non-commissioned officers, 40,000 officers and others of the administrative cadre, 18,000 one-year volunteers and 661,000 privates.

The strength of the army kept pace with the percentage as laid down in the Constitution as is shown by the following data:

Population	Census	Peace Strength (Pvts)	Per Cnt.
60,641,278	1905	515,321 (Law April 1911)	0.849
64,925,993	1910	544,211 (Law June 1912)	0.838
64,925,993	1910	661,176 (Army Bill 1913)	1.01

4. Strength.

Under the law as it existed in 1913, service was compulsory and universal with no substitutions allowed. The following were exempted:

(1) a. Members of reigning houses.

b. Members of mediatised and those of nobles raised to princely houses, whose exemption is stipulated by treaty.

(2) Those liable to service but unfit to bear arms, but who may be useful on account of their civil training and occupation and may be called to service: for instance as nurses, artisans in clothing factories etc.

(3) During period of disqualification, those deprived by court sentence of civil rights. Those sentenced to the penitentiary are permanently disqualified.

In the German Army the following military classes were provided, with the period of service in each, under the law as in effect in 1913:

(a) Liability commences at the age of 17 and ends at 45.

(b) Active Service (Heerpflicht) begins at the age of 20.

1. First Line: Active 2 years (3 years in cavalry and horse artillery).

Reserve 5 years (4 years in cavalry and horse artillery).

2. Second Line: Landwehr (1st. ban) 5 years (3 years cavalry and horse artillery).

Landwehr (2nd. ban) 6 years (8 years cavalry and horse artillery).

3. Landstrum: Second Ban 6 years (trained or untrained) First Ban 17-39 years of age (all untrained men).

4. Volunteers: One year only.

5. Ersatz Reserve.

The following table taken from Encyclopædia Britannica gives a good idea of the various classes just specified:

Men selected at 1st. muster for Infantry.	}	20-22	22-27½	27½-32½	32½-38½	}	
		Active	Reserve	Ldwr. 1	Ldwr. 2		
Do. for Cavalry.	}	20-23	23-27½	27½-30½	30½-38½	}	
		Active	Reserve	Ldwr. 1	Ldwr. 2		
Men selected at 3rd. muster for Infantry.	}	20-22	22-24	24-29½	29½-34½	34½-38½	}
		Ldsm. 1	Active	Reserve	Ldwr. 1	Ldwr. 2	
Do. for Cavalry.	}	20-22	22-25	25-29½	29½-32½	32½-38½	}
		Ldsm. 1	Active	Reserve	Ldwr. 1	Ldwr. 2	
Men allotted to trained Ers. Res. at 1st. muster.	}	20-32½	32½-38½				}
		Ers. Res.	Ldwr. 2				
Men allotted to untrained. Ers. Res. at 3rd. muster.	}	20-22	22-32½	32½-38½			}
		Ldsm. 1	Ers. Res.	Ldsm. 1			
Men finally assigned to Landstrum 1 at 3rd. muster.	}	20-22	22-38½				}
		Ldsm. 1	Ldsm. 1				

A brief explanation of service in some of the various Lines should be given. Men enrolled in reserve of The First Line were recognized as belonging to their respective corps and during this service were required to join twice in the four or five years for a period of training, which was limited by a law to 8 weeks. In the

first ban of the Landwehr there were two periods of exercise from 14 to 18 days each. The cavalry of the Landwehr was not called out for training in time of peace. In the second ban of the Landwehr there was no training. The Landstrum was purely a home defence force. One-year volunteers were made up of young men who were educated, and who supplied their own subsistence and equipment. These one-year volunteers formed the main source from which were drawn officers and non-commissioned officers for the reserve. The Ersatz Reserve was made up of men of 20, who were fit for training, but in excess of the numbers required for the annual contingent of recruits. The object of the Ersatz Reserve was to furnish replacements for the Active Army after mobilization. Upon mobilization Ersatz Reserve organizations were to be formed, and the men of the Ersatz Reserve to be assigned to these and receive such training as should be practicable.

While it was the intent of the formers of the Constitution, and of those who conceived the idea of the modern organization of the German Army, that military service was to be universal with few exceptions, this end failed of realization due to the large number of young men who presented themselves for enrollment each year, and further to the expense which would have been entailed if the army laws had been changed to permit of the calling of all able-bodied young men to the colors. For the years 1911 to 1913 the number of young men who appeared approached a maximum of 600,000. About seventy-five or eighty per cent of these were good for service. Under the law only about fifty-five per cent could be accepted. The disposition of German manpower for the two years, 1911-1912, is shown as follows:

	1911.	1912.
Muster: Men of 20 1st. appearance	563,024	557,608
Men of 21 2nd. appearance	367,688	385,163
Men of 22 3rd. appearance	289,089	294,825
Older special classes	51,574	52,272
Muster Total	<u>1,271,384</u>	<u>1,289,868</u>
Disposal: Struck off	826	916
'Excluded' criminals etc.,	35,500	34,211
Put back to following year (age 20 to 21)	734,563	746,482
Assigned to active service: voluntary enlistment		
(Above muster age)	39,531	40,413
Levied	223,925	239,717
Definitely assigned to inactive categories:		
Ersatz Reserve	137,922	94,732
Landsturm I	90,207	142,307
Disposal Total	<u>1,271,384</u>	<u>1,289,868</u>

It will be observed that men were called for consideration three times. This method was in effect up to January 1914. Men up to that time being chosen for service by lot. After January 1914, however, the annual contingents were divided into two classes: (1) Those found especially physically fit; (2) Those less fit though not unfit. Those in the first class were selected for draft, and if insufficient to fill the annual contingent, then men from the second class were chosen to supply the deficiency. This new law abolished the system of calling up men more than once. After all immediate and possible needs were supplied all men not chosen were passed to the Ersatz Reserve.

Prior to January 1914 about 250,000 men each year were assigned either to the Ersatz Reserve or Landsturm I, both inactive categories. These men however, while not receiving any training, nevertheless, were liable to service under the Constitution and laws of the Empire. Upon mobilization, they were subject to call with subsequent training. There was another group of men not yet considered in the estimation of potential

strength. These were the men trained or untrained, between the ages of 39 to 54. In the latter class were included men of Landsturm I and II and men who had passed the age of liability. The Ersatz Reserve in 1913 numbered about 900,000; Those between the ages of 46-54 about 1,500,000, of whom roughly one-half had received military training; Landsturm I and II about 1,500,000. If to these were added the 3,100,000 of the active army, reserve and Landwehr, the strength of the German Army, trained and untrained in 1914 was approximately 7,000,000. These figures are net and the estimate is very conservative.

The peace strength of the German Army was insignificant in relation to its reserves, about one-half of whom had received military training. It is said that the secret of the Supreme Command of The German Empire was the method in which they would use the reserves in the event of war.

ORGANIZATION OF THE GERMAN ARMY.

The directing minds of the German military leaders had early learned that speed in action was one of the greatest factors contributing to a successful campaign. They realized that this speed was dependent not on the rate at which bodies of troops moved, but upon the reduction to a minimum of causes of delay due to imperfect arrangements. They therefore systematized everything pertaining to the army, from the handling and disposition of the recruits to a perfection of plans in the event of mobilization, all arrangements being based on a careful study in which all contingencies were weighed.

To systematize the recruitment and training of the army and to facilitate mobilization in the event of hostilities, Germany was arbitrarily divided into 24 army corps districts, corresponding to the 24 line army corps. Each of these army corps districts constituted an Ersatz District from which the army corps drew its recruits. An exception to this was the Prussian Guard Corps, which had no territorial districts assigned to it from which to draw recruits. Men in the Guard Corps were drawn from the Prussian Provinces, Alsace-Lorraine, and from volunteers from the German states. Like the Prussian Guard Corps, the V, XV and XVI Corps drew recruits from all over the Empire. The reason for this rule was political, these corps being located respectively in Poland, Alsace and Lorraine. There is attached a table, taken from The Times History of The War, Volume I, entitled Peace Strength and Composition of the German Field Army on October 1, 1913, which shows the headquarters location and composition of each of the German army corps. For convenience a table taken from The Infantry Journal, May-June 1914, is also attached at this point. This latter table gives the figures for special units of the German Army not included in the first table.

It will be noted by reference to the attached table taken from The Times History, that there are three corps that bear the name "Bavarian" and that the XII and IX Corps are called "Saxon." These designations are the result of the convention between the States of Germany at the time the army of The Empire was organized. At the formation of the Empire, it was seen that an Imperial army, uniformly organized, equipped and trained was essential. While Prussia, which comprised over one-half of The German Empire, composed of 26 kingdoms, duchies, states and independent cities, dominated the conferences, still Bavaria, Saxony and Wurtemberg were jealous of their sovereignty, consequently it was stipulated that Bavaria should maintain her own military organization with a budget, however, fixed by the Empire. Her contingent was to consist of two corps, the IV Bavarian and II Bavarian Corps, later increased to three corps. Saxony and Wurtemberg were allowed to retain certain rights in respect to the administration of their military forces. The corps from these territories, as well as from Baden, bear the name of their respective states. The emperor, however, was to be commander in chief, and in time of war all corps were to come absolutely under his control. In time of peace he was given the right of inspection of Bavaria's contingent.

The Emperor of Germany, as already noted, was by law the supreme commander of the German Army, though his authority in time of peace was somewhat limited in certain states. Assisting the Emperor were The Military Cabinet, composed of The Ministry of War, The Great General Staff, The Inspectors of The Army and the Inspectors of the various arms. The Chief of the Military Cabinet was the Adjutant General of the Emperor.

At the head of The Ministry of War was the Minister of War. This body had authority over matters of fortifications, armament organization and administration, and in this field was supreme.

The General Staff at the head of which was The Chief of Staff was divided into three sections: (1) The

MACHINE GUNS

226	Machine Gun Companies
13	Machine Gun Abteilungen
16	Fortress Machine Gun Abteilungen

FOOT (Fortress) ARTILLERY

201	Batteries (55 Battalions)
31	Horse (Abteilungen)

PIONEERS

184	Companies (44 Battalions)
34	Searchlight Abteilungen

COMMUNICATION TROOPS

1. Railway Troops

4	Regiments (2 Battalions of 4 companies)	32 Cos.
1	Battalion (4 Companies)	4 Cos.
		<hr/>
		36 Cos.

2. Telegraph Troops

7	Battalions (3 Telegraph cos. 2 Radio cos.)	35 Cos.
1	Battalion (3 Telegraph cos. 1 Radio co.)	4 Cos.
1	Battalion (2 Telegraph cos. 1 Radio co.)	3 Cos.
		<hr/>
		42 Cos.

	Fortress Telephone Companies	8
		<hr/>
		50 Cos.

3. Aerostatic Troops

	Balloon Troops (Airship Troops) 6 Bns.	17 Cos.
	Aviation Troops 5 Bns.	15 Cos.
		<hr/>
		32 Cos.

MOTOR TROOPS

1	Battalion (4 cos. and 1 co.)	5 Cos.
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TRAIN TROOPS

25	Battalions (4 Companies)	100 Cos.
3	Companies	3 Cos.
		<hr/>
		108 Cos.

Table showing organizations of Special Troops in The German Army.
INFANTRY JOURNAL MAY-JUNE 1914

PEACE DISTRIBUTION AND COMPOSITION OF THE GERMAN FIELD ARMY, OCTOBER 1, 1913.

		Infantry					Cavalry							Artillery					
		Divisions	Brigades	Regiments	Battalions	Jager Battalions	Brigades	Regiments	Squadrons	Regiments					Brigades	Regiments	Battalions		
										Cuirassiers	Dragoons	Hussars	Uhlans	Horse Vagers			BRIGADE DIVISIONS	Field	Horse
Prussian Guard	Berlin	2	5	11	33	2	4	8	40	2	2	1	3		2	4	9	24	3
I Corps	Konigsberg	2	4	8	24		3	6	30	1	1		2	2	2	4	9	24	3
II Corps	Stettin	2	4	9	27		2	4	20	1	2		1		2	4	8	24	
III Corps	Berlin	2	4	8	24	1	2	4	20	1	1	1	1		2	4	9	24	3
IV Corps	Magdeburg	2	4	8	24	1	2	4	20	1		2	1		2	4	8	24	
V Corps	Posen	2	5	10	30	1	2	4	20		1		2	1	2	4	9	24	3
VI Corps	Breslau	2	5	10	30	1	3	6	30	1	1	2	1	1	2	4	8	24	
VII Corps	Munster	2	5	10	30	1	2	4	20	1		2	1		2	4	8	24	
VIII Corps	Coblentz	2	4	8	24		2	4	20	1		2		1	2	4	8	24	
IX Corps	Altuna	2	5	10	30	1	2	4	20		2	2			2	4	8	24	
X Corps	Hannover	2	4	8	24	1	2	4	20		2	1	1		2	4	8	24	
XI Corps	Cassel	2	4	8	24	1	2	4	20		1	1		2	2	4	9	24	3
XII Corps	Dresden	2	4	8	24	2	2	4	20	1		2	1		2	4	9	24	3
XIII Corps	Wurtemberg	2	4	9	27		2	4	20		2		2		2	4	8	24	
XIV Corps	Karlsruhe	2	5	10	30		2	4	20		3			1	2	4	8	24	
XV Corps	Strassburg	2	4	8	24	2	2	4	20		2	1		1	2	4	8	24	
XVI Corps	Metz	2	4	8	24		3	6	30		2	1	1	2	2	4	8	24	
XVII Corps	Danzig	2	4	8	24	1	2	4	20			3		1	2	4	8	24	
XVIII Corps	Frankfor on Main	2	4	9	27		2	4	20		3		1		2	4	8	24	
XIX Corps	Leipsic	2	4	8	24		2	4	20	1		1	2		2	4	9	24	3
XX Corps	Allenstein	2	4	8	24	1	2	4	20	1	2	1			2	4	9	24	3
XXI Corps	Saarbrucken	2	4	9	27		2	4	20		1		3		2	4	10	24	6
I Bavarian	Munich	2	4	8	24	1	2	4	19	2				2	2	4	8	24	
II Bavarian	Wurzburg	2	4	8	24	1	2	4	20				2	2	2	4	9	24	3
III Bavarian	Nurnberg	2	4	8	24		2	4	18					4	2	4	8	24	
		50	106	217	651	18	55	110	547	14	28	23	25	20	50	100	211	600	33
					669								110					633	

Table compiled from Lobell's *Jahrberichte*, 1913. Fortress, Artillery, Pioneers, Railway and Telegraph Troops, Flying Corps and Train Battalions are omitted.

From *The Times History of The War*.

Great General Staff; (2) The General Staff with Troops; (3) The Topographical Section. There were about 225 officers belonging to the General Staff.

The Great General Staff performed the usual duties of a general staff, assisting the High Command in matters of operations, command, information of the enemy, organization etc. There were about 100 of the General Staff officers assigned to this section.

The General Staff officers with troops were assigned to the headquarters of divisions and higher units.

The Army Corps Districts were grouped into what were termed "Inspections." There were three Army Corps in each Inspection, except at Munich, where there were four. These were eight "Inspections" with an Inspector assigned to each, with authority of inspection alone, and no control over the Corps. Inspections were located as follows: Dansig for I, XVII and XX; Berlin for Prussian Guard Corps, the XII and XIX Army Corps; Hanover for the VII, IX and X Army Corps; Munich for the III Army Corps, and for the I, II and III Bavarian Corps; Carlsruhe for the VIII, XIV and XV Army Corps; Stuttgart for the XIV, XVIII and XXI Army Corps; Berlin for the II, V and VI Army Corps.

In addition to the "Inspections" just noted there were Inspector Generals for the Cavalry, Field Artillery, Garrison Artillery, Engineers and Fortresses, of Communications, Trains and Machine Guns.

There were also military governors and commanders of thirty-four strong places, among which were numbered, Heligoland, Metz, Coblenz, Cologne and Kiel.

The German Field Army which embodied all forces of the Empire, consisted of armies and was commanded by the Emperor. Armies consisted of several army corps and the army corps of a certain number of divisions, regiments of field artillery, pioneer battalions and a train section. The army corps, the largest unit in time of peace, was the basis of management both in time of peace and war.

The table shows the number of divisions, brigades and regiments and other sub-divisions contained in each of the German Corps. This table does not show the auxiliary troops attached to each Corps. Upon mobilization, the Army Corps was constituted as follows: 2 Infantry divisions; 1 company Pioneers; 1 Abteilung (detachment) Telephone Troops; 1 half-company of Signal Troops; 1 Abteilung Radio Troops; 1 Abteilung Telegraph Troops; 1 battalion Heavy Field Howitzers (4 batteries of 4 guns each); 12 Ammunition Columns (4 Infantry, 8 Artillery); 13 Supply Columns; 1 Bridge Train (Army Corps) Field Bakery Columns; 12 Field Hospitals; 2 Remount Depots. The strength of a mobilized Army Corps was 41,000.

The division contained generally; 2 or 3 Brigades of Infantry; 1 Regiment of Cavalry; 1 Brigade of Field Artillery; 1 Company of Engineers (Pioneers); 1 Light Bridge Train; 1 Signal Company; 1 Telephone Abteilung; 2 Infantry Ammunition Columns; 4 Artillery Ammunition Columns; 4 Field Hospitals; 1 Remount Depot; 6 Supply Columns. The strength of a mobilized division was 17,000 and was commanded by a Lieutenant General.

The Brigade, commanded by a Major General, consisted of two regiments with the following strength: Infantry Brigade 6,590; Cavalry Brigade 1,470; Artillery Brigade 1,870.

The Regiment of Infantry was composed of three battalions and a machine gun company. It was commanded by a colonel or a lieutenant colonel and numbered all ranks 3,290, horses 190, vehicles 59, fighting strength 3,000 rifles.

The Battalion was commanded by a major and was constituted of four companies, and a signal detachment, made up of the signal details from the companies. War strength 1,080 men, 60 horses and 19 vehicles.

The company was divided into three platoons, each divided into one-half platoons and made up of squads (Sektionen), and commanded by a captain (mounted), with three or four lieutenants as platoon leaders. The company headquarters, comprised 4 musicians, 4 litter bearers, 4 cyclists, 3 signal men and 4 teamsters. The captain was responsible for the discipline, training, equipment and armament of his company. The company had its own train of one ammunition wagon and field kitchen, and field train with ration wagon and baggage wagon. The Infantry company was armed with the long rifle of 1898, box magazine with a capacity of 5 cartridges. This weapon (Mauser) was considered excellent.

It might be of interest at this point to briefly sketch the life of the average German infantryman. As soon as the annual contingent of recruits joined the regiment, the oath of loyalty to the colors was administered with great ceremony, having been preceded by a religious service and address to the recruits. The recruits

joined in October of each year and their training started at once, continuing to March 30 of the following year when they were considered fit for field duty.

The day of the soldier began at 4:15 A. M. when the non-commissioned officer of the day was awakened. Barracks were policed before breakfast. The company was formed at 5:55 A. M. by the First Sergeant, the corporals reporting their squads. At 6.00 A. M. the lieutenants arrived and the senior received the report of the First Sergeant. Platoons were then inspected by their leaders. When the Captain arrived, the senior lieutenant reported the company to him.

The First Sergeant then reported to the Captain matters of routine requiring his attention, e. g, passes, breaches of discipline etc., and disposition in each case was made. The company then, until about 11:15 A. M. engaged in drill exercises. After an interval, allowing for preparation for dinner, the meal was served.

In the afternoon, the company engaged in athletic drill, or other forms of instruction took place.

The non-commissioned officers of the company had certain routine reports to make to the First Sergeant, and daily received instructions from him on the work of the following day. The line between them and the private soldiers was well drawn, an example being a requirement that they mess separately.

Troops were paid three times during each month, on the 1st, 11th and 21st respectively. The First Sergeant made the payment. At the time of payment, packages addressed to the soldiers were distributed. Payment of the soldiers was witnessed by one of the lieutenants.

There were certain special small units not yet touched upon, which require attention. These were machine gun companies, machine gun batteries, Jagers, and Mounted Field Jagers. The Cavalry and Artillery, likewise, will be covered briefly:

The machine gun company commanded by a captain, with 3 lieutenants assigned, was divided into 3 platoons of 2 guns each (total of 6 gnus). War strength: 90 men, 40 horses and 12 vehicles. The limbers and three ammunition wagons carried 81,000 rounds of ammunition.

The machine gun battery (Abteilung) was attached to the cavalry. War strength 4 officers, 130 men, 9 horses, 14 vehicles, (6 machine guns), 87,000 rounds of ammunition. Officers and non-commissioned officers were mounted.

The Jagers were infantry who had received special training in musketry. Recruited from the Forestry School Personnel of the Empire, their original duty was to serve as scouts or messengers. The Mounted Field Jagers was a corps of commissioned officers founded in 1740 by Frederick The Great. It numbered 80 with the rank of lieutenant and first lieutenant, all of whom were chosen from those who had served as officers in the Jager battalion. Their Chief function was to carry messages for the Emperor or Foreign Office.

During peace times only one division of cavalry was maintained. Upon mobilization, however, 11 divisions were formed. The squadron was the basic unit of the cavalry, commanded by a captain and numbering about 150 lances. All cavalymen were armed with lances, and the massed charge was still adherer to as the most effective tactical formation. These two facts subjected the German command to severe criticism by military minds the world over.

The disposition of cavalry and artillery in the Army Corps has already been covered. The armament of the artillery consisted of the field gun of small calibre, the field howitzers of 10-5 cm and 15 cm, and the heavy mortars of 8.4 inches, and for siege purposes 11 inches. Regiments armed with field gun or light and heavy howitzers were embodied in both army corps and divisions. The field gun was considered obsolete, the howitzers of most modern type. Horse artillery was formed into eleven groups for services with eleven cavalry divisions, being armed with the small calibre field gun. The foot artillery manned the fortresses.

Auxiliary units such as telegraphy, air service, cyclists, signallers, supply, medical, ammunition supply were organized along the usual lines. The details of organization will not be explained.

The majority of the non-commissioned officers in the German Army rose from the ranks, being either those who at the age of 17 had volunteered or who at the end of their period of active service had re-engaged. About one-fourth of the non-commissioned officers came from special schools organized for boys of the age of 15, with a two-year course, and from schools for non-commissioned officers, which took the pupils from the schools just mentioned and candidates between the ages of 17 and 20, who came equipped with a good education and well recommended. These boys were eligible to become non-commissioned officers at the age of 19. The younger non-commissioned officers, while possessed of a good education both military and general, did not

understand the meaning of discipline and given authority were inclined to brutality. The non-commissioned officers were divided into two general classes (a) The Field-weibel or Sergeant Major and the Vizefeldweibel, both of whom wore swords with officers knots, (b) The Sergeant and small Unteroffizier. These two classes numbered about 110,000 at the outbreak of The World War.

There were two classes of candidates from which the officers were drawn: (a) Cadets, who had entered a cadet school at the age of 10 years, and generally the son of an officer or high government official; (b) Young men, who having passed through school, joined the ranks as Fahnenjunker, to work for a commission. About two-thirds of the officers were obtained from this class.

For both classes of candidates for commission, certain requirements had to be met. Each had, as a general rule to be of good family, and (a) had to pass an examination for a commission and (b) having been nominated, he was not commissioned until the officers of his prospective regiment had voted their approval.

The ambition of every officer was to receive appointment to The General Staff. Numbering only 225, it is not difficult to imagine the stringent requirements that had to be met, and the years of laborious study entailed, before an officer was admitted to this corps de'elite. Promotion was slow until the increase in 1913, and the officers' hope rested in securing appointment to the General Staff.

There was one other institution, characteristic of the German system of attention to every detail, that is, the provision of attendants (Der Bursche) for officers, which is one of interest. While the officer was required to furnish suitable and sufficient quarters and subsistence to his attendants, the attendant was a regularly enlisted soldier, paid by the government. "Der Bursche" was officially recognized, as he contributed to the efficiency of the German officer.

6. Organization as Affecting Mobilization.

At the outbreak of the World War and within a few hours after the declaration of war, mobilization of the vast German Army was well under way. After the lapse of a few days, a great fighting machine was battering at the forts of Eastern Belgium, which soon fell before this powerful force. As has been stated, the German Army of peace and war, to the outside observer, were two entirely different structures. Not until mobilization began and the German Army began its offensive movements did the world appreciate how systematically the German Government had organized and built up their army.

Organization, not only of man power but of every conceivable agency tending to produce speed in mobilization and concentration, was the goal of The Great General Staff. Army Corps overnight, were manned at full war strength, each reservist, thoroughly trained, reporting to his regiment and being clothed in uniform, armed and equipped without delay, the required articles being stored ready for such a contingency as this. Plans for the formation of Ersatz depots, predetermined and minutely prepared, were at once set in motion. New units were formed for reservists—those not required to bring the active army to war strength; from the First Levy of Landwehr, reserve divisions were organized as a second line; and the youngest contingents of the Landsturm were called to supply the waste of war, until men of the Ersatz battalions had received sufficient training. Every resource, available for war use, had been tabulated, motor car owners subsidised and railways so regulated as to permit of operation by the army for military purposes without a hitch.

The German scheme of mobilization was to so organize as to permit a striking of the enemy at the outset with full strength. They had laid their plans with this idea in view, and at the outbreak of the World War, hardly before the other warring nations had realized that the war had commenced, over three million of trained and equipped German soldiers, component elements of armies and army corps, were moving to concentration camps and to the Eastern and Western frontiers of the Empire ready to overwhelm the opposing armies.

III. THE AUSTRO-HUNGARIAN ARMY.

1. Historic Outline of The Austro-Hungarian Empire.

The history of Austria, as was stated in the introduction of this monograph, paralleled that of Germany. From the year 800 A. D. when the Frankish Emperor established a mark, south of the Danube and east of the River Enns, as a defence for the kingdom against Slavic invasion, until 1804, when Francis II, the last of the Holy Roman Emperors, upon the ascendancy of Napoleon, proclaimed himself Emperor of Austria. This area, in 1914 forming the Empire of Austria, was constantly at war, either opposing the influx of Moravians or Magyars, or repelling the invasion of Turkey and later seeking to wrest from the Turks the domination of Hun-

gary, or else battling with their neighbors to the north and west. Raised to the rank of Duchy in 1156, Austria by 1246 had risen to a place of importance among the German states, and Vienna had become a center of culture. The frontiers of Austria of the year 1246 were the same as in 1914.

In 1866, after the war with Prussia, the Emperor of Austria surrendered his position in Germany, and Austria, Tirol, Bohemia and Salzburg ceased to be German, though populated by eight millions of people of German origin.

In 1865, Hungary, which had been subject to Austrian rule, obtained her independence after 17 years of agitation and strife. Hungary, however, had always been loyal to the house of Hapsburg, which for years had ruled Austria. In 1867, the Empire of Austria-Hungary was formed, with the reigning member of the House of Hapsburg as the King of Hungary and Emperor of Austria. There was nothing in common between these two sovereignties except in respect to their ruler, the army and navy and as regards a few other matters of national scope.

1. The Army 1867-1914.

The army of Austria-Hungary was in reality three separate and distinct armies. (a) The Common Army, made up of contingents from all parts of the Empire, (b) The Austrian Landwehr, and Austrian Levy-In-Mass, and (c) The Hungarian Landwehr (Hovendseq) and Hungarian Levy-In-Mass. The Austrian and Hungarian Landwehr were both active armies, maintained separately by their respective kingdoms, and administered by a war ministry of each state.

This organization became effective after the war with Prussia. Service was made compulsory and universal, with a war strength set at 800,000, and with certain maximum peace strengths for each of the three armies. The strength of the Common Army was maintained far below the authorized figure, and the two national armies were merely skeletons.

Upon the defeat of the army of France by the Prussian military machine in 1870, Austria awoke to the fact that her defensive forces were being neglected and that preparedness in time of peace was a condition upon which depended continued national security. She sought to remedy the dire state of affairs relating to her army and reorganize on a sounder basis with laws carried out to the letter. Hungary offered opposition to Austria's endeavors along this line and until 1908 no remedial action of consequence was taken. In 1908-1909, after Bosnia and Herzegovina had been annexed, Hungary withdrew her opposition and the army began to receive active attention. For the twenty-year period prior to 1909 most of the youths of the Empire had been passed to the general levy and those drafted received very little training.

Under the law of 1912 the annual contingents of the three components of the army of the Dual Monarchy were the following three years to be increased as follows: Active Army, 1st year 136,000, 2nd year, 154,000, 3rd year 159,000; Austrian Landwehr for the same period an increase from 20,000 to 27,000; Hungarian Landwehr an increase from 17,000 to 25,000; Bosnia and Herzegovina 6,400 to 7,800.

Service in the Austro-Hungarian army was similar in most respects to that in the German Army. Liability commenced at the age of 21 years and ended upon completion of the 35th year. Both in the Common Army and in the two Landwehrs, service was continuous for 2 years (three years for cavalry and horse artillery), then 10 years in the reserve (7 years in reserve for cavalry and horse artillery) and then 2 years for the reserve of the Landwehr. Reservists were liable to undergo certain annual periods of training.

After completion of their twelve years service all men passed to the Landstrum, where they remained until their 42nd birthday. There was no Landstrum in Bosnia and Herzegovina.

All men in excess of the annual contingents were assigned to the Ersatz Reserve or Levy-in-mass. There was an Ersatz Reserve for the Common Army and for each of the Landwehr. One year volunteers were accepted and many of them became reserve officers.

Recruiting was territorial for all three armies and drafting was accomplished by lot. Those men receiving the lowest numbers were allotted to the Common Army, the next lowest numbers to the respective Landwehr, and those in excess to the Ersatz Reserve if physically fit. Teachers and members of the priesthood were exempt.

2. Strength of The Army in 1913.

The peace strength of the Army for the year 1913 was fixed at 34,000 officers and 390,249 men, distribu-

ted as follows, figures for 1914 not being available: Common Army, Officers 26,351, Other ranks 313,081; Austrian Landwehr Officers 4,549, Other ranks 44,030; Hungarian Hovendseg Officers 3,109, Other ranks 33,138.

The Infantry of the Common Army was about $3\frac{1}{5}$ of the total strength, that of the Austrian $4\frac{1}{5}$ of the total and that of the Hungarian Hovendseg about $3\frac{1}{4}$ of the total.

The man power available upon mobilization in the event of war is estimated to have been about 2,000,000 without Landsturm and Ersatz Reserve. These figures include all classes of the reserves, of which only two, entering since 1912, could be considered as having received appreciable training. Counting only trained men, the field army of 1913 numbered approximately 820,000 trained men of which 230,000 belonged to the Austro field army of 1913 numbered approximately 820,000 the Landsturm and Ersatz Reserve was approximately 4,000,000.

3. Organization of the Austro-Hungarian Army.

The Supreme Command of The Imperial Army was vested in the Emperor. Next to the Emperor came the Inspector General of The Land Forces with the Chief of Staff directly responsible to him. As in Germany, Austria was divided into "Inspections" with 6 Inspectors and there were Inspectors of cavalry, artillery and the various technical corps.

There were 16 army corps of three divisions each (2 Common Army, 1 Landwehr), and carrying the necessary auxiliary groups.

The Infantry divisions numbered 49, each constituted of two brigades of Infantry, 2 or 3 squadrons of Cavalry, Divisional Artillery, Ammunition Pack Train, Sanitary Service and Field Bakeries. War strength 15,000, 450 sabres and 42 field guns and 8-10 machine guns.

The Cavalry Division was composed of 2 brigades of Cavalry, Horse Artillery and Machine Guns. War strength 3,600 sabres, 4 machine guns and 12 field guns.

The auxiliary troops were well equipped and organized along the usual lines.

The units of Infantry, Cavalry and Field Artillery allotted to the three armies as follows:

Infantry.

War Joint Army: 102 regiments of infantry
26 battalions of Field Jagers
4 regiments and 1 battalion of Jagers (Bosnia and Herzegovina)
All regiments were composed of 4 battalions.

Austrian Landwehr: 37 regiments of infantry
3 regiments (Tirolese)

Hungarian Landwehr: 28 regiments of infantry (10 with 4 battalions; 18 with 3 battalions)
1 independant company.

In addition to the four battalions there was attached to each regiment a depot battalion, skeletonized in time of peace, which in war time was expanded into two battalions, one serving with the regiment in the field, the other supplying replacements.

The Jager battalion had a depot company which functioned similarly to the Infantry regiments' depot battalion.

Each Infantry regiment in time of peace had two machine gun detachments and the Jager battalion had one.

The war strength of the Infantry company was about 250 rifles, there being 4 companies to a battalion.

The infantry weapon, inferior to Germany's, was a repeating rifle, calibre about .32, models 1895, 1890 and 1888.

Cavalry.

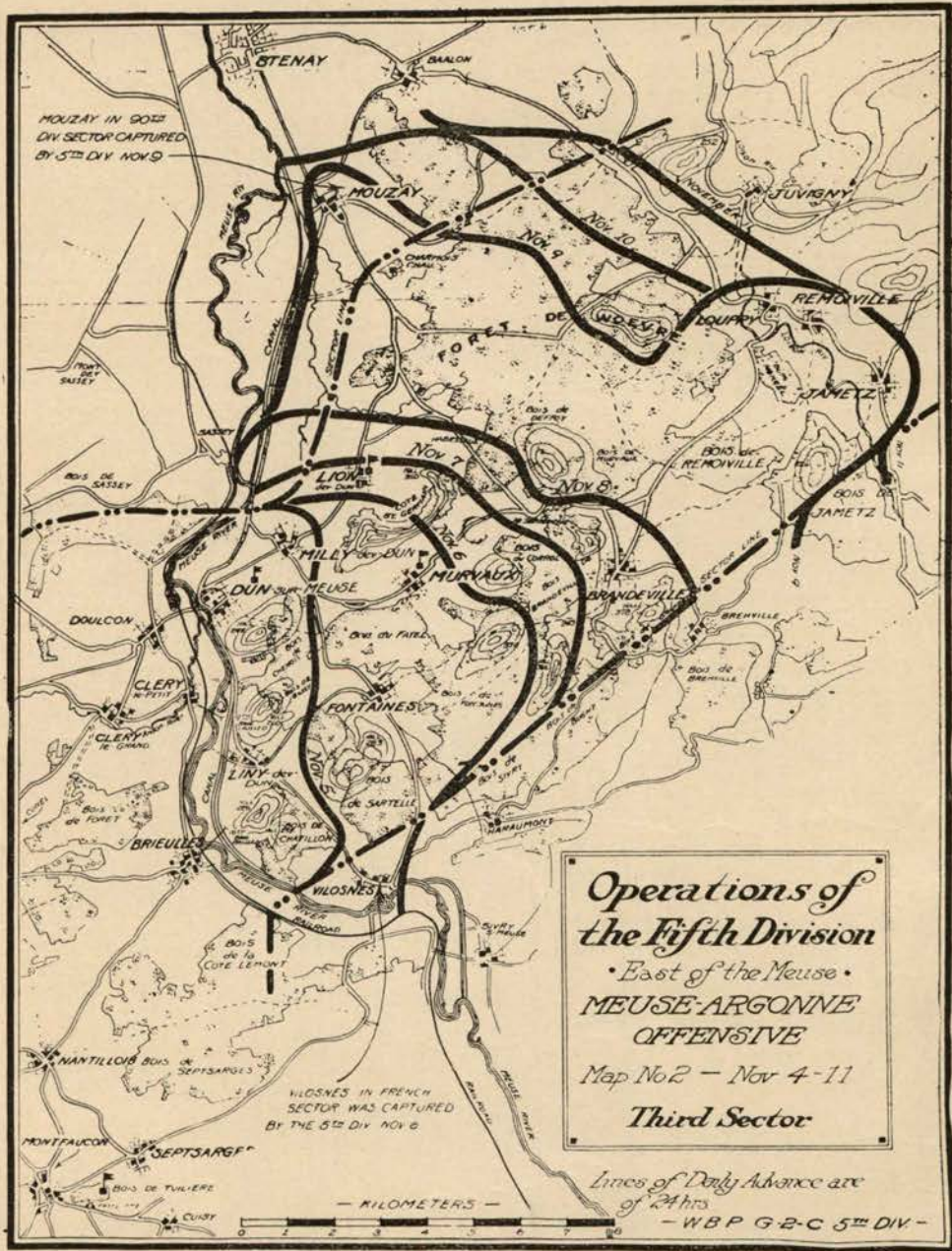
Joint Army: 42 regiments of cavalry

Austrian Landwehr: 16 regiments

Hungarian Landwehr: 10 regiments.

The regiments were classed as Hussars, Dragoons, and Uhlans, but their equipment and organization was along similar lines.

The sabre and the repeating carbine constituted the armament of the cavalryman.



Monograph p. 604.

Each regiment was equipped with machine guns, which were carried on pack animals. This method of transporting machine guns was also used in the Infantry.

Field Artillery.

Joint Army: 42 regiments field artillery
14 regiments field howitzers
8 divisions of horse artillery
14 divisions of heavy howitzers

Austrian Landwehr: 8 divisions field howitzers
10 regiments mountain artillery.

Hungarian Landwehr: 2 field regiments
8 divisions
10 regiments mountain artillery.

The non-commissioned officers of the Austro-Hungarian Army up to 1912 rose from the ranks, having had no special instructions. In order to induce these men to remain in the service special consideration was offered them in the law of 1912.

Officers of the active army were drawn from three sources, viz. from cadet schools or military academies, from the officers reserve corps and from the ranks. The officers of the active army as a general rule were well qualified both educationally and in military efficiency.

Reserve officers were drawn from one-year volunteers and by transfer from officers of the active army.

While inferior in every respect to the German army, the Austro-Hungarian army at the outbreak of the World War was a well equipped, well officered and well organized body. Modeled after the German army, both because of the dominating influence of Teutonic ideas over the Dual Empire, and because of the superiority of German military methods, universally conceded, the Austrian Army in 1914 contained the frame work around which could hastily be built a most powerful fighting force.

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MOBILIZATION AND PLANS OF THE ALLIES

—By—

CAPT. L. J. HARRIS, Inf.

The political situation in Europe at the outbreak of the World War was the result of causes reaching back many years—in fact some of its causes were as old as the nations concerned. Germany had been steadily growing in power in the nineteenth century. Under the guidance of Bismark and following out his shrewd policies, Germany continued to gain power after the war of 1870. The policies of Bismark lead Germany to take advantage of the enmity between Great Britain and Russia after the war between Russia and Turkey in 1877 and made Germany a dominating power in Europe at the Congress of Berlin in 1878 which the treaties were drawn up after this war.

Throughout all this period of European History Great Britain held the power to exercise considerable control in European affairs but limited her activities to restricting Russia. It appears that not only was the extraordinary growth of German power not opposed but in many instances it had been fostered with the idea that Germany would serve as a buffer againsa Russia. It was not till the early nineties that Great Britian became aware of the error of her policies in this respect and realized that the growth of Germany was more of a menace to her than the advancement of any other power including Russia.

Germany, as she existed in 1914, came into being after the most valuable colonies of the world had been annexed by the other great powers. She had built up an efficient manufacturing organization for which she must have an outlet. The lack of colonies forced her to encroach on the trade of other countries and in competition with them. Thus Germany became a dangerous trade rival and as England finally awakened to this, hostility replaced friendship. France emerged in 1870 from a disasterous war with Germany and had lost Alsac-Lorraine which never ceased to irritate and became a constant source of danger for another war. The natural common interest in the growing danger of Germany drew Great Britain and France together and with France came Russia. These countries formed an alliance for mutual protection.

The quick victory over France in 1870 encouraged the German Military Organization and imbued them with the idea that they could win world domination in the same manner. In 1879 an alliance was formed with Austria-Hungary, later joined by Italy, and dominating influence was gained over Turkey. This alliance was under the absolute control of Germany and this country began the greatest military preparation the world had ever known.

Here then we have the opposing alliances and the alignment of power at the outbreak of the war. However, because of a conflict of interests between Italy and Austria-Hungary in which Italy claimed Istria and the Trentino, Germany was unable to hold her in the alliance.

In allowing Germany to grow into power that dominated central Europe the allies had a situation in 1914 that was greatly to their disadvantage. Germany was fully organized for war and openly ambitious for world leadership. By the efforts of Germany Turkey had been maintained in her position at the Dardenelles and Russia had been cut off from the sea.

The conflict of various interest of the countries of Europe, Germany's ambition to become the greatest of World Powers; the critical need of Germany for colonies, markets and sources of raw materials; the Teutonic alliance under the absolute control of Germany; and the unprecedented military preparation of Germany made war inevitable. The much discussed assassination of the Crown Prince of Austria was merely an excuse for Germany to put her matured military plans into effect.

This assassination occured on June 28th, 1914 and the feeling was general throughout Europe that Serbia had failed to curb a criminal agitation within her borders and that Austria would be justified in bringing Serbia to time. In diplomatic circles the opinion seemed to be that whatever action taken by Austria would be moderate and at this time there seemed to be no menace to the peace of Europe. On July 23rd, 1914, nearly a month after the assassiantion came Austria's note to Serbia demanding its acceptance within 48 hours. The acceptance of these demands meant the signing away of Serbia's National Independence. Serbia appealed to Russia and Russia advised the acceptance of all demands except that requiring Austrian officials should conduct investigations and trials on Serbian soil.

On July 25th, at 6:30 P. M. Serbia was informed that her reply was unsatisfactory and diplomatic relations were broken. This same afternoon Serbia ordered a general mobilization and Russia adopted tentative plans in case Austria should declare war against Serbia. This ended diplomatic negotiations and was the beginning of final preparations for war.

Map number one shows diagrammatically some of the conflicting interests of the Great Powers in Europe and neighboring African and Asiatic Territories before the outbreak of the war.

SERBIA.

Under the law of 1901 Serbia created its National Army. This law was still in force, without change in 1914 and required military service of all Serbian subjects for thirty-two years. The service was divided into three classes: the first included the active army and its reserves; the second and third were composed entirely of reservists. The soldier served two years with the colors and eight years in reserve of the active army; then he passed into the second class to remain for seven years; thence into the third class to remain another seven years; then he passed into the general reserve for a period of eight years thus completing his period of liability for military service. The first and second class formed the field armies; the third class was destined for service on the line of communication and frontier guards; while the general reserve was to be used as a home guard.

By this law Serbia had approximately 350,000 in its active army. This number, however, was greatly inferior as compared to the other armies of Europe, but at the outbreak of the War it was an army of veterans. Although having the advantage of recent and successful field service this army was without transportation of any kind; it was short of rifles and poor in horses and was dependent on Russia for all its supplies for war. The number of available men was much greater than the 350,000 mentioned above but the shortage of rifles delayed putting any larger army in the field till some weeks after the declaration of war when 120,000 rifles were received from Russia.

A general mobilization was ordered in Serbia at 3 o'clock on the afternoon of July 25th, 1914. War was declared by Austria-Hungary against Serbia on July 28th, 1914.

Before going into the plans of operation of the Serbian Army it is desirable to look at the military geography of Serbia. Serbia is a country about the size of the state of Maryland and contained in 1914 about 4,000,000 people. It had on its east the hostile state of Bulgaria and on its North and West its traditional enemy Austria-Hungary. Serbia had been impoverished by two recent wars. It is generally mountainous, four-fifths of its land being uncultivated and much of it is oak forests. Serbia is separated from Austria-Hungary by rivers Sava, Drina and Danube; however the Sava and Drina are easily forded in numerous places in the summer months.

The shortage of transportation facilities and auxiliary services in this army made it almost impossible for it to take the offensive against the Austrian Army but in its own country with its many natural obstacles it could operate to a great advantage. Because of its small numbers, it was, also, impossible for the Serbian Army to occupy the Austro-Serbian frontier, which extends some 340 miles, especially since in summer months the rivers Sava and Drina are easily forded at numerous places. Field Marshal Putnik determined upon defensive operations and at once the seat of Government withdrew from Belgrad to Nish and the main armies were grouped in the Shumadija whence they could move rapidly either North or West. Strong detachments were posted at Valejevo and Ushitse and outposts stationed at every important point on the frontier, after this all that could be done was to wait till the enemy's plan of invasion materialized.

RUSSIA.

Russia by the law of 1874 first created its national army. This law required military service of every Russian subject, made provisions for exemptions, but allowed substitution between brothers. The names of the men enrolled to fill the annual draft was decided by lot. Under certain conditions where exemptions were not allowed service could be postponed.

Slight changes had been made in the original law but in the main it was the same at the outbreak of the war in 1914 and the whole population of the Russian Empire between the ages of 18 and 43 was liable to personal military service.

For political reasons the territorial system of allocation of recruits was never introduced in Russia. The peace strength units of the Russian army were composed of two-thirds Russians and one-third "subject-races,"

such as Poles, Letts etc. As a general rule neither the Russian nor the "subject races" were permitted to serve at or near their homes, but sent to units some distance away. However an exception was made to this rule on mobilization, in order to save time, and the various units were completed to war strength by drafting men from the local population.

At the outbreak of the war great things were expected of the Russian Army. Its vast numbers, to the average citizen would make it invincible, and reasonably so because this army alone in numbers, was equal to the combined forces of Germany and Austria-Hungary. She commenced the war with the equivalent of 114 infantry and about 36 cavalry divisions. She was the only nation in Europe, that, in recent years had met a 1st class modern army on the field of battle and no other army had such a large number of veterans. However, the Russian Army had always suffered from abuses, dishonesty had always been a great plague in its administration and with all Russian resources the army was dependent on import for its main supplies of arms and munitions.

The History of the Russian Army seemed to point to the conclusion that the army of 1914 would not be an exception to the rule and that, man for man, it would prove inferior to those of the other great powers of Europe. However, in this, much depended on the value of the experiences in the war with Japan. Unless she had profited by lessons of that war and unless there had been certain fundamental reforms Russia's armies were sure to prove disappointment to her Allies.

As we have previously seen events were occurring on top of events in rapid succession in Europe in the latter part of July in 1914. Russia had determined to protect Serbia against Austria and was, for that reason, carefully watching Austria. On July 25th, a council of Russian ministers held in the presence of the Czar adopted a tentative mobilization plan of thirteen army corps destined to operate against Austria only in case Austria should attack Serbia. Austria had partially mobilized and on July 28th, declared war against Serbia. The immediate result of this was a partial mobilization on the part of Russia in accordance with the afore mentioned plan.

In consequence of the reported unyielding attitude of Austria-Hungary against Serbia, Russia, on July 31st, ordered a general mobilization. This mobilization was, presumably directed against Austria-Hungary but it had been generally recognized from the first that general mobilization by Russia would lead almost immediately to the same measure by Germany.

It had been generally thought that mobilization on the part of Russia would be slow and disorganized because of the lack of transportation facilities and the character of that vast country. On the contrary, however, the general mobilization proceeded speedily and orderly.

Seven complete and two partially complete front line armies were organized in the districts as follows:

Complete.

- 1st. Army in Vilna Military district.
- 2nd. Army in Warsaw Military district.
- 3rd. Army in Dubno Military district.
- 4th. Army in Kazan Military district.
- 5th. Army in Moscow Military district.
- 8th. Army in Proskurov Military district.
- 9th. Army in Petrograd Military district.

Incomplete.

- 6th Army in Petrograd Military district.
- 7th. Army in Odessa Military district.

No definite date can be set as to when this mobilization was completed but it was much more rapid and orderly, than had been expected.

At the outbreak of the war the Russian government had a large accumulation of available cash. In the Imperial Bank of Russia it had on deposit 517,000,000 roubles. It had about 20,000,000 roubles in securities on deposit in Berlin which were withdrawn within twenty-four hours after the Austro-Hungary ultimatum to Serbia. At the same time Berlin bankers were instructed to remit 100,000,000 roubles of deposits of the Russian government to Paris, London and St. Petersburg. In addition the Russian government had credits in Paris amounting to 500,000,000 roubles at the outbreak of the war. The condition of the Bank of Russia was, to all

appearances, very satisfactory. At the outbreak of the war its legal maximum circulation of bank notes in excess of metallic reserve was increased by 1,500,000,000 roubles.

The sale of Vodke was discontinued and, since this had been a large source of revenue to the government for about 350 years, special new taxes were levied. Taxes on income from city estate were raised from 6 0|0 to 8 0|0. On certain commercial products the tax was increased 50 0|0. Merchant licenses were increased 33 1|3 0|0. A form of corporation tax was levied of from 5 0|0 to 7 0|0 of their profits and a special war income tax was levied.

At 6:00 P. M. on Saturday August 1st, 1914. Germany declared war on Russia.

It is important to study the military geography of this frontier district of Russia for it determined her plan of action.

The topography of Russia made invasion a very difficult if not hopeless task. A glance at the map shows a great salient approximately 200 miles N. & S. by 250 miles E. & W. projecting into the territory of what is known as the Tonic League. This salient is a great plain, through which from N. to S. flows the river Vistula, and near its center stands the capital, Warsaw, said to be one of the strongest citadels in Europe and around which lies a group of fortresses called the Polish Triangle consisting of Ivangorod, on the Vistula; Brest Litovsk; Warsaw and the advanced fort of Novo Georgiovsk. This triangle is a fortified region with three fronts—two toward Germany and one toward Austria. On the Southern frontier of Russian Poland there is no barrier till from fifty to one hundred miles south where the Carpathians protect the plains of Hungary against attacks from the north. However in the north between the river Narev and the sea, it is a country where military operations are difficult. This section is mainly swampy forests but changes as it nears the Baltic coast and becomes a chain of lakes and ponds with woodland of birch and pine between them.

The east of this salient along the river Prepet is a vast tangle of streams, ponds and marshes covering some 30,000 square miles and called the marshes of Pinsk. This district barred the march of armies and a road must be found to the north or south. Along the north in the valleys of the Narev and the Nieman was a chain of fortified crossings. South on the side toward Galicia, there were three fortified towns, namely, Lutsk, Dubno and Rovno.

Therefore this salient was defended on its western side by the Polish Triangle, on the north by the chain of forts along the Narev and Nieman, on the south by the forts south of Pinsk, and on the east by the great marshes of the Pripet.

The original Russian plan of campaign was to act on the defensive toward Germany and assume the offensive against Austria. The 1st. Army under Rennenkampf was to hold back Germany while the 2nd Army under Samsonov was to be held in reserve opposite Warsaw. The southern armies consisting of 3rd under Ruzski, 4th under Baron Salza, 5th under Pleehve and eight under Bruselove were to operate against Austria. The 9th Army was to be held at Petrograd for the defence of the capital against possible landings. The needs of the Allies later changed this somewhat and the 2nd Army was sent north and was replaced on the middle Vistula by the 9th Army.

We therefore have the concentration as follows:

(1) The Northwest Group commanded by Jilinski at Byelostok consisting of the 1st. Army under Rennenkampf deployed in the Vilna district to operate west into East Prussia; and the 2nd Army under Samsonov deployed on the Narev to advance north into east Prussia and in co-operation with the 1st Army to turn the Masurian Lakes.

(2) The Southwestern Group commanded by Ivanov at Rouno consisting of 4th Army under Baron Salza and 5th under Pleehve deployed facing south along the Khoem-Lejublin-Novo-Alexandria Railroad; and further south-east the 3rd. Army under Ruzski deployed about Dubno and the 8th Army under General Brussilov deployed about Proskurov. The 3rd and 8th Armies were to take the offensive at once against the line of communications of the Austrian Armies, which were known to be preparing to advance into Southern Poland.

BELGIUM

The old Belgian Army had been organized on the basis of conscription with paid substitution but the law of 1909 took the first step toward a National Army by providing for the military training of one son in each

family. The law of 1913 extended the principle of compulsory service and provided for an annual draft of 67,000 drawn not by lot but with reference to the material service already rendered by the family. Service began at the nineteenth year and lasted thirteen years, eight of which were in the active army and five in the reserves. The actual service with the colors was for the infantry, fortress artillery, and engineers, fifteen months; for the cavalry and horse artillery two years; and for the field artillery and train twenty-one months. Unfortunately these reforms were not complete in 1914 and the total of men available was only 263,000. By calling upon the Civic Guards Belgium was able to put into the field six divisions of infantry, one of cavalry and had approximately 130,000 men for the fortress garrisons. The field artillery was good, but there were few heavy pieces; the equipment of the infantry was not all that could be desired and no field uniform had been adopted. The Belgian soldier went into battle in his dress uniform.

As soon as the international situation demanded it Belgium took such precautions as her army permitted. On July 29th the army was placed on a strengthened peace footing by calling three classes of reserves to the colors. Complete mobilization was ordered on Saturday August 1st. At this time there was one division in Flanders, one at Lieze and two near the French frontier. Not until the German ultimatum did Belgium attempt to concentrate her forces against Germany and on August 4th her forces were still in the process of mobilization on line Brussels Antwerp. The 1st division was moved from Ghent to Tirlemont, the 2nd division from Antwerp to Louvain, the 5th division from Mons to Peroyse, the 6th from Brussels to Wavere and the 3rd division was rushed to Liege. These movements were protected by cavalry divisions concentrated at Gemolou and moving on Warene and two detached mixed brigades at Tongre and Huy. By the afternoon of August 4th these forces held the line from Boncelles to Barchon and cavalry patrols covered the gap between Pontaise and the Dutch frontier. This same day Germany declared war on Belgium and attacked at Liege.

The army of Liege was under command of General Leman and his plan was to make such a stand on the line of southern forts that the enemy would be delayed for a day or two and then the city must eventually fall but this need not mean the end of resistance as the northern forts could still hold out till the enemy should force the plateau from the city, or advancing from Vise or Huy should take them on the flank. This meant time and until they fell there was no progress from Liege toward the Belgium plain. It was General Leman's aim to hold as long as possible to the forts commanding the railway between Liege and Namu, for by that road the French would come. Every delay was most valuable since hourly the Belgian army looked for the arrival of its allies, the French.

FRANCE

The first principal of Universal Service was incorporated in the laws of France in 1872 and at first was very defective. In 1899 this law was amended to require three years service with the colors of all alike.

In August 1913 France passed the most drastic form of compulsory service yet known. This law imposed 28 years of military service on every Frenchman, save only the physically and mentally unfit. This service was divided into classes as follows: three years in the active army, eleven years in the reserve, seven years in the territorial army, and seven years in the territorial reserve.

The active army and its reserves consisted of 21 army corps, organized more or less on a territorial basis with twenty located in France and one in Algeria with headquarters as follows: I. Lille; II. Amiens; III. Rouen; IV. LeMans; V. Orleans; VI. Chalons; VII. Besancon; VIII. Bourges; IX. Tours; X. Rennes; XI. Nantes; XII. Limoges; XIII. Clermont; XIV. Grenoble; XV. Marseilles; XVI. Montfeller; XVII. Toulous; XVIII. Bordeaux; XIX. Algeria; XX. Nancy; XXI. Epinal.

The territorial army destined for lines of communication and garrison duty but also available for field service in home defence, was organized to produce 36 divisions on mobilization. These divisions, were however, only cadres, and the purpose of the Territorials was to form local guards, the surplus being sent to depots for training as drafts to supply losses.

Affiliated with the Territorials and destined for the same purpose of garrison work were the Gendarmerie the Garde Republican, the Donaniers and the Gardes Forestiers. Lastly we come to the Arme'e Coloniale, partly white troops recruited anywhere in French territory, partly native troops raised in Africa.

In addition to developing a National Army an extensive system of fortifications was undertaken. The North and East frontiers were divided into five sections, three of them being fortified and two being left un-

fortified. A German invasion from Belgium was to be met by fortresses at Lille and Mauberge. Fortifications at Dunkirk and Calais gave flank protection on the coast. The valley of the Oise was protected by Fort Hirson, that of the Meuse by Fort Charlemont and Mezieres, and that of the Cheirs by Fort Montmedy and Longwy.

The sector, about forty miles, from Mezieres to Verdun was left unfortified. Further south the defensive sector of the middle Meuse was guarded on the flanks by fortresses at Verdun and Toul, which were connected by a number of barrier forts. The next sector to the south from Toul to Epinal was left unfortified. In front of this sector, near Lunville, is Fort Manonville protecting the Saarburg-Lunville-Nancy railroad.

The last sector on the eastern frontier, the upper Moselle, was guarded on its flanks by the fortresses of Epinal and Belfort. Both are surrounded by double lines of forts and the two are connected by a chain of barrier forts similar to that of the middle Meuse. This completed the first line of defence.

Behind the opening sector from Mezieres to Verdun lies the fortified region of La Fere-Laon-Reims and further south on this second line is found the fortresses of Longres, Dijon and Besancon. As the third line we find the double line of forts around Paris.

On the Italian and Spanish frontiers the Alps and Pyrenees were similarly organized for defence though the natural barriers made defence much easier. Lyons in southern France bears the same relation to the southern fortifications as does Paris to the northern and eastern fortifications.

In building this extensive system of fortifications it was thought that a reduction of the great flanking fortresses would require much time and give opportunities for an offensive. Should a German invasion come south or north of the fortified zone of Middle Meuse, the French armies could assemble behind the Verdun Toul line and from there attack the invaders or take up a flank position facing north or south and await the attack. If the invaders come from Belgium, even though the northern defences were reduced, the field armies would still occupy a strong position facing north with their flanks resting on Paris and Verdun. The improvement in arms and explosives caused a complete rearrangement and reconstruction but in the main this general scheme was carried out and such was the condition of fortifications of France in 1914.

The war preparation of France began at 9:00 P. M. on July 31st., but order for general mobilization was not issued till 3:40 P. M. of August 1st., after news had been brought of the proclamation of martial law in Germany. The scheme of mobilization in France provided for completion at the expiration of twenty days with a regular succession of events occurring day by day within this given period. The first movement consisted of the posting of covering detachments and was completed by noon August 3rd. The mobilization proper started on August 2nd. The declaration of war came on August 4th. The concentration began at noon August 5th. By noon of August 12th, the more urgent transport movements had been completed and between that day and the 18th, the main work was accomplished with the armies concentrated as follows:

- I. Dubail—Belfort and Line Mirecourt—Lunville.
- II. Castelnau—Line Mirecourt—Lunville to Moselle.
- III. Ruffey—Moselle to Verdun.
- V. Lanrezac—Along Meuse and Belgian frontier.
- IV. De Cary—General Reserve—East Commercy Alsace Army—Pau, Belfort.

Coincident with the mobilization of the man power of France came the mobilization of her financial resources. In considering these financial resources of France we should keep in mind the instinct of economy of the French people and the general distribution of her national wealth. Three fourths of the families of France own their homesteads and as a country are very extensive foreign investors. These investments were usually in government or municipal bonds.

In France the principal function of the banks is the supply of commercial credits. The reports of four leading banks with branches all over France showed aggregate deposits on June 30th, 1914 of 5,504,000,000 francs, discounts 3,540,000,000 francs, advances and loans 1,080,000,000 francs, and cash reserve of 602,000,000 francs. In addition the smaller banks had deposits amounting to 5,000,000,000 francs. The nervousness preceeding the outbreak of the war brought on a run on the reserves of the Bank of France. The aggregate discounts increased from 1,541,000,000 francs to 2,444,000,000 francs during the week ending July 30th, while the circulation of notes advanced from 5,911,000,000 to 6,683,000,000 nearly touching the legal maximum which at

that time was 6,800,000,000 francs.

To counteract this influence the French government authorized, by a law of August 5th, 1914, the Council of Ministers to take any measure "necessary to facilitate the execution, or suspend the effects, of commercial or civil obligations." The legal maximum for the Bank's circulation of currency was raised to 12,000,000,000 francs and a decree was issued postponing for thirty days the maturity of all obligations falling due during the month of August. These all relieved the Bank of France and increased its capacity for meeting the extraordinary demands made upon it by the state. By agreements the state could call on the Bank for advances up to the amount of 2,900,000,000 francs.

The French plan of operation had for its first step an offensive thru Lorraine and had as its objective the turning of the left of the main German force advancing through Luxemburg and the Ardennes securing the Briey coalfields by the investment of Metz by the seizure of the bridgeheads of the upper Rhine to interfere with the line of communications of the German V, VI and VII armies. It was thought that this was the weakest of the German forces and it would have considerable difficulty in holding the country between the Vosges and the Rhine. Thus the first attempt would be to clear the Vosges passes held by weak German forces, and which must be captured in order to safeguard the flanks of any advance from Belfort or Nancy. On the 15th. Joffre heard for the first time that the German forces were moving through Liege enroute for the Belgian Plain though he had as yet no notion of their size. The northern attack was not only coming by the Ardennes as he had thought and necessitated a change in plans. Accordingly he ordered the V Army to move up into Belgium and occupy the angle formed by the Sambre and the Meuse and the IV Army to link up with the III Army by taking place left vacant by the V Army.

The French plan at this time considered Namur to be as capable of a strong defence as had the Liege forts and it was decided to use it as a pivot for an advance into Belgium by Lanrezac and the British Army, now in the process of concentration. If this advance was successful it would gain the line Namur—Brussels—Antwerp. As a protection against raiding cavalry, however, he sent d'Amad to Arras to take command of a group of territorial divisions and watch the country about Donai and Lille. To Joffre's mind it was clear that the enemy would not be equally as strong in Lorraine, in the Ardennes and north of the Meuse, and his policy was to disconvey the point of enemy weakness.

BRITISH EMPIRE.

In the summer of 1914 the only professional army of Europe was that of the British Empire. It was an army raised and maintained on a voluntary basis and paid as economically as possible. This army consisted of a small striking force called the "Expeditionary Force" organized into one cavalry division and six infantry divisions, with staffs for headquarters units of a general headquarters and two armies, and capable of taking the field in Europe at short notice; garrisons for colonies and protectorates; and a Home Defence Force of territorial troops for defence of the United Kingdom against invasion during the possible absence of the striking force. This army made up the largest and best strictly professional army in the world.

In addition to this army the regular reserves, composed of men who had been fully trained by service in the regular forces, could be used to make up shortages in the regular personnel; the special reserves, composed of men who had received recruit training and an annual 27 day period of training thereafter, could be used as infantry for coast defence garrisons; the Territorial Forces, for home defence only, was composed largely of men who were too old or too young or physically unfit for active campaigning, and for this reason wholly inadequate both in strength and training.

Preparations for mobilization had received most careful consideration and consisted in "a precautionary period" and "general mobilization." The first or precautionary period concerned mostly the navy and coast defenses in defense of the nation from possible invasion, and came at a very opportune time as it found the navy ready for immediate action because of a concentration of units for the Royal Review of Portsmouth on July 18th. On July 24th, because of the diplomatic crisis, the dispersal of these units was postponed and on Aug. the 2nd, Great Britain gave its promise to protect the coast of France. On the same day the Expeditionary Force was ordered to mobilize. The mobilization plans were minutely followed and the declaration of War against Germany on August 4th, found this force ready. Embarkation began on the night of August the 7th., and on August 17th., it was officially announced in the English press that the whole of the Expeditionary Force was safe-

ly landed in France.

This army was only the first wave of a great torrent. On August the 5th Lord Kitchener was appointed Secretary of State for War: on the 6th the army was increased by 500,000 and the colonies began to pour in with their help. Canada turned over all her resources to the cause of the Allies and immediately called for volunteers. This call was responded to with enthusiasm and in only a few days 100,000 men had offered themselves. New Foundland increased her naval reserve strength to 1,000 and sent 500 men to the Expeditionary Force. Australia undertook to raise and equip an Expeditionary Force of 20,000 men and a Light Horse Brigade of 6,000. New Zealand raised an Expeditionary Force of 8,000 men of all arms. In south Africa the union government released all British troops for service outside South Africa and General Botha called out local levies for a campaign against German Southwest Africa and put himself at their head.

In India there were roughly 70,000 British troops and a native army consisting of 130 regiments of infantry, 39 regiments of cavalry, the Corps of Guides, and ten regiments of Gurkhas who were mercenaries from the independent kingdom of Nepal. From the Indian Army it was announced that two infantry divisions and one cavalry brigade would be dispatched at once to the seat of war in Europe; while three more cavalry brigades would follow. In the meantime the rulers and princes of India had placed their resources at the King-Emperor's call. The twenty-seven larger native states which maintained Imperial Service troops, offered their Armies and from twelve of these the Viceroy accepted contingents of cavalry, infantry, sappers and transport, besides a camel corps from Bukhanir.

Along with the mobilization of men of the British Empire came the mobilization of its finances. The progress of political crisis in the last week of July 1914 was automatically reflected in the financial situation in England and the economic crisis developed with such rapidity as to portend the immediate stagnation of the whole machinery of credit. The stock exchange closed its doors on July 31st, when continental dealers were demoralizing the market by unloading securities in a frantic effort to liquidate some of their assets. The assistance of the government was necessary to avoid the threatened submergence of the whole financial organization. First of all of the government's provisions came the moratorium which was a legal postponement of payment of obligations falling due. On August the 7th pound and half-pound treasury notes were put in circulation at the rate of £5,000,000 daily limited to the approximate sum of £200,000,000. At this time all debtor countries were pressed for payment and arrangements made that gold so received to the care of the Canadian minister of Finance in Ottawa.

During the early stages of the conflict the British government obtained the necessary funds for conducting its military operations by borrowing from the bank and issuing short term treasury notes. Later on loans were negotiated from outside the British Empire.

Lord Kitchener, as Secretary of State for War, did not believe the war would be short nor easy, or that any one campaign would be decisive. He made his plans for a war of several years duration. From the outset he realized that the British were poorly prepared for a great war on land but he was sure that such preparedness could still be achieved. The struggle as he saw it would last at least three years, and he laid his plans for an army of seventy divisions, which should reach its maximum strength when the enemy's had begun to decline. He was convinced that the main German thrust would come through Belgium, and he was anxious that the British army should concentrate about Amiens and not at Menbeuge, for he guessed at the broad sweep of Kluck's envelopment and he did not wish the morale of his troops to be impaired by beginning a campaign with a compulsory retirement. On this point he was overruled but his instructions to the British Commander-in-Chief shows how little confidence he had in the initial French plan. He warned him that he could not be rapidly or strongly reinforced, and would in no case come in any sense under orders of any Allied general. While every effort, he added, must be made to coincide most sympathetically with the plans and wishes of our Ally, the gravest consideration will devolve upon you as to participation in forward movements where large bodies of French troops are not engaged, and where your force may be unduly exposed to attack." This caution was wholly justified. If the British in the next three years were to build up a great army they could not afford to have their nucleus of highly trained regulars squandered fruitlessly at the outset.

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Invasion and the War in Belgium.

GERMAN PLANS AND MOBILIZATION AT THE OUTBREAK OF THE WAR.

—By—

First Lt. Ellis Bates, Inf.

1. PLANS.

AFTER 1870.

In studying the subject expressed in the title of this monograph, it is necessary in order to more thoroughly understand the German plans put into execution at the beginning of the World War, to go back beyond the years just preceding the war and study the military plans of the German leaders after they had brought the Franco-Prussian War of 1870 to a conclusion favorable to the Teutons. In the years just after that war the elder Von Moltke, one of Germany's greatest leaders and heroes, had presided over and guided the destiny of Germany's military future.

Germany had always been faced with the problem of a two-front war descending upon her, with the two great powers—France and Russia—who hemmed her in on two sides, as enemies. Von Moltke had thoroughly appreciated this situation, and at the conclusion of the war of 1870 his great military mind at once set to work to plan and guard against this danger.

He at first considered that in view of France's weakened condition, brought about by the struggle of 1870, that in the event of a hostile combination of France and Russia, Germany could retort with an offensive on both fronts. France quickly recovered to such an extent, however, that Germany soon found she must make a choice of one front for an offensive and the other for holding. Moltke then, in view of the slow Russian mobilization, was in favor of the offensive against France. He thought that in a few weeks he could gain the decision over France. Then, instead of making any further advance on Paris, he planned to discontinue the French attack and to throw as much strength as possible against Russia. He thought that Russia could not mobilize within a month, and by that time he would have finished the campaign against France.

In 1880 Moltke reversed his strategic plan and decided first to hit Russia and then France. This change of plans was due partly to the great strengthening of the French border fortresses and partly to the fact that a union with Austria had been affected in 1879, which gave Germany such an accession of strength in the east that she thought she could quickly crush Russia, while France would be held in check by the strong natural and artificial defensive line of the Rhine.

Moltke was succeeded by Count Waldersee as Chief of Staff, who was of the same opinion as his predecessor.

In 1891 the German General Staff again reversed its plans for the conduct of a possible war against France and Russia. Count Waldersee during that year had been succeeded as Chief of Staff by Count Von Schlieffen, who decided that he must first put France out of the way and then turn on Russia. The rapidly increasing military power of France was the greatest factor in the new change of plans. Germany had always planned on taking the offensive before her enemy could do so, and the new aggressiveness of France frightened her and led her to believe that France instead of Germany might possibly take the first offensive in an effort to recover the provinces which she had lost in the Franco-Prussian War. In case of war, Germany under this plan intended to concentrate her greatest forces for the attack upon France, leaving only a small number in the eastern theater.

THE PLAN OF 1914.

In 1914 came the opportunity for which Germany had so long planned and waited. The dispute between Austria-Hungary and Serbia was seized upon by Germany as a chance for war. Let us now analyze the general strategical plans open to Germany. The war of her own choosing was upon her. She found that she had to choose from the following plans:

- (a) A defensive on both fronts;
- (b) The plan of the elder Moltke, i. e., a defensive against France and an offensive against Russia;
- (c) The plan of Von Schlieffen of a defensive against Russia and an offensive against France.

The first of these plans, that of conducting a two-front defensive, naturally implies a long war and was

rejected on that account. Besides, Germany's army was trained as an aggressive army, and its leaders knew the benefit of carrying the war to the enemy's country.

The second of the three plans, the Moltke idea, had many adherents and in fact was never completely excluded from consideration by the greater military minds of Germany. However, an offensive against Russia, with simultaneous defensive operations against France in the west, also implied a long war and was therefore rejected.

The third plan, the one conceived by Gen. Count Von Schlieffen, implying an offensive against France and a defensive against Russia was adopted. Under this plan Paris was the obvious goal of the Germans, and the idea of the victorious troops of the Kaiser again marching through the streets of Paris as in the preceding war appealed tremendously to the whole nation, and made this the popular plan. "Nach Paris" was the cry.

DEVELOPMENT OF THIS PLAN.

It has been found that the plan of Schlieffen gained the most adherents. The next question which confronted the great German General Staff, reputed to have been the hardest worked body of soldiers ever known, was how best to carry out the adopted scheme of crushing France in the minimum time.

In keeping with all great war plans that of Germany and the Central Powers was extremely simple. Austria, with the help of a few German corps, was to take care of Russia, while Germany was defeating France.

Rapidity of action seemed to the Germans to be the one essential of success. She had to beat her enemies in turn, using somewhat the same forces to do so, and it was this seeking for speed which led to the choosing of the route of invasion.

Four possible routes were open to the Germans. From the south of France to the north these were the Belfort gate, the Lorraine gateway, through Luxemburg, across the Belgian plains.

Paris, the great prize, was naturally defended from an eastern invasion by a series of plateaus rising from the Paris basin, and by the mountainous regions of eastern France. Since 1870 these natural barriers had been artificially strengthened by a strong line of fortresses stretching from Belfort in the south to Epinal, and from Toul to Verdun, the entire eastern frontier being covered except a break through Toul and Epinal. Practically all river passes through the hills in the east of France were guarded by fortified or semi-fortified cities. A strong offensive from the direction of Metz would have the shortest distance to travel to reach Paris, about 170 miles. However, in this movement the Prussian forces would have to fight through the fortified French frontier and the difficult terrain of eastern France. An offensive through Belfort, from time immemorial a route of invasion from the east, would have the same conditions to contend with. An offensive through Luxemburg would to a lesser degree meet the same opposition of terrain and fortresses. There was one other route open for the great drive—across Belgium. By going through Belgium, Germany knew that she would make one more enemy. Belgium would be forced to enter the war. Furthermore, the distance to Paris by this route was about 250 miles, approximately 80 miles further than by making a great offensive from Metz through the Lorraine gateway. However, speed was the thing, and Germany decided that she could move the fastest by way of Belgium, in spite of the longer distance. In Belgium there were many excellent roads and railways which favored the rapid advance of many columns. Rich coal and iron deposits and fertile fields would be taken over. Splendid lines of communication and supplies could be maintained across this plain. The route from physical characteristics was easily the best. By making the movement through Belgium, the difficulties involved in an attack on the Belfort-Nancy-Toul-Verdun front could be avoided. Furthermore, Germany intended to actually crush France—to put her definitely out of action—and to do this it was deemed necessary by all German leaders to make the invasion an enveloping movement. The narrow Franco-German border gave her no room for this encirclement, so essential a part of German tactics. By going through Belgium she had plenty of room for this, and at the same time she obviated any danger to her own right flank from the direction of Belgium.

Taking all these things into consideration, Germany decided that the way in which she could most speedily crush France was by making the invasion via the Flanders route. Military necessity from the German view overrode any scruples she may have had with regard to the violation of the neutrality of Belgium. This was

the chosen route for the main drive of the German forces toward Paris. Based from Cologne, this drive was to be made across the Belgian frontier near Aix-la-Chapelle, through Liege, up the valley of the Meuse and Sambre, into France near Maubeuge, and then down the valley of the Oise. In conjunction with this great flanking maneuver, pressure was to be applied simultaneously on all parts of the Franco-German line.

This operation was to be followed by a drive of the German center based on two other great advances—one from Coblenz and the valley of the Moselle west across Luxemburg, into France near Longwy, across the Meuse and down the valley of the Aisne, the other from Strassburg across Lorraine, between Metz and the Vosges mountains, through Nancy, between the barrier fortresses of Toul and Epinal, and down the valley of the Marne. The sketch on page 26 shows the routes chosen by the German General Staff for the assault of France. The entire scheme of invasion pivoted on the German armies to be formed around Metz. The rapidity of the advance through Belgium and the suddenness of the blow against France was counted upon by the Germans to furnish the surprise element which they wanted in order to make their victory most complete.

The German war plan counted on a relatively short war and also contemplated a considerable delay in Russian mobilization. It was believed that Russia could not possibly become dangerous within six weeks. While carrying out the offensive operation in the west, Germany planned to safeguard her eastern frontiers with a few corps to hold off any Russian invasion from northern Poland, while Austria took the offensive in southern Poland.

Germany did not at first place much dependence upon her navy. She was banking on the army, and the navy was to remain behind the defenses of Kiel. The submarine campaign was later decided upon.

II. THE MOBILIZATION.

ORGANIZATION FOR MOBILIZATION.

The German mobilization was tied fast to the plan of the General Staff adopted for the invasion of France. The whole German military system rested upon the mobilization, and one of the main points in the training of the German armies as a whole was their ability and readiness to launch their entire fighting force swiftly in any direction. Here it will be well to define mobilization as differentiated from concentration. Mobilization naturally runs into concentration, and I will therefore slightly touch on the subject of the initial German concentration in this paper, but the real subject in which I am interested is mobilization.

Just what is it? Mobilization is the act of bringing an army to a war footing from a peace basis. Concentration follows mobilization, and implies the distribution of troops along the hostile frontier in such a manner that they may be available for action. Mobilization consists in the call for men and the requisitioning of animals, the assembly of men and animals in camps, and their division into field, depot and garrison forces. It means the gathering together of the state's human forces, in and also out of the country, so as to supply them with food, weapons, clothing, transportation and like. It means the patrolling and defence of all frontiers and the taking of measures for the protection of all bridges, railroads and highways. In other words it means the putting into effect of all measures necessary to pass from a peaceful state to military state, in which the strong hand of the military chief executive is supreme.

Upon the excellence of the system of mobilization which the Germans had built up rested their hopes for a quick body blow to France. Let us seek to find out how they had builded this remarkable machine, waiting only for a day when it might find a word flashed over the country on its well-oiled way.

Germany's standing or peace time army was composed of about 830,000 men. In peace times this number was divided into 25 army corps. With the exception of one corps, the famous Prussian Guards, which was

sustained and recruited from the nation at large, these twenty-five corps were on a provincial basis, different corps drawing their men and being kept up by different provinces. Following is the peace-time distribution of these army corps:

Corps	Headquarters	Provinces
Guards	Berlin	Nation at Large
I.	Kosingsburg	East Prussia
II.	Stettin	Pomerania
III.	Berlin	Brandenburg
IV.	Madgeburg	Prussian Saxony
V.	Posen	Posen
VI.	Breslau	Silesia
VII.	Munster	Westphalia
VIII.	Coblenz	Rhineland
IX.	Altona	Holstein
X.	Hanover	Hanover
XI.	Cassel	Hesse-Cassel
XII.	Dresden	East Saxony
XIII.	Stuttgart	Wurtemberg
XIV.	Karlsruhe	Baden
XV.	Strassburg	Alsace
XVI.	Metz	Lorraine
XVII.	Danzig	Wst Prussia
XVIII.	Frankfort	Hesse, Darmstadt
XIX.	Leipzig	West Saxony
XX.	Allenstein	East Prussia
XXI.	Saarbruck	Alsac, Lorraine
Bav. I	Munich	Bavaria
Bav. II	Nuremburg	Bavaria
Bav. III	Wurzburg	Bavaria

From this it will be noticed that the strongest and most corps were grouped in Alsace-Lorraine and along the Rhine, the second strongest grouping being along the German-Russian frontier.

Each of these provinces, in fact the whole of Germany, was also subdivided into districts, whose business it was to have on record not only all data regarding every reservist, but also all motors, horses and vehicles available, food, everything likely to be wanted or needed by the army. Each corps area had its own headquarters and in each military sub-division or district of each province there was a mobilizing center. Each German reservist knew the reporting place of his district. The districts are so located that they can forward their drafts of men and material to the provincial concentration point—the corps mobilizing station—at the quickest possible notice. The provincial concentration points are so situated that the masses of men pouring in from all sides can be properly cared for and sent in the needed direction without loss of time or any congestion whatever. As the men report to their own mobilization centers they are completely equipped and then sent on to the corps center, either join their old organizations or be assigned to new units, and are then all ready for the front.

Such a mobilization system as this must necessarily have a highly developed transportation system to support it. Such was the case. Germany's mobilization and her plan of hitting France and crushing her, then using her wonderful system of strategic railways to move her troops against Russia, depended upon her railways. From Berlin trunk lines extend almost in a direct line to her French and Russian frontiers. These are not single lines, but double or triple and in many cases quadruplicate lines of steel converging with other strategic lines at certain points—Hanover, Cassel, Frankfort, Cologne, Strassburg. Note with one exception, Madge-

burg, which is connected with the main lines by a net of branches, all of the corps centers are on main trunk lines. For more than decade Germany had been constructing strategic railways to the Belgian frontier, and practically every mile of German railway built in the last years before the war was constructed for military reasons. In addition to the main lines across Germany from border to border, a maze of branches, especially at important strategic points along the French, Belgian and Russian frontiers, had been constructed. Into Russia Germany had 17 lines, capable of 500 troop trains daily. Russia had only 5 roads to the German border. Under the German system also ninety per cent of all railway officials were ex-soldiers.

Elaborate time tables and transportation cards were in readiness to be put into execution on the instant of mobilization, superseding the civil tables of peace-time. Theoretically and practically these schedules were tested twice a year at grand maneuvers. It is said that in the last Kaiser maneuvers held before the war over half a million men were concentrated and transported without a hitch from one end of the empire to the other.

THE MOBILIZATION IN 1914.

Such then was Germany's elaborate machine of mobilization with which she was preparing first to overrun and destroy France, then to turn on Russia.

On July 30, 1914, at 1.00 p. m., several Berlin newspapers, among them the Lokal Anzeiger, a semi-official paper, simultaneously announced in special editions that German mobilization had been declared. Those special editions were at once seized by government officials, and the French and Russian ambassadors in Berlin were told that the report was false. However, all these papers were under the rigid control of the government.

On July 31st something new in the line of official proclamation was invented by the German government. "Kriegsgefahrzustand" or "state of imminent danger of war" was announced from Berlin. This meant the introduction of martial law, and actually the perfecting of the military machine. It now only needed the word to set this huge instrument of war into motion. In every other country this would have been understood in the fullest sense as general mobilization. Russia on the previous day, July 30, had ordered complete mobilization against Austria. In order to make a complete mobilization it was necessary for Russia to call out her troops in Poland, which faced Germany as well as Austria. Germany intended to make this an excuse for her own mobilization against both Russia and France, attempting to make it appear to the world that she was acting in self-defence in view of the mobilization of Russia occurring near the German border. On the same date that she declared at state of danger of war to be existent, she sent an ultimatum to Russia demanding that Russia stop within twelve hours "every measure of war against us and against Austro-Hungary." At the same time she informed France of her attitude toward Russia, and demanded to know within eighteen hours whether or not France would remain neutral. Naturally these demands were ignored, as Germany wanted and hoped they would.

On August 1st, Germany declared war against Russia and ordered general mobilization.

There is much evidence to the effect that Germany was really mobilizing during all this period of agitation while she was conducting her clumsy diplomatic exchanges with the other nations. On July 21st, the French ambassador in Berlin had informed his government that mobilization was then taking place. It is probably true that there was considerable troop activity throughout Germany at this time, but it cannot be proved beyond doubt that Germany had actually taken her final steps toward complete mobilization of the nation's troops and resources until the proclamation was issued by the government on August 1.

On mobilization all of the railways were at once taken over by the government, and the tried and tested war-time railway schedules were immediately put into effect by the railway officials. Reservists were called to the colors and all war-time measures at once took effect.

Without waiting to receive and equip their reservists, the garrisons along the French frontier were at once reinforced by peace-time regular army brigades and divisions brought from the interior. Behind this protective line mobilization took place in the usual manner, each corps mobilizing in its own provincial area.

Germany's immediate strength in case of war had been underestimated by her enemies. Her peace-time organization and her method of calling in reserves was well understood. Each corps in peace or war consisted of two divisions. It was known that in time of war at mobilization these two divisions were at once brought to war strength by the inclusion of active reserves, and that extra corps would be formed from surplus reservists. However, what was not known and what formed one of the surprises of the German General Staff, was the fact

that before 1914 arrangements had been completed for duplicating each first line corps with a reserve corps. For every active corps there was to be one reserve corps. This actually almost doubled the strength of the German army for the initial blow over what had been expected by the enemies of Germany. These reserve corps mobilized in the same manner as the active corps, and in the area of the corresponding active corps.

Mobilization in Germany proceeded with the precision of clockwork. The word was flashed to every corner of the German empire on August 1st, and brought the reserves to the appointed mobilizing center of each corps. It must be remembered that Germany's first blow was to be aimed at France, and the initial mobilization having started the German concentration was made along the Belgian and French frontiers. Corps at cities near the French frontier, such as Metz, Strassburg, and Coblenz, were at once strengthened by corps from the interior, which were shipped immediately to the border without waiting for the addition of their active reserves.

German mobilization was completed on August 12, three days before the same process had been achieved by France. However, the Germans in their plans of attack against France, of which speed was the keynote, did not wait for their mobilization to be completed before they moved on Belgium. Many reservists, and even whole corps, which had to be transported from the interior of Germany, did not join the armies to which they were assigned until after the fall of Liege had occurred and fighting was well under way. Naval reservists were mobilized in about the same manner as the army reservists, reporting for duty at their previously designated stations when the word of mobilization was sent out.

THE INITIAL CONCENTRATION.

The immensity of the German mobilization and concentration, which has been termed the greatest troop movement the world has ever seen, may be appreciated when one considers that a German army corps required more than 100 trains, each composed of 55 cars, for its transportation. The huge value of Germany's strategic railways may also be faintly appreciated here. Guns, rations, ammunition, artillery, clothing, animals, trucks for the rapid advance through Belgium, all went with the troops. The entire country, not just the army, was mobilized, and the huge national army was a perfect mechanism which might have been thrown into fatal confusion by the blunder of one official or the delay of one train. The blunder did not occur. Regiments that had been ordered to mobilize in the forenoon are said to have left in the evening for the field fully equipped.

The German mobilization in 1914 rendered about 1,850,000 men ready for service at the end of six days. This was only the start of the initial mobilization, and by the time fighting had commenced in earnest along the two fronts she had about 4,500,000 men in the ranks. This included the peace time army of about 830,000 men, the active reserves (men who were under 28 years of age and who had recently been in the service), the Landwehr (trained men between 28 and 39), the Landstrum (trained men of middle age), and the Ersatz reserve (men who for various reasons had escaped the call for military service, and who in time of war if called upon passed into the Landstrum). The Landstrum was divided into two classes on an age basis, and the second class, with the Ersatz, was the last group to be called.

Germany's plans for the invasion of France, which had been conceived by Gen. Von Schlieffen, called for a great concentration of troops along the Belgian and French frontiers, and for a small number along the borders of East Prussia to hold the Russians. Von Schlieffen in 1906 had been succeeded by Gen. Von Moltke, a nephew of the elder Moltke, who adhered for the fundamental views of Schlieffen, and the beginning of the campaign in the west developed in the main in accordance with the Schlieffen plan.

The German armies were accordingly assembled on the western frontiers, and as they stood in the last day of the initial mobilization were as follows:

Army	Commander	Corps		Area in which assembled
		Active	Reserves	
I.	Von Kluck	2	3	Near Cologne—concentrated behind Maestricht tongue
		3	4	
		3		
		4		
		9		
II	Von Bulow	7	10	South of Cologne—concentrated facing the Liege frontier, Aix la Chappelle-Malmedy
		10		
		11		
		Guards		
III	Duke of Wurtemberg	8	8	On Luxemburg frontier
		18	18	
IV	Crown Prince of Germany	5	5	Southeast of Luxemburg, area Metz-Thionville-Saarbruck
		6	6	
		13		
		16		
V	Bavarian Crown Prince	21	1B	East and southeast of Metz
		1B		
		2B		
		3B		
VI	Von Heeringen	14	14	In Alsace, between Metz and Strassburg
		15		

These six armies were mobilized with faultless efficiency and were ready upon the declaration of war to invade France as planned.

Just as operation began still another army was organized in the western theater under General Von Hausen. This army, which included the 11th Corps, taken from the 2nd Army after the fall of Liege, and the 12th, 19th and 12th Reserve Corps, which did not join until August 11th, 12th and 13th, respectively, was inserted between the 2nd Army, commanded by Gen. Von Bulow, and the army of the Duke of Wurtemberg, and was hereafter known as the third army, the remaining armies in the west, connecting with the army of the Duke of Wurtemberg, being then numbered consecutively up to seven.

In addition to these armies in the west detachments under Gen. Von Deimling were concentrated in Alsace to guard the German left.

As the armies first deployed in the west they included all the 25 active corps except the 12th and 19th, which soon after joined Von Hausen's 3rd Army, and the 1st, 17th and 20th, which with the 1st Reserve Corps were mobilized and kept in East Prussia. The army in the east was known as the 8th Army.

The concentration in the west was soon increased by the addition of reserve corps, which were mobilized within their own provincial areas and later sent forward to join the armies to which they had been assigned. As before mentioned, the first concentration gave Germany a total of about 1,850,000 men on the western front for the first blow against France. Twenty active corps and nine reserve corps constituted the main part of this number. The strength of a war-time corps was about 50,000, and these 29 corps, with the detachments in Al-

sace and and the cavalry divisions attached to the armies, made up the total of 1,850,000. As the advance of the western armies began most of them were strengthened by the addition of troops just arriving from Germany. The reservists of the 3rd and 9th Corps joined their corps at Liege, the advance having begun before the mobilization was completed. The armies in the west stood on a battle front about one hundred ninety miles in length, although it was not continuous. The 8th Army in East Prussia at the outset numbered close to 200,000 men.

The complete concentration of Germany's active corps was made by August 15. The concentration of the reserve corps was completed by August 17, and the concentration of the Landwehr and other forces was completed by August 18.

III. SUMMARY.

Such was the story of Germany's plans and the mobilization which so startled military thinkers by its rapidity and perfection. A brief summary shows the points which I have covered to be as follows:

As to Plans—

1. To crush France in a minimum of time.
2. To hold Russia (with the help of Austria).
3. In order to effectively and speedily defeat France, an enveloping movement through Belgium was necessary, this emplying the strongest possible concentration of troops on the German right, opposite the frontiers of Belgium and France. Speed needed to give surprise.
4. France disposed of, to throw all the available Prussian resources of men and material to the assistance of Austra-Hungary in the eastern campaign against Russia.

As to mobilization—

1. It was to be as rapid as possible.
2. It was to obtain for Germany for the first blows a superiority of numbers over France.
3. Its greatest concentration aimed at the Belgian frontiers

IV. CONCLUSIONS.

Germany's plans in the event of a two-front war were the results of years of study on the part of great soldiers, the German General Staff. That these plans failed was not due to any unsoundness on the part of the plans, but rather due to the fact that the plans could not be carried out by the field armies.

The violation of Belgian neutrality, which not only made an enemy of Belgium, but also brought England, with the world's greatest navy, into the lists against Germany, was one great reason for the German failure. Belgium's brave resistance against the first hordes of German invaders gave France time to complete her mobilization. Italy, before the war a luke-warm ally of Germany, was later forced into war against Germany. Then again, Russia mobilized far quicker than Germany and in fact the whole world had believed possible and launched an offensive against Austria and Germany, which forced Germany to move some of her corps from the west to the east at a time when the presence of these corps in the west was sorely needed in order to gain the quickly sought decision over France.

Lastly, the Germans had planned actually too well. They thought that they were well imbued with the teachings of the elder Von Moltke, and that they were following in the footsteps of this great military leader. Actually they did not follow his principals. The Germans in the World War planned their advance years ahead clear to Paris. This was exactly contrary to the principals of Von Moltke, who said "it is a delusion to imagine that a plan of campaign can be laid down far ahead and fulfilled with exactitude. All that the leader of an army can do is to form a correct estimate of the circumstances, to decide for the best for the moment, and carry out this purpose unflinchingly." Moltke in 1870 had only prepared in every detail his successful advance on Paris as far as the Franco-German frontiers. Germany in 1914 laid down rules for the conduct of the ad-

vance clear to Paris. Had the Germans really adhered a little closer to the teachings of Moltke for his conduct of an aggressive campaign, the actual basic soundness of their plans and the advantages gained by their speedy and complete mobilization might have accomplished their purpose.

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PART II.

THE EASTERN FRONT

THE BATTLE OF TANNENBERG

—By—

Capt. Charles H. Karlstad, Infantry.

ORIENTATION.

The Battle of Tannenberg is the title given a battle of the World War fought near the village of Tannenberg in east Prussia, beginning August twenty-second, and ending August thirty-first Nineteen hundred fourteen, between the German VIII Army and the Russian II Army.

THE COMMANDERS.

German—Paul Ludwig Hans Anton von Beneckendorf und von Hindenburg was born of a military family in Germany in 1847, entered a military academy at the age of eleven and in April 1865 became a Second Lieutenant in the 3rd Regiment of Foot Guards. He served in the field in the war between Prussia and Austria in 1865 and in the war between Germany and France in 1870-71. He rose by successive steps through General Staff and Command duty until he became a Corps commander in 1905. From this duty he retired from active service in 1911. He was at all times a thorough and diligent student of military history. He was recalled to active duty to command the VIII Army on the Eastern frontier at three o'clock the afternoon of August 22, 1914 and arrived at his post of command at Marienburg, East Prussia, the afternoon of August 23.

General Erich von Ludendorff, as Chief of Staff of the VIII Army, very ably assisted General Hindenburg at the Battle of Tannenberg.

Russian—Samsonov, at the outbreak of the world war, was fifty-five years old. He had commanded a division of cavalry in the Russo-Japanese war but for several years preceding the World War had been engaged in administrative duty of a nature that did not fit him well for the command of an army in the field in modern war. He assumed command of the Russian II Army on August 16th, 1914. He was of a simple, kindly nature and well liked by his officers and men.

General Zhilinsky, commanding the northern Army group consisting of the I and II Armies, was a mediocrity who owed his appointment to the favoritism of the Russian Minister of War. The Russian disaster at Tannenberg is due in large part to the failure of this officer to co-ordinate his Armies and lead them in proper manner.

GENERAL SITUATION.

A. PLAN OF CAMPAIGN.

German—During the years of peace preceding the World War the German General Staff had prepared exhaustive plans of campaign for such a war as came upon them in 1914. The Empire must strike and crush one enemy in a very short time and then turn the bulk of her forces against the other. As Russia was deemed slower of mobilization than France, The Fatherland must first send the bulk of its forces against its western enemy, and retain only a sufficient force on its Eastern frontier to make it reasonably safe from invasion by Russian forces.

Russian—The peace time plans of the Russian General Staff, formulated in the years preceding the World War, were to divide her active forces into two groups known as the Northwestern Front of two armies and the Southwestern Front of four armies. It is with the Northwestern Front only that this monograph is concerned. The forces on this front, in case of strong German attacks, would offer an elastic defence on one line after another and would hold the region on Bialystok-Grodno-Vilna at all costs during the troop movements there. In case of relatively weak German forces in that theater the two armies would assume the offensive, conquer East Prussia to the Vistula River and thereby definitely secure the right and rear of the future Russian

main effort. This attack was to be carried out by the two armies, the I Army advancing against the Masurian Lakes and the Angerapp River, while the II Army advanced north north-west through Mlawa-Allenstein, on the west side of the Masurian Lake region from where it would strike the German resistance against the I Army in the right flank and rear.

The early events of the war having shown that the German main effort was first being directed toward France, the Russian Commander-in-Chief directed his Northwestern Armies to advance, partly to secure the objective just described and partly to startle the German High Command to detach forces from the Western front that were then engaged in over-running France and Belgium.

B. TROOPS.

German—At the outbreak of the war, Germany retained in East Prussia the VIII Army under command of General von Prittwitz. It was made up of the I, XVII and XX Army Corps, the I Reserve Corps, 3rd Reserve Division, 1st Cavalry Division, 70th Landwehr Brigade, 6th Landwehr Brigade and the garrison of the fortresses of Königsberg, Thorn, Kulm, Graudenz, Marienburg and others. The fortress garrisons were Landwehr and Landsturm formations, the names given German second line troop organizations. Their strength was approximately 200,000 men.

Russian—The Russian I Army was under command of General Rennenkampf, an officer of German ancestry who had won fame as a cavalry commander in the Russo-Japanese war. It consisted of the II, III, IV and XX Army Corps. On its right the 1st and 2nd Guard Cavalry Divisions and the 2nd Cavalry Division, formed as one corps, operated under the command of the Commanding General of the 2nd Cavalry Division. On its left the 1st and 3rd Cavalry Divisions acted as one corps under the Commanding General of the 1st Division.

The II Army, commanded by General Samsonov, consisted of the XI, XV, XXIII and XIII Corps. To this army was added the I Corps which was placed in echelon to the rear of the left flank by the Army commander. It participated in the battle of Tannenberg. On its right the 4th Cavalry Division operated and on its left were placed the 6th and 15th Cavalry Divisions.

The strength of each of the two Russian Armies was approximately 200,000 men. Their combined strength therefore was about twice the strength of the German forces in East Prussia.

C. SUMMARY OF EVENTS LEADING TO TANNENBERG.

The decision having been made by the Commander-in-Chief of the Russian forces to advance his Northwestern Army group to the offensive, the commander of the group placed his armies in motion on August 15, 1914. Advance guard forces of the Russian I Army came in contact with German troops at Stallupönen, Germany, on August 17th and after a sharp clash the Germans withdrew to Gumbinnen, where another battle, of greater importance than the Stallupönen action, was fought on August 19th and 20th. During these encounters the German VIII Army was disposed of as follows: in East Prussia facing the Russian I Army was placed the I and XVII Army Corps, I Reserve Corps, 3rd Reserve Division, 1st Cavalry Division and the garrison of the fortress of Königsberg; on the Southern frontier of East and West Prussia from the Lotzen Lakes to the Vistula River was disposed the XX Army Corps, available fortress garrisons and certain Landwehr formations. (The 70th Landwehr Brigade amongst others). The Battle of Gumbinnen has been claimed by both adversaries as a victory but the German Army Commander having received information on August 20th that a Russian Army was advancing against the Prussian frontier between Soldau and Willenberg, an area in the right rear of his forces facing Rennenkampf's Russian Army, ordered the action at Gumbinnen broken off and decided to abandon the whole of Prussia east of the Vistula River. To attain this end the I Army Corps was ordered to entrain from stations west of Insterburg for Gosslershausen, the 3rd Reserve Division was entrained from near Angerburg and dispatched to the vicinity of Allenstein to reinforce the XX Army Corps and the XVII Army Corps, I Reserve Corps, and the garrison of Königsberg were ordered to move west by marching. The 1st Cavalry Division was left facing Rennenkampf.

Von Prittwitz communicated his decision and orders to the Supreme Command at Coblenz but General von Moltke could not agree to the strategical necessity of abandoning the large tract of valuable territory involved. Therefore von Moltke relieved von Prittwitz and summoned General von Hindenburg by telegraph from his home at Hanover to assume command and recalled General Ludendorff, who was then with the German forces in Belgium, to act as Chief of Staff of the VIII Army.

Ludendorff arrived at Coblenz at six o'clock the afternoon of August 22, hastily reviewed the situation, and induced General Headquarters to transmit orders to the East front defining the retreat of the main body of the VIII Army for August 23. The I Corps, moving westward by rail was diverted from Gosslershausen to a position just east of Deutsch-Eylou, in the right rear of and near the XX Army Corps which was at that time heavily engaged with the Russian II Army. The I Reserve Corps, the XVII Army Corps, and the main reserve of the Konigsberg garrison, then marching westward, were to halt and rest. Available troops of the nearby fortresses of Thorn, Kulm, Graudenz and Marienburg were ordered to Strasburg and Lautenburg. A rapid concentration of troops in sufficient force to assume an offensive was thus begun in southwest East Prussia while it left a strong force in the north in an excellent position for maneuver. No change was made in the disposition of the 3rd Reserve Division.

Ludendorff departed from Coblenz by special train for the East Front three hours after his arrival in that city, was joined by General von Hindenburg at Hanover, and at three o'clock in the afternoon of August 23rd they arrived at VIII Army Headquarters at Marienburg where Hindenburg at once assumed command.

Meanwhile the Russian II Army was advancing, having crossed the frontier into East Prussia opposite Willenburg, Ortelsburg and Niedenburg on August 22nd. The disposition of its troops was as follows: on the right the 4th Cavalry Division and in order towards the left, the VI, XIII, XV and (2nd Division) XXIII Corps, 6th and 15th Cavalry Divisions.. The I Corps was near Soldau as a reserve.

THE BATTLE

ANGUST 22, 1914.

At the suggestion of General Ludendorff, newly appointed Chief of Staff of the VIII Army, German Headquarters on the evening of this day dispatched orders to the Eastern Front that began the troop concentration for the Battle of Tannenberg.

AUGUST 23, 1914.

The Russian II Army continued its advance to the northward on an approximate axis Prasnish-Allenstein. At about five o'clock in the afternoon the XV Corps came upon the prepared German positions from Orlau, through Lahna, to Frankenau. The Russians at once attacked and at eight-thirty o'clock in the evening the Thirty First Regiment carried the village of Lahna, the German centre, at the point of the bayonet. The right and left flanks of the German position withstood the Russian attacks made on that day. The 2nd Brigade of the 6th Division was directed against the German right. It was supported in the attack by three field batteries, two of which were in a concealed position in the left rear of the attack brigade at a range of 5,500 yards while the other, also concealed, was directly in rear, at a range 3400 yards. The latter battery did excellent work. Howitzer fire was also used to support the attack. The Infantry advanced to within approximately seven hundred yards before darkness stopped the battle for the day.

The German force in the engagement on this day was a portion of the XX Army Corps, the main body of which had been withdrawn slightly from its frontier positions. General von Hindenburg and Ludendorff had arrived at Marienburg and found the remaining German forces then disposed of as follows. The XVII Army Corps and the I Reserve Corps were near Gerdauen, some distance from the forward elements of Rennenkampf's slowly advancing I Army. The garrison of Konigsberg had cleared Insterburg in its retreat westward. The 1st Cavalry Division was in position south of Insterburg facing the Russian I Army. The 3rd Reserve Division had detrained at Allenstein and was acting as a reinforcement for the XX Army Corps. The entraining of the I Army Corps for Deutsch-Eylau had begun. On the right of the XX Army Corps and extending to the Vistula River the garrisons of the fortresses of Thorn and Graudenz were in position.

There was delivered to Hindenburg on this day a note found on a dead Russian Officer that revealed the plan of campaign of the Russian Army Group commander which has already been described herein. In the evening Hindenburg telegraphed General Headquarters—"Concentration of the army for an enveloping attack in the region of the XX Corps planned for August 26."

AUGUST 24, 1914.

The attack by the Russian XV Corps against the German positions at Frankenau and Orlau was renew-

ed early on this day and both positions were carried. At Frankenau, on the German right, the Russian attacking force had crept up a hundred yards during the night thus placing themselves about 600 yards from the German trenches. This distance was covered in three rushes, the last gaining the enemy trenches wherein but a few of the defenders were awaiting the bayonet. The frontal attack was ably assisted by two companies of Russian troops deteled to turn the enemy right. The attackers made excellent use of their spades, one observer having found rifle pits dug out within one hundred and thirty yards of the German position. The machine gun fire of the German defenders was very effective, inflicting serious losses to their enemy. The Russians estimate their losses at four thousand in the action of August 23 and 24, one Regiment having lost nine of its sixteen company commanders and one company losing all of its officers and one hundred and twenty men killed of one hundred ninety that entered the battle.

The right of the Russian II Army continued its advance slowly throughout the day with an apparent lack of proper co-ordination between the various Corps Commanders. By evening their front extended generally from north of Ortelsburg to north of Neidenburg. II Army Headquarters was at Ostrolenka. Samsonov was marching boldly in a very difficult country, there being a maze of marshes, virgin timber, lakes, and practically no roads. His transport was not sufficient and fully mobilized.

Hindenburg was operating in a country perfectly familiar to him, he having made a most detailed study of it through his active service. The left of the XX Army Corps was forced back by the Russian successes of the morning but its withdrawal held some advantage for the Germans in that it more effectively exposed the Russian right flank to the contemplated attack of the XVII Army Corps and the I Reserve Corps. A great number of German refugees were hurrying westward to escape the Russian invasion and were interfering with the troop movement of the German VIII Army.

The German Commander slowly withdrew his forces facing Rennenkampf who did not indicate any definite future action on this date. Other arrangements for the proposed enveloping attack were being energetically pursued.

An intercepted enemy wireless message in the afternoon gave the German command valuable information as to the movements of the Russian II Army for the next several days.

VIII Army Headquarters moved to Rosenberg on this date where it remained through August 25.

AUGUST 25, 1914

The Russian right and left wings advanced slowly on this day. The 2nd Division of the XXIII Corps was placed under command of the Commanding General of the XV Corps. The other divisions of the Corps, the 3rd Guard, was to be placed under the same commander upon its arrival on the battlefield. The XV Corps rested throughout the day although all resistance in its immediate front was carried by nine o'clock in the morning of the preceding day. The apparent lack of proper cooperation between the Russian Corps Commanders continued as they were ignorant of the exact location of neighboring corps and were not assisting one another to advance rapidly by turning the flanks of the inferior enemy forces.

The Russian Intelligence system was working poorly in that a quantity of German mail matter captured the preceding day at Frankenau had not yet been investigated by its captors.

Hindenburg was completing his strategical movement of troops for the great blow against the Russian II Army. The withdrawal of troops from in front of Rennenkampf, started the preceding day was continued. The XVII Army Corps, covered by the I Reserve Corps, was marching westward, then southward on the axis Bischofsburg-Ortelsburg. As soon as it had cleared the rear of the I Reserve Corps, the latter was withdrawn under cover of Cavalry screen and started southward directed on Seeburg. Following this the 6th Landwehr Brigade, in position at Lotzen, started its march westward for the new battle. By evening the I Reserve Corps had arrived at Seeburg and the XVII Army Corps, following a march of fifty kilometers had arrived at Bischofstein.

AUGUST 26, 1914.

The Russian II Army Corps commander continued his slow and methodical advance, the VI Corps directed on Bischofsburg, the XIII on Allenstein, the XV and XXIII against the reinforced German XX Army Corps,

the left of which was on this day pushed back from Hohenstein. Echeloned to the rear and advancing through Usdau was the Russian I Corps.

Hindenburg started the general VIII Army attack on this date. The I Army Corps and various fortress garrisons extending towards the Vistula River were thrown against the positions of the Russian I Corps, which was north and west of Usdau, from a west-northwest direction while the right wing of the reinforced XX Army Corps attacked Usdau from the north. The remainder of the XX Army Corps, reinforced on this date by a Landwehr Brigade, so that it now consisted of three infantry divisions and one infantry brigade attacked straight east against Hohenstein and Waplitz. The left of this corps was hard pressed by the Russians but a Landwehr Division under General von der Goltz placed at Hindenburg's disposal by General Headquarters arrived from Schleswig-Holstein and was directed on Hohenstein from the northwest.

On the left flank of the VIII Army the German troops approaching from the north came upon the leading divisions of the Russian VI Corps near Bossau, and by a combined attack, the XVII Army Corps striking frontally from the north and the 6th Landwehr Brigade attacking the enemy left flank, drove the Russians from the field. This occurred on the evening of this date.

Throughout these movements by the Germans, the Russian II Army Commander stubbornly held to his original plan and continued the movement of his center to the N. To strengthen his heavily pressed left flank XXIII Corps at Soldau under the orders of General Artamonov, commanding the I Russian Corps, and ordered the 2nd Division of the XXIII Corps from the left of the XV Corps back to cover the right of the I Corps.

Rennenkampf had practically lost touch with the enemy but continued due west very slowly.

AUGUST 27, 1914.

The battle on this date became terrific and general. The German Command ordered the renewal of the attack on Usdau to begin at four o'clock in the morning. It fell into German hands in the afternoon. The Russian I Corps fought its way toward Neidenburg. In the center the reinforced XX Corps made no progress although it attacked vigorously. On the left of the XX Corps, the newly arrived Landwehr Division was closing in on Hohenstein. On the north the I Reserve Corps reached Wartenburg and on the extreme left flank near Bischofsburg the XVII Army Corps had again met and defeated the Russian VI Corps and thrown it in full retreat. The German command considered that with the capture of Usdau it had practically broken through the left of the Russian II Army.

Samsonov's communications were so faulty that he was unaware of the reverse suffered by the VI Corps on the evening of August 26th and ordered his VI and XIII Corps to continue their advance northward on the 27th. He disposed the XV Corps to better meet the attack of the German reinforced XX Corps by moving its left to Muhlen from Hohenstein. The Russian losses thus far were large and hospital facilities were insufficient.

AUGUST 28, 1914.

Hindenburg moved his Headquarters to Frogenau early in the morning of the day. The German Command continued its attack throughout the day with all available forces with a view to complete encirclement and annihilation of the main body of the II Army. The I Army Corps, on the right, was ordered to occupy Neidenburg, a turning movement in that direction having been effected the preceding day. The XX Army Corps in the center attacked vigorously while on its left the Landwehr Division under Von der Goltz again attacked Hohenstein. On the left the I Reserve Corps and the XVII Army Corps were moved slightly westward to a line Allenstein-Passenheim. The left flank was properly covered to avoid an attack from the direction of Ottelsburg. The right flank of the German XX Corps was repulsed in its attack on Waplitz but the Russians did not follow up this advantage. During the afternoon the left flank of this Corps succeeded in advancing while on its left the Landwehr Division captured Hohenstein. Large numbers of Russian prisoners now began to appear behind the German lines, interfering to an extent with military traffic. By evening troops of the German I Army Corps were well beyond Neidenburg fighting their way towards Willenburg where the German Army Command had decided to unite the encircling forces coming from the west and north. The capture of Neidenburg had closed the most practicable route of escape of the Russian forces. By evening, of the forces on the left flank, the I Reserve Corps had advanced to a position southwest of Allenstein, where it threatened the

Russian XIII Corps with envelopment while the XVII Army Corps had made good progress and was rapidly extending its left toward Willenburg as ordered by the VIII Army commander.

The Russian commander realized the seriousness of his position on the morning of this day, having received at nine-thirty in the morning, news of what had occurred to his VI Corps some forty hours before. Instead of remaining at a Headquarters far enough in rear to communicate with and direct his forces, he moved forward to attempt to communicate personally with his interior Corps commanders. The VI Corps continued its retreat during the day through Ortelsburg though this section had not been ordered by Samsonov. The Russian I Army Corps also withdrew further south and had no communication with Samsonov after the early morning of this day. Communication between the Army Commander and the commanders of the VI and XIII Corps also ceased in the evening of August 28.

AUGUST 29, 1914.

The encirclement of the main body of the Russian Army was made the immediate objective on this date and all troops of the VIII Army were pushed forward.

As the size of the encircling ring diminished the concentric fire of its artillery became constantly more effective. The 3rd Reserve Division broke through the enemy resistance in its front and drove its way through to a point east of Neidenburg. During the afternoon disturbing reports reached Hindenburg that strong columns were advancing from Mlawa on Neidenburg and would therefore strike the German I Army Corps in the rear. To meet the threat from the south all available reserves from the western and northern portion of the battlefront were started on the march southward. No determined attack by the Russians developed however.

Following a council of war called by Samsonoff, the Russian XV Corps began a retirement to the south and tried to cut its way out through Neidenburg in the early morning. German defenses, hastily organized, held however and the only opportunity of escape was thwarted. The larger portion of the Corps was killed or captured in the closing phases of battle in the woods northwest of that town. During the night of August 29-30 Samsonov disappeared, all evidence tending to show death by suicide. The Chief-of-Staff of the beaten Army and the majority of the Army Staff escaped into Russia. The Russian I Corps and supporting troops had an excellent opportunity to cut its way through Neidenburg from the South but no strong effort was made. General Artamonov was soon relieved of his command.

By evening the German XX Army Corps and I Reserve Corps were out of action and had assembled in column along the road from Allenstein to Hohenstein.

AUGUST 30, 1914.

The battle continued with order and precision on the German side against general disorder, wholesale surrender, and here and there magnificent fighting on the part of the Russians. In the vicinity of Muschaken, particularly, between Neidenburg and Willenberg, the Russians made determined effort to break through the encircling ring but without success. Russian columns consisting of the I Corps and attached troops also approached and actually occupied Neidenburg on the evening of this day but retired again at 4:00 A. M. the morning of August 31 upon hearing of the advance of German troops.

The Commanding Generals of the Russian XIII and XV Corps were captured on this date and reported to General Hindenburg.

AUGUST 31, 1914.

This was the closing day of the battle of Tannenberg and as all Russian resistance of an organized nature had been broken down the fighting that occurred was between isolated groups of the contending forces with a view to compelling surrender of all enemy troops within the German ring.

Hindenburg sent the following message to the Kaiser on this date.

"I beg most humbly to report to your Majesty that the ring around the larger part of the Russian Army was closed yesterday. The XIII, XV, and XXIII Army Corps have been destroyed. We have already taken more than 60,000 prisoners, among them the Corps Commanders of the XIII and XV Corps. The guns are still in the forests and are now being brought in. The booty is immense though it cannot yet be assessed in detail. The Corps outside our ring, the I and VI, have also suffered severely and are now retreating in hot haste

through Mlawa and Myszaniec."

CLOSING INCIDENTS AND RESULTS.

When all Russian prisoners had been counted, it was found that slightly more than 90,000 officers and men had been captured. In addition, the vanquished army had suffered heavily in killed and wounded throughout the action. The result of the battle was a practical destruction of the Russian II Army, the I Corps alone escaping as a semblance of a formed body.

ANALYSIS.

Hindenburg saw that his mission was to clear Prussia of the enemy or at least to halt the invasion which was over-running that valuable stretch of German territory bound by indissoluble ties to the reigning family. Von Prittwitz had been summarily relieved of his command because he insisted on retiring before the vastly superior numbers of the enemy which were bearing down upon him from the front and the right flank.

In his consideration of the situation the German saw two enemy armies opposed to his one. Each of the enemy armies was approximately equal to his own in number, or, combined they presented 400,000 men. He could well estimate that their moral was high as the Germans had withdrawn before them at Stalluponen and Gimbinnen on the Eastern frontier and in the vicinity of Soldau on the southern frontier. The Russian position was quite good strategically. It possessed these faults, the armies were separated from one another by considerable distance and were marching toward a junction in a hostile country in the presence of the enemy. However, a modern army is an independent, self-supporting organization and it is well known to the Russians that only comparatively weak German forces had been left in East Prussia to oppose a Slav invasion. The position of the two armies offered the further advantage that frontal resistance by the German command against either army could now be struck in flank or rear by an energetic movement of the other Russian Army. The chief disadvantage occurring to the Russians lay in the difficult terrain in which they were marching, it being an area bounding in small lakes and marshes and possessing few good highways. The territory was well known to the German commander who could therefore appreciate its difficulties and advantages more completely than the Russians.

The movements of the enemy were not immediately clear to the new German Army commander. The enemy had won victories at the front of each army and it appeared the logical time for strong, rapid organized pursuit. It was soon noted that this course was not being followed but the advance of each army was slow and cautious. The probable intentions of the Russian Commander could be inferred from the positions and movements of his armies but the German Intelligence fortunately found a paper on the body of a dead Russian Officer that gave to Hindenburg a clear picture of the enemy plan, which if actively pressed and well directed could not very successfully be resisted by the small German forces in the east.

Hindenburg could quickly gauge the strength of his own force. In numbers it equalled about one-half of the invading host. His subordinate leaders were Germans trained in the German school. More than half of his troops were German first line soldiers while the others were men of German military training and were now well and properly organized in the battle units. The Army Commander could therefore feel assured of able and loyal execution of his plans and vigorous and brave action from his troops for such was the soul of the German Army, brought about by a long period of vigorous national military policy.

The position of the German VIII Army was not particularly good. It may even have been disastrous had the Russians been well led, as by bringing on a general engagement by a rapid advance of their I Army, they could have pinned the larger portion of the VIII Army to the vicinity of Insterburg and Angerburg while with a rapid advance of their II Army have caught the German forces in flank and rear and routed or destroyed them. The German position was undergoing improvement through the execution of the plans of Ludendorff, conceived by him in his short stay in Coblenz, as a striking force of considerable power was being assembled on the left flank of the most dangerous enemy (II Army, Samsonov) that would compel him to act with care in his further invasions of East Prussia.

The VIII Army was acting alone. Its commander had no supporting troops of sufficient power to influence a critical action. The armies of the Fartherland, with the exception of the forces in East Prussia were engaged in the highly important actions in the West. The Commander of the VIII Army could best serve his

Kaiser by wisely using the forces then at his disposal and not call for reinforcements, which could only come from the Western Front and seriously weaken the highly important attacks then under way on that Front.

Hindenburg had the following plans of action open to him.

A. He could rapidly withdraw all his forces facing the Russian I Army straight to the westward, covered against attack from the south by the XX Corps and such fortress garrisons as were in position on line with that Corps, unto the line of the Vistula and then withdraw the XX Corps to the new line. The following objections to this plan presented themselves; first, that it was not in accord with the mission of the VIII Army, which was to prevent the enemy from over-running East and West Prussia; that it would permit the enemy to join his separated forces and present a united front, and that the line of the Vistula at best was not a good line of defence.

B. He could adopt a line of defence somewhere east of the Vistula as along the line of the Passage River and attempt to hold the invading Slav until the situation on the Western front was such as to make the release of troops for the Eastern theater a practicable measure. This plan possessed the single merit of conservatism aimed to prevent, if possible, the destruction of further areas of the Fartherland. It did not throw the troops into an immediate and dangerous engagement but left them comparatively free for maneuver, awaiting the enemy attack. Practically the same objections existed against this plan as existed against Plan A.

C. He could concentrate his forces against the Russian II Army and if successful in beating it would thereby be rid of his most dangerous opponent, because of the two armies the pressure or movement forward of the II Army alone was of more danger to the VIII Army than pressure from the I Army alone. The latter could only inflict serious punishment and drive the German Corps opposing back toward interior Germany while the former could probably sever lines of communication and by rapid maneuver surround and destroy a portion of the German forces. This plan appeared the best. It was a bold step to take but a bold step would help to regain the lowered morale of the retreating Germans. It offered the enticing goal of the possible encirclement of and subsequent destruction of a whole enemy army and would enable the forces in the Eastern theater to save the situation without withdrawing reinforcements from the Western Front. It must assume amazingly slow action on the part of the Russian northwest Army Group Commander as that official could by prompt action after the German attack opened, bring the I Army thundering down on the attackers and, striking them in the rear, annihilate them.

The decision as we have heretofore seen was to adopt "Plan C" and we can but approve the keen judgement of von Hindenburg in his estimate of the slowness and inability of the enemy superior commanders, and his true measure of his own resources.

CRITICISMS OF STRATEGY, TACTICS AND OPERATIONS.

The Russian Northwest Army Group should have pushed both his armies forward with all possible speed once the invasion was entered upon with a view to complete destruction of the German forces in Prussia. Not only did he fail in this regard but he permitted one army to stand idly by while the other was destroyed even though the idle army could without a doubt have reached the battlefield in time to cause a German disaster.

Samsonov seemed unable to organize his communications in a manner that permitted him to command his several corps. Modern war demands well organized lines of communication that will function when information or orders need be dispatched. As an example of this inefficiency it required over forty hours for Samsonov to learn of a defeat suffered by his VI Corps on the evening of August 26th. This information was of the highest importance as it clearly showed a strong enemy force on the Russian right flank. Furthermore Russian orders for troop movements were wirelessly in the clear. Thus on August 24th a message of great importance was intercepted by the German Intelligence Service.

The Russian Corps Commanders failed sadly in co-operation with each other. The flank corps, the I and VI, retired into Russia as soon as the attacking German forces began to press them. Their action in each case was without the orders of the Army commander, and apparently little effort was made by them to even inform their superior, or the neighboring Corps commander.

The Russian troops facing the XX Army Corps had an excellent opportunity to cut their way out

through that corps on August the 28th. The XX Army Corps had attacked but had been decisively beaten off near Wapnitz. The Russians did not take advantage of that situation. The German attack could probably have thus been neutralized or its success delayed until the I Army could reach the battlefield.

The Russian Intelligence Service was extremely poor. German mail captured in the action at Frankenan on August 24 was not opened until late the following day when a British officer saw the mail bag and suggested its examination. It does not appear that the Russians at any time during their strategic advance had a proper knowledge of German dispositions.

BRIEF SUMMARY OF LESSONS.

1. That it is helpful to the Army officer to be an industrious student of Military History. Hindenburg was a deep student of that subject throughout his career.

2. That nations should attempt to keep political expediency far from the battlefield. General Zhilinsky was a political pillar. His weak, vacillating methods, brought the disaster of Tannenberg upon his nation out of a situation that an able commander should have brought striking victories.

3. That co-operation between commanders on the field of battle must be secured. The Russian Corps Commanders failed to co-operate. German Commanders did co-operate.

4. That it is not wise to attempt to unite forces in the presence of the enemy. He may fall upon and beat such forces in detail; the former was attempted by Zhilinsky, the latter was thoroughly done by Hindenburg.

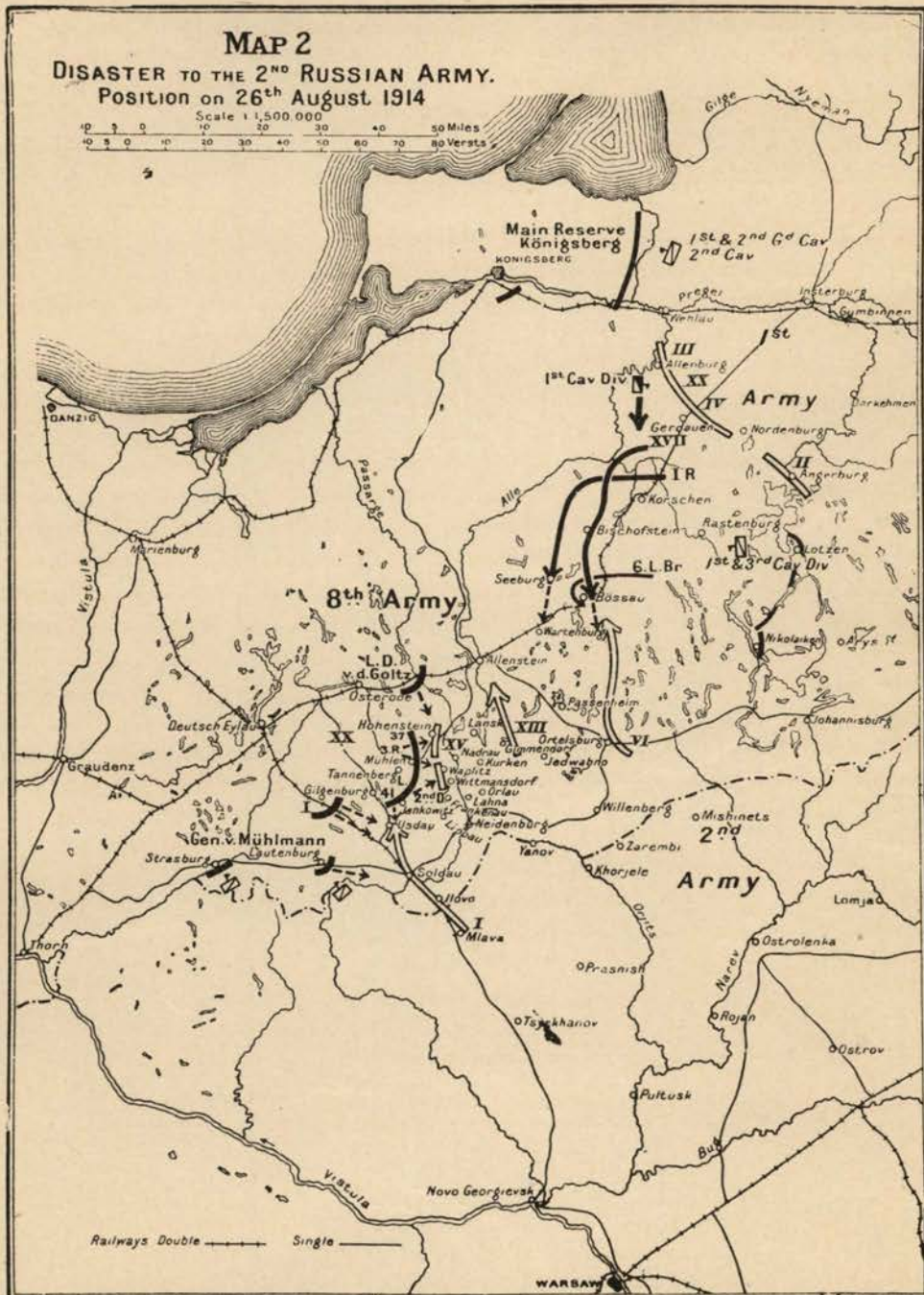
5. That good communications are a requisite in modern war. Russian History at Tannenberg is a succession of disastrous occurrences, largely avoidable, had the army commander been promptly informed of events.

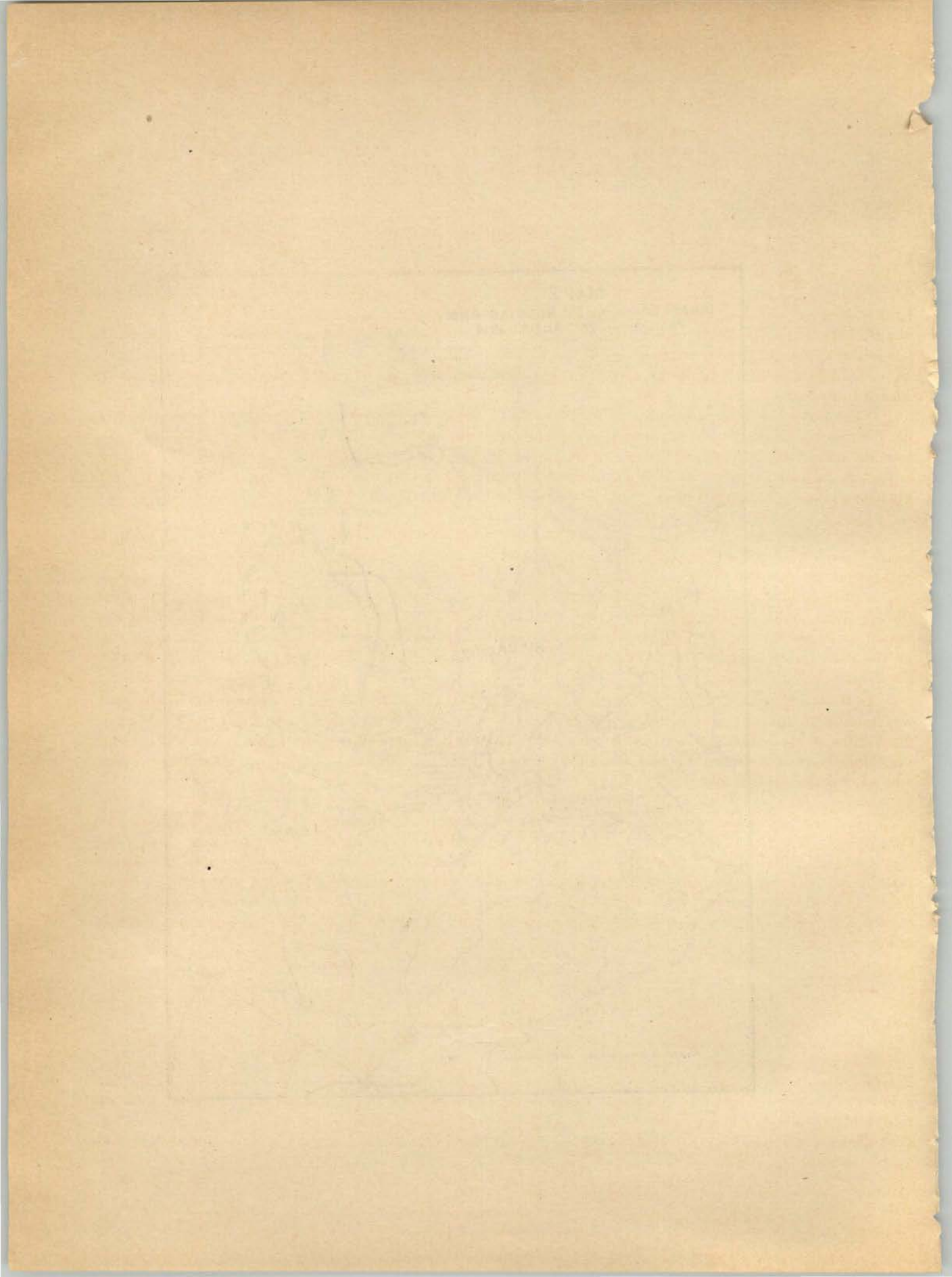
6. That it is well to make bold decisions on the battlefield and throw all the strength of available forces into making the action a success. Von Prittwitz was cautious and was beaten. Hindenburg assumed command of the retreating army, willingly shouldered responsibility for possible reverses and firmly decided to throw all his resources against the enemy. He thereby annihilated a force equal in size and material to his own.

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MAP 2
DISASTER TO THE 2ND RUSSIAN ARMY.
Position on 26th August 1914

Scale 1:1,500,000
 0 10 20 30 40 50 Miles
 0 10 20 30 40 50 60 70 80 Versta





THE REDUCTION OF THE POLISH SALIENT FROM APRIL 1st, 1915
TO INCLUDE THE FALL OF WARSAW.

—By—

Capt. John S. Schwab, Infantry

Military Situation.

The armies of the Allies and the Central Powers on the Western Front, had reached a deadlock. England and France were preparing for an offensive on a large scale, to be initiated sometime during the summer of 1915. Germany was conducting a passive defence, resting and re-organizing her divisions and constructing her positions into an elaborate system of defence.

On the other hand, in the East, the Russians were meeting with more than ordinary success against the Austro-Hungarians.

The battle line extended from a point on the Baltic Sea coast, just north of Memel, to Czernowitz, near the Russian border in the south, forming a huge salient, with Warsaw just ahead of the apex. The line was about 900 miles long—the longest battlefront the world had ever known. It was not, however, such a fortified line as that in the west. It consisted of intermittent field entrenchments, and these only where nature did not supply natural defenses, such as swamps, forests and steep hillsides.

Russian Forces.

The whole of the Russian forces on the Eastern Front were under command of the Grand Duke Nicholas. They were divided into two groups, with General Alexiev in command of the northern group and General Ivanov in command of the southern group.

The positions and commanders of the armies within these two groups were as follows: In the north, the 5th Army under General von Plehve, was operating in the Courlands; the 10th Army under General Radkevich, in Masurenland; the 12th Army under General Churin and the 1st Army under General Litvinov, were on the Bobr-Narew line; the 2nd Army under General Smirnov, in front of Warsaw and stretching south along the Pilitza.

In the south, General Evert, with the 4th Army, was along the Nida; General Dmitriev, with the 3rd Army, was holding the line of the Dunajetz in Galicia; General Selivanov was besieging the fortified city of Przemsyl, the Verdun of the east, which was on the point of falling; General Brussilov with the 8th Army, was active in the Carpathians; General Shcherbachev commanded the 11th Army near Koziowa; General Leshitski, with the 9th, was fighting in Buknovina.

Russian Plans.

The primary object of the Russian plans, formulated early in the spring of 1915, was the capture of the Carpathians. The Grand Duke Nicholas and his staff believed that, with such a pivot in their possession, they could maneuver their armies with ease; take Germany in the flank from the south; have Hungary at their mercy, and definitely relieve the Serbians. Moreover, Austria would be compelled to sue for peace and Germany would stand alone. The Grand Duke Nicholas accordingly proceeded to concentrate a great number of troops in southern and western Galicia and on March 19th, the initial attack was launched along the Lupkow-Uzzok line.

German Forces.

Von Hindenburg had complete control of all German and Austrian armies on the Eastern Front, but had given General von Mackenson unlimited control of the armies in Poland.

The German forces were divided into three groups, each under its own commander. The northern group, under the immediate command of von Hindenburg, consisted of the following:—General von Bulow's Nieman Army in Courland; General von Eichorn, commanding the 10th, was on the Nieman; General von Scholtz with the 8th, was along the Bobr; General von Gallwitz with the Gallwitz Group, afterward formed into the 12th Army, was on the Narew front; Prince Leopold of Bavaria with the 9th Army, was in front of Warsaw; General Woysch with his detachment and the 1st Austro-Hungarian Army, was operating toward Ivan-

gorod.

General von Mackensen commanded the central group under his immediate command was the 11th Army and linked with it, was the 4th Austro-Hungarian Army under the Archduke Joseph Ferdinand. Both armies were in position along the Dunajetz-Biala line. The 3rd Austro-Hungarian Army, under General von Boroevic was in a salient curve of the Carpathians crest from Malastow to Virova; the 2nd Austro-Hungarian Army under General Boehm Ermolli, extended from Vivira as far as the heights west of the Uzzok Pass.

Next came the southern group under General von Linsengen. Stretching from a point west of the Uzzok Pass, along the Carpathian crest to a point southwest of Halitz, was the southern German Army under the immediate command of von Linsengen, and on his right, along the Dniester and the frontier, was the 7th Austro-Hungarian Army under General von Pflanzer-Baltin.

German Plans.

Early in the spring, the German General Staff had decided on a decisive action in the east. They knew that Italy had about decided to enter the war and cast lot with the Allies, and that Rumania and Serbia were, speaking in the vernacular, on the fence. A complete success in the east would not only release a large number of troops for duty on the Western Front, where it was apparent they would soon be sorely needed, but would also give Austria-Hungary better means with which to cope with Italy, when that country entered the war. Furthermore, Rumania and Serbia might become so impressed with the German prowess that they would, perhaps, delay their entry into the war for some time.

The initial attack was to take place along the Dunajetz-Biala line, and during the first weeks of April large bodies of troops and a large column of supplies, particularly munitions and heavy artillery, were concentrated in the vicinity of Cracow in Galicia. This was accomplished with the utmost secrecy. In fact so strict was the censorship, the Austrian G. H. Q. was not even informed of the movements until the middle of April.

Military Situation April 1st, 1915.

Early in March, the Russian 8th Army under General Brussilov, in accordance with the plans of the Russian G. H. Q., launched an attack against the Austro-Hungarian forces along the Lupkow-Uzzok line. The Russians, as was stated before, planned to break through the Austrian resistance at these two points, which would open up to them the broad grain fields of Hungary, toward which Germany looked for food supplies.

On March 22nd, Przemsyl fell into Russian hands, together with a large supply of munitions and a large number of Austrian prisoners. This had the effect of giving an added impetus to the already falling Austria-Hungarian morale. It also released a large Russian force, which was sent to assist General Brussilov in his campaign in the Carpathians. Upon receipt of these reinforcements, he immediately launched a vigorous attack against the Austrians, and, by the end of March, had captured the last Austrian position in the Lupkow Pass and was attacking vigorously the pass of Uzzok. The Austrian defence at the latter point, although stubborn, could not resist the drive of Brussilov's Army, and by the middle of April, we find the Russians in control of both passes and looking with covetous eyes toward the broad grain fields of Hungary. On April 18th, the Russian advance halted to reorganize, and await the arrival of reinforcements and new supplies of ammunition.

In the north, a series of local attacks and counter-attacks by both the Germans and the Russians, had failed to change the battle line to any great extent.

German Concentration at Cracow.

As was previously stated, the German General Staff conducted the concentration at Cracow with the utmost secrecy. It is conceivable of course that the Russian General Staff would, no matter how expertly the concentration was carried out, receive some information concerning it. However, although receiving the information that large numbers of enemy troops were reported to be passing through and coming toward Cracow, they ignored that particular part of the line as a possible avenue for the expected enemy attack. As a consequence, they knew nothing of the immense concentration of almost two million men. They were looking toward the south or the north and not west for an attack, therefore, to them, all troop movements in Galicia, were assumed to be movements to mask the German intentions in the south or north.

Commensurate with this huge concentration of men, the Germans had provided about 1500 guns of heavy caliber and several thousand lighter field pieces, together with a bountiful supply of munitions. In addition, the German engineers assembled large numbers of pontoons to assist in the crossing of the rivers over which they expected to pass in their attacks.

Attacks Along the Line.

To assist their concentration at Cracow and to divert the attention of the Russians from the spot at which the real blow was to be struck, a series of attacks were made, by the Germans, all along the line. In the north, the German Baltic squadron had bombarded the villages along the Courland Coast and had also shelled Libau. In the south, General von Linsengen had launched a vigorous counter-attack against the Russian 8th Army under General Brussilov. Minor local attacks were made at various points along the line between the two extremities mentioned above.

As a consequence of these attacks, the Russians thought that the Germans intended to roll back one of their wings. They accordingly reinforced these points excessively and continued accumulating forces for their intended drive in the Carpathians. This weakened one of their most important flanks—the line Gorlice—Tarnow. The Germans promptly took advantage of this weak sector and started the drive that was to eventually cause Russia's military collapse.

The Battle of Gorlice—Tarnow.

Mackensen's group, as it was now formed, was the largest German Army ever assembled under the command of one general. It consisted of the 11th German Army of eight German divisions and two Austro-Hungarian divisions of infantry and one Austro-Hungarian divisions of cavalry; the 4th Austro-Hungarian Army of five Austro-Hungarian and one German division of infantry and one Austro-Hungarian division of cavalry.

More important than its man power was its artillery, for its heavy batteries numbered about 1500 guns. Mackensen's plan was to utilize these heavy batteries to wipe out the meager Russian defence system, which consisted in most part of only a front line trench. By doing so, his infantry divisions could move forward with a minimum loss of time and men, both important factors to German at this time. If his drive penetrated far enough and at a rate of speed sufficiently fast, he would succeed in separating the armies of the Grand Duke Nicholas and cut their lines of communication. Moreover, Ivanov's left wing would be compelled to fall back to conform to the new line or be lost, thereby relieving pressure on the Austrians fighting in the Carpathians.

On the morning of Wednesday, April 28th, the Austrian-German front—Gorlice—Tarnow—lay along the left (west) bank of the Dunajetz to the junction of the Biala; thence along the left (west) bank of the Biala to the foothills of th Carpathians where it crossed near Ropa. The German lines of communication were exceptionally good. They had the Vistula on their left, the main railroad from Cracow on their left center and the railroad from the junction of Gryhow to Novo Sandek on their right center. To secure a cross line through the Biala valley, they only had to take the line Gorlice—Tarnow.

On the 28th of April, the battle began. Von Mackensen's right moved in the direction of Gorlice against Dmitriev's left. Dmitriev immediately withdrew troops from his center to protect Gorlice.

The attack on Gorlice progressed for two days and then, on Saturday May 31st, the great batteries of the German Heavy artillery were loosed. The fire of these batteries on the Russian positions was of the most intense nature. In fact it was an artillery preparation far surpassing anything yet known. The Russian trenches were literally blasted off the face of the earth.

The center of the German attack was directed toward the village of Ciezkowice, about half way between Gorlice—Tarnow. Under cover of the heavy artillery fire, pontoon bridges were pushed across the Bialo and Ciezkowice fell to the Germans. Due to the lack of artillery, coupled with the surprise attack of von Mackensen, Dmitriev could not check the German advance and the Russian lines from Ciezkowice to the heights south of Gorlice, were completely broken through.

During the night of May 1-2, the left flank of th 4th Austro-Hungarian Army rolled back Dmitriev's right and forced the line of the lower Dunajetz west of Tarnow by a surprise attack.

On Sunday, May 2nd, the Russian defence collapsed. Von Mackensen's troops had penetrated the line

at numerous points, and by late afternoon, the Russians were in full retreat to the western bank of the Wisloka, twenty miles away. Von Mackensen occupied Gorlice and Tarnow and had won a spectacular and indisputable victory. In the meantime the other Austro-German armies had been keeping the Russians on their respective fronts constantly on the alert, thereby preventing the Russian G. H. Q. from reinforcing Dmitriev.

It might be well at this time to mention the formation of von Mackensen's infantry during the attack. This formation has been frequently referred to as "Mackensen's Phalanx." In reality his infantry did not take up the formation of a phalanx such as was used by Hannibal, but did advance almost in close order with an interval of about one yard between men in line and in successive lines with only a few yards distance. Small wonder the "shell shocked" Russians fell back.

Battle of the Wisloka.

Dmitriev was paying the penalty for not preparing a series of alternative defence positions. He now had to take up a position on the east bank of the Wisloka, throw up hasty entrenchments of a kind and attempt to hold the Germans in check. But the heavy batteries that had reduced his prepared positions on May 1st, would have little difficulty in wiping out one so much weaker than the first. However, he made a wonderful stand at the Wisloka. He attempted to stop the Germans by making a counter-attack with the II Caucasian Corps—his only reserve—against the German right, but they were soon swept aside by the irresistible German tide with enormous losses.

As was stated before, the Russians made a wonderful defence on the Wisloka. For five days they clung to their shallow trenches, throughout the heavy artillery fire, before they were dislodged.

Mackensen, however, was not to be denied a great victory. He delivered his main attack against the railroad junction at Jaslo. On the morning of May 7th, he succeeded in penetrating the line at this point and once again the Russians were in full retreat, this time to a position on the east bank of the Wisloka, a distance of about ten miles.

Brussilov's Retreat.

The troops of Brussilov, located in the hills near the Dukla Pass, were now in danger. The Austrian 3rd Army—although tardy in doing so—had taken up the drive in echelon and had captured the pass. Brussilov's right was now unprotected and only by heavy rear guard fighting and with great losses, was he able to fall back and conform to the new Russian defence line.

The Russian Right Stands Fast.

The 4th Russian Army, under General Evert, had succeeded in holding their part of the line against von Woyrsch's detachment. Their line ran from Debica, a few miles from the Cracow—Jaroslov line, to the Vistula near the point of the junction of the Wisloka with the former.

The Grand Duke Nicholas Arrives.

The Grand Duke Nicholas, realizing that the German offensive had been fully developed, arrived on the scene about this time to take command in person. In an attempt to check the forward impetus of the German drive, he promptly instituted a series of counter-attacks against the Austro-German flanks. A few small local gains were made by the Russians in these flank attacks, but they had no influence on the main German attack, which was regulated only by the speed with which heavy artillery could be transported to the ever advancing front lines. It is well to note that as the Austro-German center advanced, the Russian flanks were also forced to give way.

The Retreat To The San.

Mackensen gave the retreating Russians no rest. By Saturday, his troops had succeeded in crossing the Wistok at Rymanow and near Frystak. This had, in effect, temporarily broken the Russian line—the goal for which Mackensen was striving, i. e., the separation of the north and south Russian armies. The Grand Duke Nicholas, however, saw this threat and on the 10th of May, immediately pushed out strong forces from the Up-

per San in an attempt to check the Germans, who were by this time, east of the upper Wistok. Although these attacks only checked the Germans temporarily, they did assist Brussilov in his retreat from the mountains and also covered the retreat to the San of the main body of the 3rd Russian Army.

But again Mackensen was not to be denied. He pushed steadily onward, inflicting heavy losses on the rear guard of the 3rd and 8th Russian Armies and early Tuesday morning, May 11th, a general Russian retirement to the San commenced.

By the evening of the 11th, the Russian left had fallen back beyond the upper San. The right of the 2nd Austro-Hungarian Army had advanced beyond the San and established communications with the left of von Linsengen's Southern Army. The Russian resistance here consisted of only minor rear-guard actions.

During the 12th and 13th of May, the 3rd and 8th Russian Armies retired to pre-arrange positions on the last bank of the San.

The line now extended from Koziowa in the south, north along the Dniester and thence to a point just west of Przemsyl. From here the line ran along the San to Niska, and then northwest across the Vistula to Opatov.

The Russians now prepared to make a protracted stand along this pre-arranged line, where they had thrown up hasty but strong entrenchments. They felt that their flanks were secure for the time being, as their left was resting on the Dniester marshes, and while their right was protected by the junction of the Vistula—San Rivers. Furthermore, the Austro-Hungarian Armies, operating, against their flanks, had not proved so formidable as they might. True, Brussilov had suffered enormous casualties, but they were not so great as they would have been had the 2nd and 3rd Austro-Hungarian Armies taken advantage of Mackensen's initial success at Gorlice-Tarnow, and the subsequent uncovering of Brussilov's right. Evert, with the 4th Russian Army, as had been stated before, was holding his own against the 1st Austro-Hungarian Army and von Woysch's detachment, and only fell back to conform to the new lines caused by the retreat to the San.

The Russian General Staff early realized that Przemsyl was to again fall into German hands. They were striving, however, to hold Przemsyl until supplies, ordnance and munitions could be sent to the rear.

They intended to do this by holding with their center and then making vigorous counter-attacks on their right and left.

On the Russian left von Pflanzer had been gradually forcing back the 9th Russian Army under Lechitski, while the 3rd and 8th Russian Armies had been falling back to the San. On the 9th of May, Lechitski instituted a successful counter-offensive against von Pflanzer on a front of about one hundred miles, cut the railroad between Austria and Bukovina and was threatening Czernowitz. By the 15th, the Russian left was resting on the Pruth and Nadworna was in their minds.

On the Russian right, von Woysch was slowly moving east, evidently under the impression that Evert would not make a stand until he reached the Vistula. Evert, it developed, had no such intentions. Instead, on the morning of May 15th, he turned and struck at both flanks of the Austrians with his infantry, while his Cossack cavalry made a wide sweeping attack upon the Austrian line of communications. The fifth lasted three days and as a result, von Woysch was compelled to fall back west of Iwaniska with heavy casualties. The Russians attacked chiefly with the bayonet, and as was usually the case, outfought the Germans in hand to hand fighting. The retreat was short lived however, as fresh divisions were hurried to assist von Woysch and Evert was again compelled to fall back.

The Battle Of the San.

Between the 12th and 15th of May, Mackensen had been chiefly engaged in bringing up heavy guns and strengthening his lines of communications. The Russian engineers had destroyed roads and railroads as the Russian Army retired. Moreover the month of May was a month of almost constant rain, and as a consequence, rivers and floods acted adversely on the mobility of the German machine.

By the 15th the Russians had also received as reinforcements, a total of five corps plus two divisions. These came from the 1st, 2nd, 4th and 12th Armies and the Odessa group.

The Russian line was now on the west bank of the San from Jaroslav to Sieniawa and from there west

to Tarnobrzeg on the Vistula. South of Jaroslav the line followed the San in front of Przemsyl, then bent around into a shallow salient to the railroad junction at Dobromil and thence southeast through Sambor and Stryj. Behind the line Sambor—Stryj were the Dniester marshes and farther north, the Grodek Lake region.

Disposition of Forces Engaged.

The 4th Austro-Hungarian Army was along the line Jaroslav—Sieniawa, facing the left of the 4th Russian and the right of the 3rd Russian Armies; Mackensen's 11th Army was along the Jaroslav—Przemsyl line, facing the left of the 3rd and the right of the 8th Russian Armies; the 3rd Austro-Hungarian Army was along the re-entrant of the salient just south of Przemsyl facing the left of the 8th Russian Army; the 2nd Austro-Hungarian Army was between Dobromil and Sambor, facing the right of the 11th Russian Army; the southern Army between Sambor and Stryj, facing the center and left of the Russian 11th Army and the 7th Austro-Hungarian Army on the right of the German line, was facing the 9th Russian Army.

The Battle Begins.

On the 15th, Mackensen's machine was again in motion and early on the morning of the 16th, Jaroslav had fallen. By the 17th, the 4th Austro-Hungarian Army had crossed the river at several places, principally by the bridges at Jaroslav. On the 18th, Sieniawa fell and the Russian right had fallen back several miles east of the San. Meanwhile the 2nd Austro-Hungarian Army had taken the railroad junction at Sambor and Dobromil and were pushing north toward Przemsyl.

On the 20th the 11th Army, under Mackensen, had forced a crossing of the San, near Radymno. This reduced the neck of the Przemsyl salient to about twelve miles across. Mackensen was restrained from making an immediate and dangerous attack upon the northern re-entrant only because he had to send reinforcements to the 4th Austro-Hungarian Army, which was suffering severe losses as a result of one of Evert's counter attacks.

Meanwhile, Boehm—Ermolli was attempting to get close enough, via the southern re-entrant, to shell the Lemburg railroad, over which Russian supplies were being withdrawn from Przemsyl.

The Fall of Przemsyl.

The original defence system of Przemsyl consisted of sixty-five antiquated forts forming a ring about forty-eight kilometres in circumference. Surrounding this ring of forts were wire entanglements and between these were prepared infantry positions. These positions, however, were somewhat crude, and like the forts, could not withstand the fire of heavy artillery. Since its recapture by the Russians in March 1915, they had attempted to reorganize its line of defence, particularly those that had been destroyed during the bombardments of the past spring. Heavy guns, including some of French manufacture, were installed and a strong garrison maintained.

Przemsyl, for all its defences, was doomed. On May 30th, Mackensen's heavy siege guns, delayed until now on account of demolished bridges and roads, were once more brought into action and the bombardment of the northern and southwestern forts began.

On the evening of the 31st, Mackensen's infantry had taken several of the northern forts. On June 1st, some of the southern forts capitulated to Boehm—Ermolli's forces. By June 2nd, Mackensen had captured seven of the principal northern forts.

The Russians, with reinforcements brought in June 1st from the north, attempted to make one more stand northeast of the fortress itself, but were compelled to evacuate this position late on June 2nd.

On the night of June 2nd, the Russian garrison evacuated Przemsyl and at 3:00 a. m., on the morning of June 3rd, Mackensen's troops entered the city. By early morning the troops of the 3rd Austro-Hungarian Army had also arrived within the city.

Mackensen did not tarry long in Przemsyl. Instead, he immediately pushed his forces east. By the 4th of June, the Russians had abandoned the whole San front and were once more in full retreat.

Gas Attack On The Bzura Front.

On May 30th, the Germans launched a gas attack along the Bzura front. That part of the Russian line

at which the attack was directed was held by a corps of Siberians, part of the 2nd Russian Army under General Simirnov.

After sending over the gas, the German infantry advanced, only to be repulsed with the heavy losses by the rifle and machine gun fire of the Siberians.

The Siberians, crouching in their trenches, with handkerchiefs moistened with urine held over their mouths and noses, with-held their fire until the Germans were almost upon them. The Germans gained nothing but experience in this attack and it is singular to note that they did not again use gas during the reduction of the salient.

The Fight in The Dniester Marshes.

Linsengen, with the Southern Army, was operating southeast toward the line Stryj—Halicz. On June 1st, he captured Stryj, important as a railroad center, and on the 7th, he crossed the Dniester at Zurawno and occupied the high ground north of the river and east of the Dniester marshes.

Making a brilliant turning movement on the 8th, Brussilov counter attacked and pushed Linsengen's advance guard back across the river with heavy losses.

Brussilov's success was short lived, however, for before he could exploit it, Linsengen pushed his own right forward, compelling Brussilov to again withdraw across the Dniester. This advance of Linsengen's right also assisted von Pflanzer's left in pushing back the right of the 9th Russian Army. The 9th Russian Army was compelled to fall back from the Pruth to the Dniester. On the 15th, von Pflanzer had taken Stanislaw, and near Czernowitz, had succeeded in pushing the Russian left back to the Russian frontier.

The Retreat To The Grodek Lakes Line.

Between the 4th and 11th of June, Mackensen had been busy re-organizing his armies and re-supplying them with personnel and material. On the 11th, he again started his "phalanx" forward, moving this time in a northeasterly direction to conform to the new line.

After driving the Russians from the San region between Jaroslav and Sieniawa he pivoted on Jaroslav, swinging his right toward Mosciska. This sudden change of direction caught the Russians unawares and as a consequence, Mackensen captured many prisoners.

On the 14th, immediately following the capture, by von Marwitz, of Mosciska, the key to this part of the line, the Russian retreat to the Grodek Lakes region began.

This is a region of shallow, swampy lakes, with few roads, and almost impregnable. The fortified city of Lemburg was one of its strong points.

The line now ran northwest from the frontier southeast of Halicz to the Grodek Lakes, thence north, passing west of Lemburg, then northwest to a point just west of Rawa Russka. Bending westward at the latter point, the line followed the north bank of the Tanev River where it again bent northwest and joined the original line close to the Pilitza River.

Dmitriev Relieved of Command.

About June 2nd, an important change took place on the Russian front. General Lesch was placed in command of the 3rd Russian Army, vice General Dmitriev, relieved. No reason for this change in command was given by the Russian G. H. Q., but it was no doubt due to Dmitriev's inefficiency while on the Dunajetz.

The Battle of the Grodek Lakes Line.

After the Germans had succeeded in breaking through the line Mosciska-Lubaczow, the Russians, fighting stubbornly, retired until they reached the line mentioned above, a line well fortified and equally well known to both sides.

The Austrians, during their previous occupation of Lemburg, constructed elaborate defenses which had since been further strengthened by the Russians. A circle of defensive works, some 30 miles in circumference, now surrounded Lemburg. Beyond the first position, west of the Rawa Russka railroad, was a second position, but as yet, it had not been completed.

Early on the 15th of June, the fight began. The Germans attacked all along the line and each attack

was successful. The 4th Austrian Army was nearing Tarnogorod; Mackensen, on a broad front, was on his way to the railroad junction at Rawa Russka; Boehm—Ermolli was advancing directly upon the Grodek positions, while Linsengen and Pflanzler battled for the Dniester crossings. The Russians were resisting along the entire front, but the steady advance of the victorious Teuton armies could not be halted.

On the 17th, Mackensen captured Jaroslav, and by the 19th, he was attacking Rawa Russka. Late on the 20th, Mackensen held both Rawa Russka and Zolkiev, and had driven the Russians north of the railroad connecting Rawa Russka and Lemburg. On the same day, the 2nd Austrian Army took Grodek. This made the positions of the Russians precarious, and late that night, the Russian Armies in front of the 11th German and 2nd Austrian Armies began an orderly retreat. Lemburg was now doomed to fall.

The Fall of Lemburg.

Realizing that they could no longer hold the main position, the Russians fell back to their previously mentioned secondary position. This was accomplished in an orderly manner, and with few losses.

The 2nd Austrian Army front was now the center of the attack upon Lemburg. Mackensen pivoting on Rawa Russka, was making a turning movement to the southeast to cut off the Russians retreating to the north, and if possible, roll up Brussilov's right.

The 2nd Austrian Army attacked vigorously on the 21st, while Mackensen, completing his turning movement, attacked from the north.

The result of these two converging attacks left no doubt in the minds of the Russians that they could hope to hold Lemburg unless they sacrificed a large number of effectives. They accordingly evacuated the city and Boehm—Ermolli entered shortly after noon of the 22nd of June. Late that evening the Russians had abandoned their whole front facing the 2nd Austrian Army.

In order to again conform to the new line, the 4th Russian Army was compelled to retire before the 1st Austrian Army and Woyrsch's detachment.

Thus ended the battle of the Grodek Lakes line, a great victory for the Teuton armies.

They now had a fortress with which to defend the east that had six direct lines of communications leading to it from the west.

However, Mackensen, as yet, had not succeeded in entirely splitting the north and south Russian armies. True, great losses (about 400,000 men, and a large amount of material), had been inflicted upon the Russians, but their Armies were still more or less intact and ready to fight when called upon.

Mackensen had partially succeeded in splitting the Russian armies when, by his great turning movement at Rawa Russka, he first shoved the left of the 3rd Russian Army north and then turned on the right of Brussilov's 8th Army. However, the Russians were quick to see the danger, and reinforcements from Alexiev's northern group, in the shape of the 13th Russian Army, under General Gorbotovski, arrived to fill the gap.

Activities In the North.

We must now leave the southern re-entrant of the salient and take note of the actions that had occurred in the north.

Early in May, von Bulow had attacked along the front of the Russian 5th Army, and on the 9th of May, with the assistance of the Baltic Squadron, had succeeded in taking Libau. From that date on, through May and June, steady progress was made by the Nieman Army in this region and von Bulow was soon threatening Riga.

As has been previously stated, these attacks, although more or less of a major offensive, were for the purpose of preventing the Russians from reinforcing their southern armies with troops from the north.

However, von Hindenburg saw, from the success that von Bulow was enjoying, that the time was drawing near for the launching of the attack from the north, that was to eventually cause the fall of Warsaw and the reduction of the great Polish salient.

For this purpose, the German G. H. Q., had, in round numbers, on a line extending from Halicz in the

south to Libau in the north, more than two and one-half million men pitted against about two million Russians.

Mackensen's Swing to the North.

Following the fall of Lemberg, Boehm—Ermolli continued moving in the direction of the Bug, fighting hard each step of the way.

Linsengen was busily engaged on the Dniester at Halicz, while Pflanzler was threatening the Dniester line eastward from Halicz to the frontier.

The 4th Austrian and the 11th German Armies moved northward, the 4th toward the Krasnic—Lublin line, the 11th toward the Zanosc—Cholm—Kovel line. The 4th and 11th Armies had left the railroads behind them and were now operating in a country of poor roads. In addition to this difficulty, Mackensen had before him the marshes of the Wieprz.

On the 2nd of July, Krasnic and Zanosc were taken and the line of the main Russian defence had been reached.

The 4th Austrian Army, however, was soon in difficulty. The Russians counter-attacked vigorously and forced the Archduke Joseph Ferdinand to relinquish Krasnic. But after extensive artillery preparations on the 3rd, by the 4th Austrian Army, the Russians were again compelled to retire.

At this time, the 4th Austrian and the 11th German Armies were ordered to remain on the line they now held until reinforcements could be brought up to take care of their ever widening front.

In the South.

In the south, von Linsengen had captured Halicz on June 28th, and was nearing Rohatzm the same day. The Russians fell back to the Gnila Lipa River where heavy rearguard fighting took place. These rear-guard actions enabled Lechitski to retire in good order to the Zloto Lipa. Repeated attacks by von Linsengen and von Pflanzler upon his position were unsuccessful and soon a deadlock resulted.

The Final German Plans.

While Mackensen was inactive, awaiting reinforcements, the German General Staff were formulating plans, which, if successfully carried out, would mean the complete reduction of the salient.

These seems to have been dissension between Falkynhayn on one side and Ludendorff and von Hindenburg on the other.

Hindenburg and Ludendorff planned the closing of the salient by simultaneous attacks from the northeast and southeast, while Falkynhayn differed in that his plan called for an immediate attack to be delivered somewhere along the line so as to relieve the pressure on Mackensen's front. This meant that the attack must be delivered as soon as possible and by the shortest route. The new German offensive once started, the Russians would be compelled to withdraw troops from Mackensen's front, and by doing so would enable Mackensen to again take up his advance.

For the scene of this proposed offensive, Falkynhayn selected the Narew front—von Gallwitz's Army to be the attacking troops. If von Gallwitz and Mackensen were both successful in their attacks, their lines would soon converge. Von Gallwitz moving southeast would sever the Warsaw—Petrograd railroad, Mackensen moving north would strike the Warsaw—Kiev railroad, the only important lines of communication the Russians now had.

Von Gallwitz was to begin his attack on the 13th, with Przasnysz in the center of his offensive. Mackensen was scheduled to move on the 16th, von Bulow in the north, was to continue his offensive along the Kovno—Shavli line, while the 1st Austrian Army and Woysch's detachment were to make frontal attacks along their respective fronts.

Formation of the Bug Army.

Falkynhayn states: "The 4th Austro-Hungarian and the 11th Armies received orders to hold themselves ready until the middle of July, fronting northwards. Before then the 11th Army was to be reinforced by the German Division which was still at Syrmia, the three divisions of the German Beskiken Corps, which had been

fighting hitherto on the left wing of the 2nd Austro-Hungarian Army and a German Cavalry Division from Belgium. In addition, two of the divisions which had been withdrawn in order to be sent back to France, were transferred to this army for a few days later. A temporary lull which had set in on the Western Front made this feasible. As these reinforcements had made the 11th Army too big for a single command, the Bug Army was formed from it, and placed on its right wing under General von Linsengen. His command of the southern army was taken over by General Count von Bothmer."

Falkynhayn further stated that three divisions of the 1st Austro-Hungarian Army were later transferred to the wing of the Bug Army at Sokol.

In addition to the above statement, Buchan states that "the new Bug Army was formed out of the XI, the 1st, 2nd and 3rd Austro-Hungarian Armies."

It is well to note that the 3rd Austro-Hungarian Army has not been mentioned by any historian since the retreat to the San, until Buchan mentions it in his statement above.

Formation of the 12th Army.

To carry out the German plans as previously outlined, three divisions of the 9th Army and three divisions from von Woyrsch's detachment were withdrawn from their respective sectors and assigned to the von Gallwitz Group. In addition to these reinforcements, the right wing of the 8th Army was ordered to assist von Gallwitz and all the heavy artillery available was sent to his sector. Von Gallwitz's Group was now designated as the 12 Army.

On the 2nd of July, von Gallwitz received orders to start the break through on July 13th.

The Battle of the Narew.

As per schedule, on the 13th of July, after extensive artillery preparations, von Gallwitz launched an attack on both sides of Przasnysz, and along a front of about twenty miles. On both sides of the city, the lines of the 1st Russian Army were pierced by the Germans. There was practically no resistance made by the Russians. Przasnysz was evacuated by the Russians on the night of the 13-14. By evening of the 14th, von Gallwitz's infantry had advanced close to the Bogate position, a halfway point to the celebrated Narew line, the screen of the Petrograd—Warsaw railroad.

It now became obvious to von Gallwitz that the usual hammer like blows of the German attacks would have to be supplanted by the rapier thrusts of the French. Speed was imperative. He realized that the weak Russian resistance was due to the fact that their fronts had been drained of troops to reinforce the Russian Armies facing Mackensen. By advancing rapidly, it would be possible to reach, or even take, the Narew line before Russian reinforcements arrived. He, therefore, attacked the Bogate position on the 15th, with only a small artillery preparation. Again the Russians fought only a rear-guard action, and on the 17th, the whole Bogate position was abandoned. By the 18th, the German lines were approaching the Narew valley between the Vistula and the Pissa.

The Retirement on the Bzura Front.

The news of the Russian retreat on the Narew front caused a demoralization of the troops of the 2nd Russian Army in the bend of the Vistula along the Bzura. They accordingly retired (without pressure from the 8th German Army), about fourteen miles to the Blonie position, the outer defences of Warsaw. This placed the 9th German Army within fifteen miles of the city. The demoralization of the Russians and their subsequent retirement, enabled the German G. H. Q., to send two more divisions of the 9th Army to assist von Gallwitz.

Russian Reinforcements Arrive on the Narew.

Stubborn resistance was made by the Russians in front of von Gallwitz, between the 18 and 20th of July. This was made possible by the Russian reinforcements that arrived from the Armies in the south. However, by the 20th, the Russians had withdrawn to the southern side of the Narew, but they still held the fortified bridge-

heads at Ossowietz, Lomza, Ostrolenka, Rozan, Pultusk, and the fortress at Novo-Georgievsk.

On the 23rd, von Gallwitz succeeded in crossing the river at numerous places between Pultusk and Lomza, and by the 25th, he had pushed his right forward until it rested on the Bug.

Although he did not control the entire river front, he was within twenty miles of Warsaw and the Petrograd railroad.

Mackensen's Drive to the North.

On July 16th, in accordance with the plans of the German G. H. Q., the 4th Austrian Army launched an attack on the Krasnic—Lublin road, against the 4th Russian Army, in an attempt to take the fortified positions at Wilkolaz. However, after ten unsuccessful assaults, the Archduke Joseph Ferdinand failed to carry the position.

That same day, Mackensen attacked the right of the 3rd Russian Army at Krasnostov and, by the 18th, after severe fighting, he succeeded in taking the position.

On the 19th, Boehm—Ermolli's Army, attacking along the left of the Russian 8th Army, forced a crossing of the upper Bug, near Sokal.

On the 17th, von Woysch launched an offensive against Evert's center toward Siermo, and by the 19th, had taken Radom. On the 20th, Siermo fell and the Russians had fallen back to the line Ivangorod—Lublin—Cholm.

The Russians now commenced launching a series of vigorous counter-attacks, but their only effect was to bring a pause in further German advancements for the time being.

Activities in The Courlands.

On the 14th of July, in keeping with the German plans to promote activity along the entire front, von Bulow had attacked the Russian 5th Army in the direction of Tukkam, and had succeeded in crossing the Windowa, near Kurschany. Continuing his attack, supported by the heavy artillery, he succeeded in taking Tukkam and Windowa on July 20th, and was soon advancing toward Mitau, beyond which lay Riga.

Von Eichorn had instituted an attack against the 10th Russian Army in the direction of Kovno. By the 24th, he had broken through the Russian lines and was only about 60 miles from Vilna.

Russian Decision to Abandon Warsaw.

About July 15th, the Grand Duke Nicholas had decided to abandon Warsaw.

It was a hard decision to make. The Russians still held the fortresses of Ivangorod, Brest—Litovsk and Novo—Georgievsk, and although the celebrated Narew line was pierced, it was not completely broken.

If he remained and attempted to stop the "Teutonic Tide," all might be lost on the other hand if he abandoned Warsaw, it meant the sacrificing of Poland, with its military, and, what was now of more importance to the Allies, its political and economical significance.

In choosing the latter alternative, he foresaw that armies who retired today would live to fight another day, while if he attempted to defend the salient to the last, his entire army, in all probability, would be lost.

Preparation for the evacuation were begun immediately, and during the last two weeks in July, machines from her factories, gold from her banks, archives from the Government Department and sacred relics and ikons from her churches were shipped into Russia Proper. All guns, ordnance and other material that might have been useful to the Germans, were either sent back to Russia or destroyed. The majority of the civilian population migrated to Russia, but the evacuation of the military was now the difficult task. The sides of the salient, especially the northern, must be held if the troops west of the city were to be saved.

Heavy reinforcements were immediately thrown into the line, against von Gallwitz and von Scholtz, and on the 26th of July, fierce Russian counter-attacks were initiated all along the northern side of the salient.

The Fall of Warsaw.

Von Gallwitz and von Scholtz had intended to attack on the 26th, but due to the Russian counter-attacks,

initiated on that date, they were placed on the defensive until the 28th, at which time the fierceness of the Russians attacks were somewhat modified.

On the 28th, they launched their delayed attacks, but the Russian resistance was so stubborn that progress, on the part of the Germans, was slow.

On the 28th, a successful Russian counter-attack, near Novo-Georgievsk, uncovered von Gallwitz's right, and imperilled the German offensive. Von Gallwitz was compelled to halt his main attack temporarily and rush reinforcements to protect his right flank.

On the 28th, von Woyrsch crossed the Vistula, between Warsaw and Ivangorod, at several points. Evert immediately abandoned Ivangorod, and retired northeast in order to maintain communications with the 2nd Russian Army before Warsaw.

On the 29th, Mackensen's right, advancing northeast of Krasnostov, was within five miles of the Lublin-Cholm railroad, while his left had already cut the line between Lublin and Cholm.

On the 30th, General Lesch abandoned both Lub in and Cholm, and, fighting heavy rear-guard actions, retired slowly to the north.

The work of evacuating Warsaw was now being the Blonie lines, and by midnight the last troops were retiring slowly, holding the Germans in check.

On the 4th of August, the Russians retired from the Blonie lines, and by midnight the last troops were passing over the bridges of the Vistula into the city. At some time during the night of the 4-5th, the Russian engineers blew up the three Vistula bridges.

By the morning of August 5th, the Russians had completely evacuated the city and on that same morning, the troops of Prince Leopold's 9th Army entered Warsaw.

ANALYSIS AND CRITICISM.

It is hardly fair to criticise the Russians on account of their lack of ordnance, munitions and other supplies. Any criticism along this line must be directed not only against Russia, but at those European and Asiatic nations that insisted that Russia be not permitted a warm water seaport.

The outstanding features of the entire campaign is the evident lack, on the part of the Russian G. H. Q., of an adequate and efficient military intelligence system. Having received information as to the extremely large numbers of German troops passing through Cracow, they did not locate the main concentration center—a spot that was within a few miles of their own lines.

Lacking this necessary information, the Grand Duke Nicholas appears to have attempted to guess at the approved solution. He evidently became misled by the feining attacks of the Germans, particularly in the north and south, which caused him to weaken his center in order to strengthen his wings. Had he only known that von Mackensen, the ablest soldier in the German Army, had been placed in command of the 11th Army in the east, subsequent events might have been different.

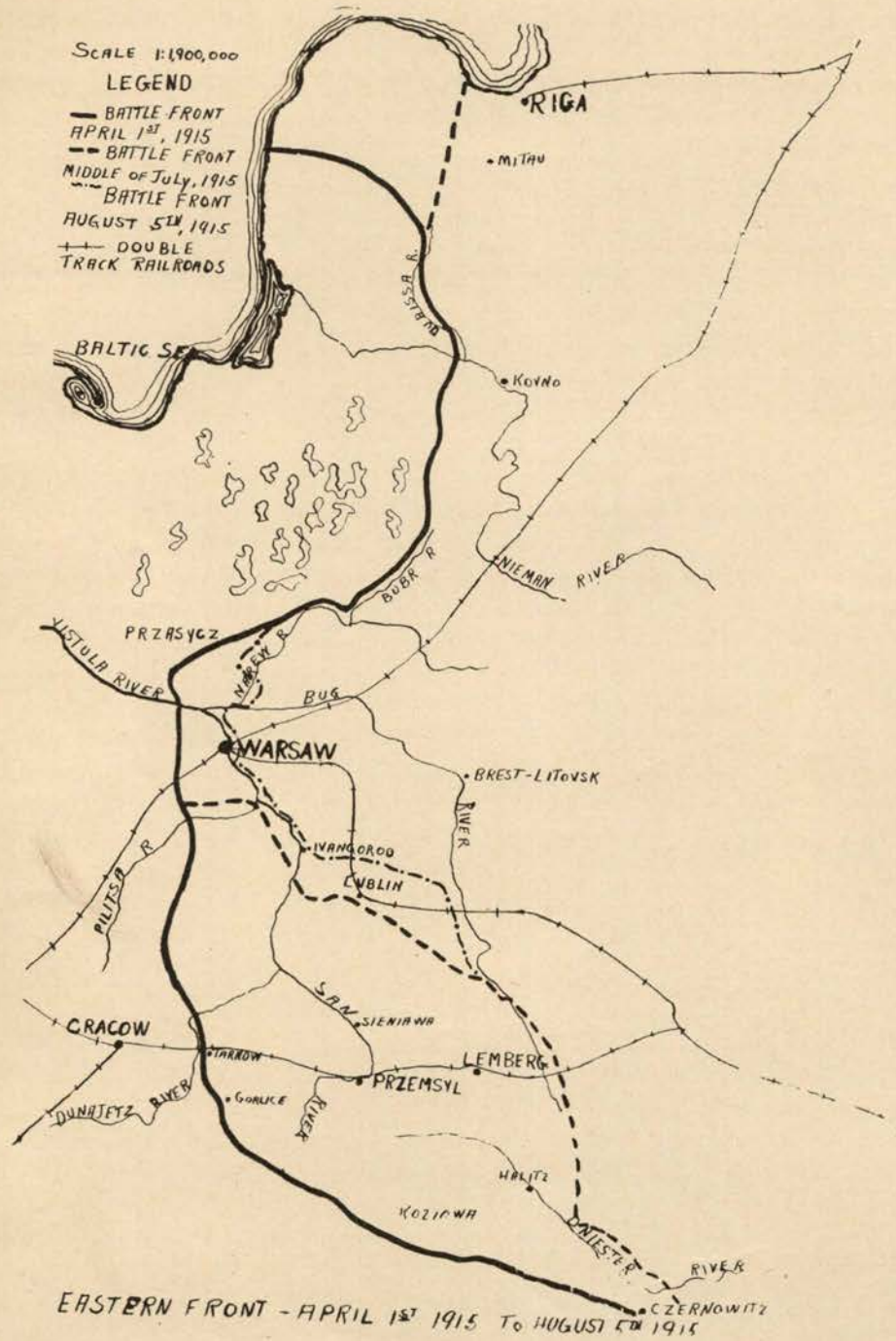
His estimate of the situation, and his disposition of forces, was faulty. He knew that the Austrians had not as yet proved to be formidable antagonists, yet against them he placed his tried shock troops, while in the north and center, against the more united, better organized, and highly trained German troops, he placed troops of unknown quality.

The Grand Duke Nicholas repeatedly removed troops from one section of the front to reinforce another, an indication that he had no general reserve. The above statement is true with only one exception, that of the corps sent from the Odessa group.

The actions of General Dmitriev (heretofore considered as an efficient commander), in failing to provide more than one line of defence, is beyond comprehension. He evidently assumed that nature, in the form of numerous rivers to his front and rear, would prove to be unsurmountable barriers to the Germans, particularly during the rainy spring months..

(However, he particularly redeemed himself by his brilliant retreat from the Dunajetz, and his five days stand at the Wisloka.)

Dmitriev's attitude in the matter of a defense system, seems to have been general throughout the Russian



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Higher Command. In only a few sections did the Russians maintain alternative defence systems and even their forts and fortresses were antiquated and easily demolished by modern artillery.

In all the major Russian counter-attacks the Russians, in almost every instance, were successful, yet they failed to take advantage of their momentary success. On the Pruth and at Novo-Georgievsk particularly, had they taken immediate advantage of the opportunity presented them, they might have succeeded in stemming the tide. Again, on the Bug, had an attack been launched at Mackensen's right, before Linsengen's Bug Army arrived, Mackensen would have been compelled to retire. A retirement of the Germans in this region, meant retiring across a terrain with few roads and no railroads, and would have placed them in a precarious position indeed. However, following their usual custom, the Russians were content to await Mackensen's next move, a move that spelled ruin to the Czar's forces.

The fact that the 3rd Austrian Army delayed their attack for several days after Mackensen's original break through, is almost inexcusable. Had its commander elected to strike in co-ordination with Mackensen's attack, the entire Russian 8th Army might have been captured.

Why Mackensen failed to use his cavalry against the Russian rear-guards is hard to understand. In no instances, except in the Courlands forests, does any historian mention the German or Austrian cavalry. Had Mackensen employed this arm of the service in a capacity to which it was particularly adapted, the Russian retreat would have become a riot. Instead, he permitted the Russians, in most cases, to retire in good order, which gave them an opportunity to throw up hasty entrenchments along the Wisloka and San, thereby prolonging the campaign.

Mackensen, as did other German commanders, depended chiefly on his artillery. Once he was able to get his heavy batteries into action, his infantry could advance with practically no resistance. It became a mathematical proposition—so many guns, so many Germans, so many Russians, so many miles per day. It is well to note that the Germans advanced in direct proportion to the amount of artillery preparation preceding each attack; when the German infantry passed beyond shelled area and came into contact with the Russian infantry, the German advance halted. From the above fact, two conclusions can be drawn. Either the Germans were timid about advancing beyond the range of their artillery or—they had met their equal, if not superior, in hand to hand fighting. The writer is prone to accept the latter.

It is well to consider, at this time, the clock like precision and team work that existed in the German higher command. For instance, von Hindenburg and von Ludendorff, although diametrically opposed to Falkenhayn's final plans, did, once Falkenhayn asserted his authority as Chief of Staff.

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BRUSILOFF'S OFFENSIVE OPERATION ON THE EASTERN FRONT IN 1916

--By--

Capt. Edward E. Walker, Infantry.

After the defeat of Russia in 1915, she had, by almost superhuman efforts, again assembled an army of 1,500,000 men. This army was divided up as follows:

The army of the North, under command of General Kuropatkin, covering the territory from the Gulf of Riga to Vidzg.

The Army of the Centre, under General Everts, from Vidzg to South of the River Pripet.

The Army of the South, under command of General Ivanov, from the Pripet to the Bukovina.

About two-thirds, or 1,000,000 were disposed of in the northern and central armies north of the River Pripet.

The Northern and Southern Armies were comparatively inactive during the spring of 1916. The Central Army, under General Everts, in its section at Lake Narotch and Lake Drgswjaty-Potstawy sector and the demonstration in the North by the Northern Army, costly as they were, prevented the diverting of German divisions to the Western Front, and showed the Allies that she had again organized armies capable of strong action.

This action of the Northern and Central Armies left the Southern Army, under General Ivanov, comparatively free and gave it the chance for organization and preparation that had been so sorely lacking in the Russian actions to date.

It is the conduct of this army that we follow thru a brief campaign of four months and whose deeds on the battlefields of Galicia and Bukovina were destined to save Italy from Austria and prepare the way for the Allies offensive against German lines that had been weakened by diversion of its best troops to the Eastern Front.

The Terrain.

A brief survey of the geography of the territory involved in Brusiloff's Offensive, can be summarized as follows:

In the Northern sector, lies the River Pripet, and its tributaries flowing northeast through a marshy, undulating country, south of the Pripet Marshes. The very nature of this country prevented an organized trench system and made the possession of this section a valuable asset to the flanks of an army.

In the north centre, is located the Volhynian Triangle. This area lies between Lusk and Rovno. It is bounded by the rivers Ikva and Putilovka. At its longest axis, it is about 30 miles wide. The terrain is rolling and sparsely timbered, with a few marshes close to the rivers. It offers an ideal ground for a war of maneuver.

In the south centre, we find the Podolian Plateau. This plateau is of rocky nature, originating in the Carpathian Mountains and gradually flattening out toward the north and northeast, where the more level plain of Galicia is formed. This formation is not a continuous series of rough, rocky hills but through large areas they dip gradually toward the mountains. In Eastern Galicia, this plateau inclines toward the south east in a gradual slope, though in the north, a steep erosion scarp faces north, northeast and northwest toward a broad lowland cut by the headwaters of the Bug and Styr Rivers. Deep gorges have been cut on the eastern slope by the Rivers Sereth, Strypa and the Zlota Lipa. These river beds face southeast and are almost parallel, forming admirable positions for successive defence.

In the south, we find the gorge of the Dniester River and the Carpathian Mountains, both offering ideal positions for the offense and the defence, favoring alike the attacking and the defending armies.

The northern area lies wholly in Russian territory. . That toward the centre, cuts the southeast corner of Galicia, while in the south, we find Bukovina, both provinces of Austro-Hungary. In the extreme south-

eastern corner, is the country of Roumania, sandwiched between Russia and Bukovina.

Russian.

In the latter part of March 1916, General Ivanov was relieved of command of the Southern Army and called to duty with the General Staff at Imperial Headquarters. General Alexiev Brusiloff was appointed to fill the vacancy. General Brusiloff had been in command of the Russian 8th Army and in active service since the outbreak of the war in 1914.

As a leader, he was without a peer in the Russian forces, but there was some doubt in the minds of the few as to his ability to control large and complex operations.

The Russian southern army was organized into four armies:

The 8th Army under the command of General Kaledin, with headquarters at Rovno, covered the front from the Kovel Sarni Railway to southeast of Kremenets.

The 11th Army under Sakharev, with headquarters at Volochisk, from southeast of Kremenets to southwest of Tarnapol.

The 7th Army under Scherbachev, with headquarters at Gusyatin, from southwest of Tarnapol to east of Potok.

The 9th Army under Lechitski, with headquarters at Kamenets-Podolsk, from east of Potok to the Roumanian Frontier.

A total for the entire Russian Army of 38 Infantry and 12½ Cavalry Divisions.

The right of General Kaledin's Army roughly coincided with those of the Archduke Joseph Ferdinand and those of Lechitski and Pflanzer-Baltin were both flanked on the south by the Roumanian Frontier.

The Austro-German.

Astride the Pripet River, lay General Linsington's Army Group. South, to the Styr, was the Archduke Joseph Ferdinand's 4th Austrian Army. From just south of Lutsk, to west of Tarnopol, lay General Boehm-Ermolli's Austrian 2nd Army. Thence Count von Bothme's Southern Army (composed of Austro-Hungarian and German troops) carried the front to the Dniester; while on the south of it, holding the front to the Roumanian Frontier, was the 7th Austrian Army under General Pflanzer-Baltin. They held the same line, with the exception of a few dents at Usciezko and east of Czernowitz, that they had been holding throughout the winter.

The total divisional strength of the four armies was 37 Infantry Divisions and 9 Cavalry Divisions. There were but 30,000 German troops in this entire group.

CAMPARASION OF STRENGTH.

Comparing the strength of the two armies, the Russians had 38 Infantry and 12½ Cavalry divisions opposed by 37 Infantry and 9 cavalry divisions of the Austro-German Army. Though the balance of man power lay with the Russians, it was more than offset by the advantage of guns, machine guns and air forces held by the Austrians. In addition to their advantage in material, the Austrians had the advantage of positions that they held all winter, improved, wired, and fitted with all the comforts possible for the front lines. Their lines of communication were vastly better than those of the Russians. They had improved the roads, built new interlacing railroads and established an elaborate system of intercommunication.

Believing that their position was impenetrable, they had settled down to make the best of their lot, underestimating the power of the enemy, and their cocksure security, building their own death traps.

Even the German General Staff shared the view of the Austrians that the position on the Southwestern front was secure. They did not believe that Russia was capable of a further offensive and actuated by this belief, massed the greater part of their troops on the Northwestern German front.

On the other hand, the Russian armies were secretly, and with their accustomed cool deliberation, preparing for this great offensive.

Both the German and Austrian General Staffs fell down in their intelligence systems to the extent that

they missed the winter preparation of the Russians. Though the secrecy with which they were carried out together with their own egotism, may have been responsible for their lack of information.

THE BATTLE LINE—JUNE 1st, 1916.

On the 1st day of June, the Russian armies were faced by those of Austria and Germany on the following line

From the small salient east of Pinsk, the front ran nearly due south, following at first the left bank of the River Styr, but crossing to the right bank above Rafalovka. East of Chartorysk, it left that river and ran south until it cut the Lemberg-Rovno Railroad just east of Dubno. It crossed the Galician frontier north of Tarnopol, which town was in Russian hands. It then followed the river Strypa a few miles to the east of the stream. It reached the River Dniester west of Usciezko, where the Russians held the river crossing, then turned east along the northern shore, curving around to the Roumanian frontier on the River Pruth about 12 miles from Czeronowitz. This sector was held by 4 Russian and 4 Austro-German Armies.

THE ALLIED REQUEST.

With Italy in a serious position and her Allies, France and England unprepared to actively help her, they turned to Russia and prevailed upon her to launch an offensive prior to the date set in the original plan of March 18 1916. Russia was not easily led to this action but finally consented. The Southwestern Army was selected for the attack.

BRUSILOFF'S PLAN.

General Brusiloff's plan was merely a demonstration of the first magnitude, launched with surprise and great secrecy, simultaneously against the entire front from the Pripet to Roumania. To exploit local success and feel the strength of the enemy. Each army was to be on its own resources.

This simple plan worked.

THE FIRST PHASE.

Heavy rains had fallen during the month of May. This made the marshy front south of Pripet and around the lower Styr very bad for the manœuver of troops. However, the sandy ground in the Volhynian Triangle and in the upper lands of the Podolian Plateau were ideal for a campaign.

Artillery Preparation.

At 4:00 a. m., on the morning of June 4, the Russian artillery bombardment opened along the entire front from the Pripet to the Roumanian border.

The fire was placed not on the trenches but on the wire entanglements, cutting large paths through them. After the fall of darkness, the fire was lifted to enable scouts to examine the amount of damage. The rate of fire was then increased and placed on the gaps made, to prevent the Austrians from repairing the havoc made by the Russian guns.

At first the Austrian High Command did not know what to make of this bombardment, thinging only of a series of local attacks. It was not long before they had a rude awakening on seeing the Russian hordes pouring over their trenches.

The Attack.

As a matter of convenient arrangement, I will follow the actions of the individual armies in their sectors to the close of the first Phase, in succession from north to south.

The 8th Army.

Promptly on the hour the 8th Army, under General Kaledin, moved to the attack along its entire front.

The main attack covering a front of 16 miles centered at the village of Olyka.

This section of the front was covered by the XXXX and VIII Corps, with one division each of the XXXIX and XXII Corps on the flanks.

In this area the Russians were helped by having the good Rovno-Lutsk and Rovno-Brody railroads and in addition the Rovno-Lutsk highway.

On the 5th of June the fighting was intense around the village of Olyka and for 5 miles to the north and south. The attack continued due west from Olyka and along the Dubno-Lutsk road in the Ikva valley. By noon of the 5th, the Austrian front was broken. The Russians trapped them in their elaborate trenches by a barrage falling in their rear and the Russian bayonets to their front. The Cossack Cavalry was used to great advantage in rounding up the dispersed Austrian units.

The birthday of the Archduke Joseph Ferdinand was being celebrated in the city of Lutsk while the army was being cut to pieces in the front lines. The two divisions holding the front (the 2nd and 10th) were driven back and the 13th Division was thrown in to hold the line. However it fared no better than the others.

The Austrian command then relied on the strong defences of the city of Lutsk to stop the advance. In this their hopes were shattered for on the next day, June 6th, the 8th Army was in front of the defenses. The Austrians were so broken by this time that the Archduke Joseph Ferdinand left the city in great haste and at 8:25 in the evening of June 7th, the Russians entered the city. In two days of fighting Lutsk had been captured and the Styr and Ikva crossed. Great quantities of all kinds of war material, as well as a large number of Austrian wounded, deserted in the hospitals, were taken.

This forward drive on so small a front, formed a very acute salient in the Russian lines. Before Kaledin could advance further to the west, it was necessary to broaden this salient. The important points necessary to his advance were the railroad crossings of the Rovno-Lutsk and Rovno-Brody on the Styr and Ikva rivers.

On the 8th of June the fighting was mainly around Dubno and Rojitché. The fighting was intense. On the 9th of June, both towns fell into Russian hands. The fall of Dubno gave back to Russia the last of the Volhynian fortresses.

A gap of over 50 miles was now in the Austrian lines, but Kaledin had not the reserves to push forward and exploit this success. Had he those reserves, and with the Austrians in full flight, without help in sight, he might have occupied Kovel and cut the Austrian lines of communication to the north.

The fighting now swung to the south eastern part of the 8th Army sector. The left wing of the 8th Army was working in conjunction with the right wing of the 11th Army. The fighting centered around the towns of Demidovka and Kozin which were taken on June 13th.

To the west of Lutsk the Cossack cavalry took the village of Zoturtsy and by the 13th were on the upper Stokhod.

The drying of the swamps by this time had enabled the right wing to get into action. On the 13th, the village of Kolki was captured, the Styr crossed and the lines pushed to the Stokhod, where the village of Svidniki was captured after severe fighting on the same date.

In the south the lines had been advanced to Rodzivilov and Alexinietz on the Galician border.

In the course of twelve days fighting, Kaledin, with the assistance of Sakharov's right wing, had advanced over 50 miles, captured the fortresses of Lutsk and Dubno, reached the Galician border, and had captured 1300 officers, 70,000 men, 53 guns and vast amounts of all kinds of war material.

By this time Kaledin had just about spent his forward momentum. If he was to maintain the success he had won, he must halt and consolidate, which he did.

The Arrival of German Aid.

By this time the German and Austrian General Staffs had awakened to the fact that a disaster had fallen on the Austrian front. All of the available reserves of the fronts still holding were rushed to stay the advance of the 8th Army. All of the German troops of von Bothmer's southern army were sent in addition to von Linsington's army group.

At this time, there was considerable friction between the Austrians and German General Staffs, as to

the means to be employed to check the victorious advance of the Russians. The German opinion that a series of reliefs was the most logical way to expedite the counter attacks, was finally adopted.

Five German divisions were united with the more sound Austrian divisions, withdrawn from the Italian front and assembled in the vicinity of Kovel, under command of General von Linsington. This army was to assume the offensive against the Russian 8th Army attacking to the southeast.

The Germans Assume Supreme Command.

In the face of the great disaster that had fallen on the Austrian front, the German General Staff had the nerve to place the following stipulation on the German aid. "That in the future, the German General Staff, in addition to its control of operations, should be insured full insight into the internal condition of the Austrian troops under their command." The supreme command and control of the Austrians now rested in German hands.

The Counter Attacks.

Von Linsington, with his newly organized army, attacked from June 16 to 30th, with only local successes. The Russian plan of diversion was again asserted by the attack of General Everts 3rd Army north of Baronovitchison on June 13th, thus keeping troops from moving south that were intended for von Linsington.

Though von Linsington did not gain any great success, (about 5 miles of ground, the upper Stokhod at Sivinski and a few unimportant towns) he did check the advance of the Russian 8th Army, fighting a successful holding engagement and preventing the capture of Kovel.

The attacks of the Russian 4th Army in the north, though not productive of any great local success, served to hold to the northern front, German troops that could have been rushed to the broken southern lines.

Operation of the 11th Army.

Moving south along the front from the 8th Army, we come next to the Russian 11th Army, which was faced by the 3rd Austrian Army under General Boehm-Ermoli.

Here the lines ran along the watershed between the Sereth and the Ikva rivers, in a country of small oak covered hills and marshy valleys.

As we have seen in the operation of the 8th Army, the right wing of General Sakhareov's 11th Army had pushed west to the Galician border in conjunction with the left wing of General Kaledin's 8th Army. Here it was forced to stop due to the inability of the remainder of the line to the south, to advance. The centre and left wing frequently attacked but were unable to move Boehm-Ermoli from his positions.

Operations of the 7th Army.

We next move to General Scherbachev's 7th Army, which was faced by the southern Army under General Count von Bothmer.

The terrain we find here is the rise from the lowlands in the north to the first steps of the Podolian Plateau. The river here starts to flow south through deep, wooded, parallel defiles to the Dniester.

General Scherbachev attacked in three zones: First, between the Tarnopol-Lemberg railroad and Zalostese; second, where the Podolian Plateau started its lift around Burkanov and third along the Buszac-Stanislau Railroad. The third zone offered the best chances of success for the following reason: Here the enemy's defenses were comparatively weak, there was a sharp salient around Buczac, a Slavic division held this front and there was excellent cover and observation.

Von Bothmer reasoned that an attack would be made along the Tarnopol-Stanislau Railway and made his dispositions accordingly. From what has been said, it will be seen that he was right, but he no doubt weakened other positions of his line to meet this attack, which he thought would be the main one. The results of the campaign show that he was badly out-generaled.

Scherbachev took especial pains to conceal the intended attack from his foes. He even went so far as to give his orders verbally to his corps commanders. He also sent a bogus telegram to his corps commanders ordering a part of his forces away from the front. Thus Scherbachev prepared his positions for attack while von Bothmer thought he was relieving a whole corps from the front.

On the morning of June 6th, the infantry attacks were made in the three zones. The right wing was

firmly held by von Boethmer. In the centre, at Burkanov, the attack met with better success and the Austrians were forced to the west bank of the Strypa. The left wing in the third zone met with amazing success, and on the 8th of June, Buczacz fell into Russian hands. They forced the positions on the River Strypa and crossed well over on the western bank, on the same date.

General Scherbachev was now in an advanced position, with von Boethmer's unbroken centre on his right and the deep defiles of the Dniester on his left. If he continued to advance in this salient, he was liable to be forced, if the enemy turned on his right flank, into the defiles of the Dniester River. Accordingly, on the 11th of June, he withheld his advance, to await developments on his left flank in Bukovina.

The period from the 11th to the 13th was occupied in repulsing enemy counter-attacks.

In five days, from the 4th to the 10th of June, this army captured 415 officers, 15,649 men, 35 guns, 37 machine guns and 30 miles of ground that had been occupied for a period of nine months and extensively fortified. Its gains were somewhat offset by its losses of 360 officers and 19,943 men in the same period.

Operations of the 9th Army.

The terrain in the zone of operations of General Lechitski's 9th Army, offered a great deal better means of defense to the Austrians than the terrain farther north. We find here the corridor between the rivers Pruth and Dniester, crossed by a range of hills which gradually peters out to the north into a small plain between Dobronovstse and the Dniester. Flowing southeast through a deep defile, is the River Dniester, with only three bridgeheads suitable for the passage of troops. They are Uscieszko, Zalestchiki and Utsie Biskupie, the latter two being held by the Austrians while Uscieszko was in Russian hands.

A report of the reconnaissance of the ground, made early in April, had determined General Lechitski that the most suitable area for attack was from the Dniester, south to Dobronovstse, through the gap between Dobronovstse and Okna; attacking in two columns, one from the east and one across the Dniester, from the north.

General Lechitski concentrated over half of his strength on this small front. The right wing occupied a frontage of about 1 2-3 miles and the left wing a frontage of about 2 1-3 miles. Again as in the preparation of the 7th Army, the greatest secrecy prevailed and every means used to deceive the enemy as to the point of the attack. These operations could have been observed from Hill 458 which was in Austrian hands, had they been actively on the lookout.

At noon of June 4th, the artillery fire was lifted and the attack launched by the two columns through the Dobronovstse-Okna gap. (There is quite a lot of conflict of date between June 2nd and 4th, as to the date of the attack. I have taken June 4th, as it was more in keeping with the original plans.)

By evening of the same day, the Austrian front lines had been taken. Pflanzler-Baltin was more taken in than had been the generals further north, because of the thought that the position was impenetrable, especially after the fruitless attacks of December 1915. The Austrians counter-attacked with great vigor, staying the attack until the 6th. On the night of the 6th, Sinkuv fell. On the 8th, the village of Okna fell. The Bridgehead of Utsie Biskupie was now pinched off. On the 9th, Lechitski transferred two divisions from his left flank to his right flank. On the 10th, Hill 458 fell and with it the key to the Austrian position. Pflanzler-Baltin was now being forced back, hopelessly disorganized, with a wedge being driven through his centre. Part of his army retreated south towards the river Pruth and part to the west towards Kolomea. By the 12th, the important bridgehead of Zaleshchyki was flanked and taken.

General Lechitski continued the attack due west, to the important road centre of Horodenka, where he faced his columns due south. On the 13th the town of Sniatyn was taken after which he consolidated into one column. He then proceeded to march on Czernowitz.

The Austrians, helped by a violent downpour of rain, made a losing attempt of three days, to hold the low hills to the south of the River Pruth. This river was now a raging torrent. On the 16th, the Russians crossed the Pruth.

General Lechitski again split his forces into two columns and attacked Czernowitz from the north and east. On the 7th, he had completed his pinching operations on Czernowitz and captured the city itself the same day.

The Austrians were now hopelessly lost, retreating in great disorder and leaving units at Stanislau, Kol-

omea and along the Dniester, without thought of command. The Russian cavalry gave them no time to rest, ruthlessly pursuing and capturing them by the thousands.

After the capture of Czernowitz, Lechitski continued due south in one column and sending small columns west towards Stanislau and Kolomea. On June 18th, Kutchurmare fell to the southern columns, who also crossed the River Sereth on the 19th of June.

On June 22nd, Kutz fell to the western columns, who were now converging on Kolomea. June 23rd, saw the town of Kimpolung in Russian hands.

From the 4th to the 23rd of June, the 9th Army had conquered the greater part of the province of Bukovina and practically destroyed the Austrian 7th Army, capturing upwards of 800 officers, including 1 general, 40,000 men, 50 guns and a vast quantity of war material.

The date of June 23rd, 1916, marks the end of the 1st Phase of the offensive.

As an example of the tactics employed by the Russian generals during this campaign, those of General Lechitski with his 9th Army, can be taken as the best of a series of daring and brilliant manœuvres, unsurpassed by any during the war.

RECAPITULATION OF THE 1st PHASE.

From the 4th to the 23rd of June, General Brusiloff had succeeded in putting to flight two of the four armies opposing him. His right and left flank armies had driven dents over 50 miles deep in the Austrian lines.

He had advanced from 10 to 60 miles on a front of 195 out of 255; captured the fortresses of Dubno and Lutsk, the important bridgeheads of Uistie-Biskupie and Zaleschika and practically the whole province of Bukovina; was within 10 miles of Brody and 25 miles of Kovel, towns of the utmost importance to the Central Powers.

In men and material, he had captured 4,031 officers, 194,041 men, 219 guns, 644 machine guns and vast quantities of war material. This great loss of men and material was a severe blow to the Austria's waning resources.

The campaign had evolved into one of manœuver instead of fixed trench warfare.

General Brusiloff now had available for his lines of communication, the important railheads of Lutsk and Buczacz.

In war material, he was now equal to his foes, for the first time in the war.

Above all, he had proven himself a brilliant leader, capable of taking advantage, to the limit of his resources, of every opportunity that presented itself.

THE SECOND PHASE.

Brusiloff's Situation and Plans.

In the first phase the flank armies had pushed far into Volhynia in the north and Bukovina in the south, leaving von Bothmer's southern army firmly holding the center. He lacked the strength of the River Stokhod for his right flank and that of the Carpathians for his left flank.

His immediate needs were to straighten his lines and improve the position of his flanks.

Upon his immediate needs must he determine his strategy. Though he no doubt looked toward Kovel, Lemburg and Halicz with covetous eyes, his decision and actions for the second phase of his campaign were based on his immediate military situation. His needs were: First, to take the line of the Stokhod so that his right flank would have the security of the Pripet River and its marshes; second, to capture Brody and advance his right centre in Volhynia; third, to dislodge von Bothmer from the Strypa and drive him back to the line of the 9th Army; fourth, to gain the foothills of the Carpathians for his left flank. Upon the strength of von Bothmer, with the natural defenses of the parallel river canyons held by him, depended the success of these plans. The Interval between the 1st and 2nd Phases.

The German General Staff had no conception that the defeated Russians of 1915 were capable of dealing so decisive blow to their ally—Austria.

June had been a month of rude awakening to them, with the Crown Prince before Verdun calling for

every available man and now the Austrians begging for help.

In the face of her own troubles, Germany rushed every available man to the help of Austria.

It was a mad race between Germany, Austria and Russia to get man power and material to the South-eastern Front. The advantage lay on the side of the Central Powers, with their excellent railroad systems and good roads. The Russian, with only two railroads over which to move troops and miserable roads, managed to get enough troops to the southeastern front to check counter-attacks and finally advance their lines.

By the 1st of July, the 12th Austrian Army had been formed, by withdrawing units from the Italian, Western, Northeastern front, von Linsington's Army Group, the 2nd Austrian army and the southern army.

This army, under command of von Linsington, was, in conjunction with the 7th Austrian army, to launch a counter-offensive against the southern portion of the Volhynian salient.

In addition to this army, all available reserves had been rushed to the Southeastern front.

Field Marshall von Hindenburg assumed supreme command as far as south of the Dniester.

Brusiloff had been reinforced by the 3rd Army, under General Lesch and in addition had received such support as could be sent over the poor lines of communication.

Thus on the 1st of July, we find the Austro-German armies partially re-organized and strengthened by German reserves, standing with their backs against Kovel and Lemburg, and planning an offensive against the Russian centre. The armies of Russia were re-organized, reinforced and eager to continue their successes of June.

Operation of the 3rd Army.

The 3rd Russian Army, under General Lesch, was placed to the north of the 8th Army, on the extreme right flank. It was faced by von Linsington's Army Group. Its front was along the banks of the River Styr and to the north and south of the Kovel-Sarney Railroad, in the Rafalovka salient.

The terrain to its front was a wide, wooded plain running south to the low hills around Kashovka on the River Stokhod. North of this plain stretched a wide, level desert of marshes and coarse grass. North of Rafalovka, we find the southern boundry of the Pripet marshes.

Lesch had no intention to strike in the north, as he only desired the marshes for protection for his flanks. His objective was the sandy plain to his front and the Stokhod, 30 miles away.

Preceded by the most intense artillery preparation seen on the eastern front to date, Lesch attacked in two columns, one at Kolki and one just north of Rofolovka, with the objective of pinching off the Kolki-Rafalovka salient.

The attack was made at dawn on July 4th.

By the night of the 4th, the River Styr had been crossed north of Rafalovka and the Austrian lines pushed back 12 miles from the river, to Vulka-Galuzyiskaya.

On July 5th, Kolki was taken after stubborn defense by the Austrians and the Styr bridged at that point. Vulka-Galuzyiskaya fell the same date. On the 6th, Koslin-Knovka and Raznitze fell, with the fall of the latter two towns, the Kolka-Rafalovka salient was eliminated.

On the 7th, the Russian cavalry was in Manievitche, on the Kovel-Sarni Railroad, about half way from the Styr to the Stokhod.

The two columns of Lesch, now converged on the Gorodok-Manevitchi-Okonsk-Zugarovka line. His extreme right, south of the marshes had, by this time, pushed forward to the Stokhod, seizing Novo-Tcherevisgehe. The main road from this place to Kolki was now in his hands.

On the 8th, the upper Stokhod was crossed at Ugly and Arrenovitché. The Russian position now lay on the Stokhod between the Kovel-Rovno and Kovel-Sarni Railroads.

After the first stand in front of Kolki and Rafalovka the Austrians retreated in great disorder, burning the towns as they went. The Cossack cavalry harrassed their flanks and rear, giving them no time to halt and reorganize. The infantry pushed forward and consolidated all of the advantages that had been won.

With Kovel, the Austrian base, but 20 miles to his front, Lesch ran into much stronger resistance. The Austrians now made desperate stands in previously prepared positions. Lesch had spent his forward momen-

tum by this time and was unable to advance further. From the middle of July on, this front again became one of a war of position.

In four days of fighting, Lech's 3rd Army had accomplished its mission. It had straightened the front, gained the Stokhod and its flanks now rested on the marshes of the Pripet. They made an advance of 25 miles on a front of 40 and had captured 300 officers, 12,000 men and 45 guns, a great number of machine guns and large quantities of war material.

The 8th Army.

The front of General Kaledin's 8th Army, with the exception of a slight improvement in the vicinity of Svidniki, remained practically the same as it was on June 30th.

The Russian Ruse.

About this time Russian Imperial Headquarters announced to the world that the fate of Kovel and the operations on the entire front depended upon the results of these battles. That in the event Kovel fell, the road to Brest-Lisovsk and to Warsaw, would be opened.

This was no doubt a ruse of Brusiloff to mislead von Hindenburg into thinking that his immediate objective was Kovel.

The 11th Army.

With the exception of the right wing, which had operated with the left wing of Kaledin's 8th Army, in June, the 11th Army had not played any great part in the offensive to date.

German Counter Offensive.

Von Linsington had moved south and taken command of the newly organized Austro-German 12th Army, which had been made up of about 20 divisions brought from Dvina, Verdun and the Trentino.

A great counter stroke was planned against the southern part of the Volhynian Salient. It was hoped to drive Kaledin from Lutsk and Dubno and dislodge Lesch from the Stokhod. The date fixed for this stroke was July 18th.

General Brusiloff had somehow received information and the exact schedule of this plan. To frustrate these plans before they matured, he ordered the 11th Army to attack at once.

General Sakharev moved his army to the attack, on the night of the 15th. He, as had Lechitsky, Lesch and Kaledin, struck at several zones of the front at once. His two main efforts were against Boehm-Ermoli's centre in front of Brody and in the north on the Bludov-Zlotchevka line.

After two days of fighting, Boehm-Ermoli's centre fell back to the upper Styr.

On the 16th, General Sakharov pivoted his right column on Bludov, turning the Austrian left flank, drove them south and cut to pieces the 48th, the 61st Austrian and the 22nd German divisions. On the same date, three large ammunition dumps, which von Linsington had prepared for his own offensive, were taken, at Mikhasion.

The Austrians made a determined stand at Gorokhov.

It now started to rain in torrents. Sakharov, with his progress slightly impeded by the rain, continued to advance south towards the Zlota Lipa and east towards the Styr. On the 20th, Berestechko fell. He had now driven a wedge between the 4th Austrian Army, commanded by Boehm-Ermoli, and von Bothmer's southern army, and was swinging south to operate against von Bothmer's left, which lay on the upper Sereth and Styr rivers.

On July 22nd, the Austrians started the evacuation of Brody. Why von Bothmer did not make a more determined attempt to defend this strong point, with its natural defenses, will never be known.

On July 25th, the Russian attack on Brody started in three converging columns from the east, north and south. At 6:00 a. m., on the third day, the 28th of July, Sakharev entered the city. The booty was immense.

Sakharev continued his advance, but not as the Austrians expected, through the densely timbered country cut by deep ravines, that lay to his front. He turned due south, crossing the ridges east of the more difficult ground. This movement brought his front to the Pienaki-Podkamien line, which was parallel to von Bothmer's

lines of communication. On August 4th, he attacked along the line Nushche-Zagozhe in conjunction with the right wing of Scherbachev's 7th Army, which attacked from Zolotese south towards the Sereth.

By the next day, August 5th, all of the villages of the upper Sereth had been taken.

On the 6th, Reniov fell. Von Bothmer's left flank was now completely turned.

These actions marked the end of the advance of the Russian 11th Army during this phase of the offensive.

General Sakharev, during the period from July 15th to August the 6th, had completely disorganized one wing and turned the flank of the best army on the southeastern front. He captured 1,006 officers, 47,567 men and immense quantities of all kinds of war material. His gains in respect to territory, though not of a great magnitude, made safe the southern flank of the Volhynian Salient.

The Guard Army.

Let us now turn again to the northern sector.

On July 21st, the new Guard Army, under command of General Bezobrazov, had been added to the command of General Brusiloff. He placed it in the front, between the 3rd and 8th Armies, facing northwest, with its centre half way between Lutsk to Kovel.

On July 28th, this army attacked along the upper Stokhod, where it was successful in the first stages of the attack.

On July 30th, their cavalry was five miles west of the Stokhod. Von Linsingen was forced from the river and fell back to previously prepared positions.

On the 2nd and 3rd of August, they made slight gains, capturing the village of Rudka-Mirynska, but were later forced to give up the town due to the acute salient it made in their lines.

This army, in conjunction with the 8th and 3rd Army, continued to attack until the 9th without success.

On the 9th, Bezobrazov took up a position slightly in advance of his original position and one much harder to defend.

During the 12 days, this army was on the offensive, they gained nothing decisive and lost 532 officers and 54,770 men, the flower of the Russian Army.

This attempted drive of the Guard Army, was Brusiloff's only direct bid for the capture of Kovel. Its failure was due to a good many causes, those paramount are: The placing of untried troops in the line for a decisive action; lack of co-ordination between the artillery and attacking units; vacillating attack orders; the ill-chosing of the ground for the attack; lack of co-ordination of the attacking units and the utter lack of subordination of General Bezobrazov.

After this brief but tragic offensive in the north, we again turn to the south and follow the 7th and 9th Armies to the end of the campaign.

The 7th and 9th Armies.

The action of the 7th and 9th armies blend together during this phase of the campaign.

The control of eastern Bukovina had very little direct bearings on the strategic position of the Austrian armies in Galicia. Its relation to Roumania, however, was more important.

Any advance to the west of Kolomea would endanger von Bothmer's lines of communication and the only crossing of the Dniester, of military value, were between Halicz and Nishnirov.

If Lechitski took Kolomea, Delatyn, Stanislau and the crossings of the Dniester, he would cut the main railways into Hungary, which were von Bothmer's main feed lines to the south, turn his right flank and drive him out of his position on the Strypa.

The units of Pflanzer-Baltin's army that had fled west and north to the Dniester, were assimilated with von Bothmer's command and were holding the crossings between Halicz and Nishnirov.

On June 28th, Lechitski's second series of attacks were started on the line Niezviski-Pistryn and stretching from the Dniester to the Carpathians.

He first struck for Kolomea. Flank cavalry attacks caused the Austrian position in front of Kolomea, to break on the first day. On the next day, the 29th, Kolomea was abandoned in such haste, that no appreciable

damage was done to the six railways and highways converging in the city.

The Marmaros-Stanislau Railway, at Delatyn was his next objective. Lechitski's left wing now moved south over the wooded hills toward Berezov. The right wing in conjunction with the left wing of the 7th Army, north of the Dniester, moved on Tulmatch. On June 30th, Tulmatch was taken, this forced von Bothmer's right flank back several miles, to conform with the Austrian retreat.

On July 2nd, von Bothmer counter-attacked, retook Tulmatch and stayed the progress of the right wing.

The 9th Army centre and left wing were advancing without serious opposition. On June 30th, Pistyn and Berezov fell to the left wing and on July 3rd, it was but 6 miles from the Marmaros-Stanislau Railway. On July 8th, the centre column captured Delatyn.

Two of Lechitski's objectives had now been taken.

The forces of nature now entered the campaign. The July rains were falling in torrents and the Pruth and Dniester were roaring floods, this left only the left wing, which was in the foothills of the Carpathians, free for action. Lechitski was forced to halt his victorious advance.

The front was inactive until August 7th, on which date, Lechitski struck again with his right column, retaking Tulmatch and reaching the Dniester close to Nizhniov. On the 8th, the left wing of the 7th Army crossed the Koropiets and consolidated with Lechitski's right wing.

On August the 9th, the Austrians evacuated Stanislau and the next day, the 10th, General Lechitski entered the city. On the same date, General Scherbachev crossed the Zlota Lipa north of Nizhniov.

Von Bothmer was now in desperate straits. Lechitski had cut the Marmaros-Stanislau Railway and in the capture of Stanislau had cut the feeder of his right wing, the Styr-Buczacz Railway. His right flank was completely turned by Scherbachev, when he advanced north of Nizhniov.

Brusiloff, with the two jaws of his pinchers in the south, had cracked the last hard nut remaining to his front.

Von Bothmer withdrew to the Zlota Lipa with his centre at Brhezanyia and his left behind Zbrov.

With the retirement of von Bothmer, the last of Brusiloff's objectives had been attained. His line was straightened out and his centre was in a position to advance.

Von Bothmer's retirement marks the end of the 2nd phase of the offensive.

THE THIRD PHASE.

The Germans were not slow to see the menace of Brusiloff's further advance in August. They concentrated every effort on the southeastern front. All of their armies were re-organized and German generals were openly placed in command of the army groups. The modern organization of the western front, using divisions instead of larger units, was introduced. Germany realized that it must be German strength that was to stop the Russian advance.

Brusiloff, with his lines straightened, now turned his thoughts toward Lemberg, and the joining of his left flank with the Roumanians across the Carpathians.

The front of Lechitski's 9th Army was turned southwest and it was assigned the capture of the Carpathians. Scherbachev with his 7th Army was given the entire Dniester front. Brusiloff had now separated his 7th and 9th armies, and assigned to them tasks along different lines.

The armies were high in spirit and morale but they lacked the necessary reserves and munitions to continue an offensive along different lines and against an enemy who had all the advantage in material and positions.

Under pressure from the 7th Army, von Bothmer had fallen back to the line Zborov in the north and the Dniester in the south.

On August 27th, Roumania declared war on Austria. She was now openly on the side of the Allies.

On the 29th of August, Scherbachev's 7th Army started its offensive. By the 3rd of September, von Bothmer's right centre was broken.

Reinforcements were now rushed to the aid of von Bothmer. He received 12 full strength divisions, 2 Turkish, 3½ Austrian and 7 German. With this help, his right held in front of Brzezany. Von Bothmer now

had close to one quarter of a million men under his command.

On September 5th, Scherbachev made his last attempt on Halicz, and failed, due to the lack of fresh troops and munitions. This front was stagnated into one of inaction for the remainder of the fall.

During Scherbachev's campaign against Halicz-Sakharov, with his 11th army had advanced on the Svinukhy-Bludov line where small gains were made up to September 20th.

The check of the 7th Army on his left flank, robbed him of any fruits his success had brought him. From September 20th on, this front stagnated as did that of Scherbachev and from the same causes.

Lechitski, in the south, with only his 9th Army, as of the date August 10th, had the different task of taking the passes of the Carpathians.

By the 15th, Jablonitza pass was taken and on the 17th he was holding part of Mt. Kapal and the Kiri-liba Pass.

On the entry of Roumania into the war, on August 27th, Lechitski endeavored to force the eastern passes of the Carpathians and co-operate with the Roumanians.

From the 30th of August to September 10th, he met with success in his venture into the mountains.

On the 11th, his left wing gained contact with the Roumanians, and took Mt. Kapal.

The Russians now formed a defensive flank for their new alley, but Lechitski was at the limit of his advance, due to the lack of men and munitions. His front, now extended over 100 miles. About the middle of September, snow started to fall and this, in addition to his lack of reserves, forced him to gradually diminish his attacks. With the retarding of Lechitski in the Carpathians, the objective, forcing the passes and turning the Austrian flanks for Roumania, failed.

Several changes now took place in the Russian lines, the main one being the assumption of command of the Special Army (old Guard Army) by General Gourko. Troops were now sent to help Lechitski hold his flanks in the Carpathians.

The Special and 8th Armies attacked in the direction of Valdimir-Volinski on October 16th-17th, with but local success. This was the last offensive operation of any size attempted in the fall of 1916.

The success of von Falkenhyn's attack on the Roumanians in October, forced Brusiloff to send to the aid of their ally, the reserves that were now coming to his armies. These circumstances caused him to abandon his Galician position, and the entire front settled down to a war of position.

ANALYSIS & CRITICISM.

Reconnaissance.

The Austrian High Command, as well as the officers responsible for the front lines of observation were criminally negligent in their lack of knowledge of the Russian activities. The 7th Austrian Army, with Hill 458 in their possession, must have been mad to have allowed the Russian concentration of General Lechitski to pass unnoticed.

The Russians had knowledge of every move of the Austrians and took advantage of every opening.

Plans.

General Brusiloff's plans were very simple, well co-ordinated and during the 1st and 2nd Phases (the Southern part) excellently executed.

The plans of the third phase were made without considering the increased resisting power of the enemy and without reckoning on the lack of men and material available for the task.

Tactics.

The major tactics employed by all four of the Army Commanders, were very similar.

They were, driving thin wedges into enemy lines with powerful narrow columns; converging these columns behind the enemy and literally pinching him off in large quantities. These tactics worked even against the strongest position, that of Count von Bothmer, in the Russian centre.

The combined attack along the whole front, forcing the enemy to fight at all points, resulted in the

breaking down of the German plan of shifting reserves and was a large factor toward the success of the 1st and 2nd Phases.

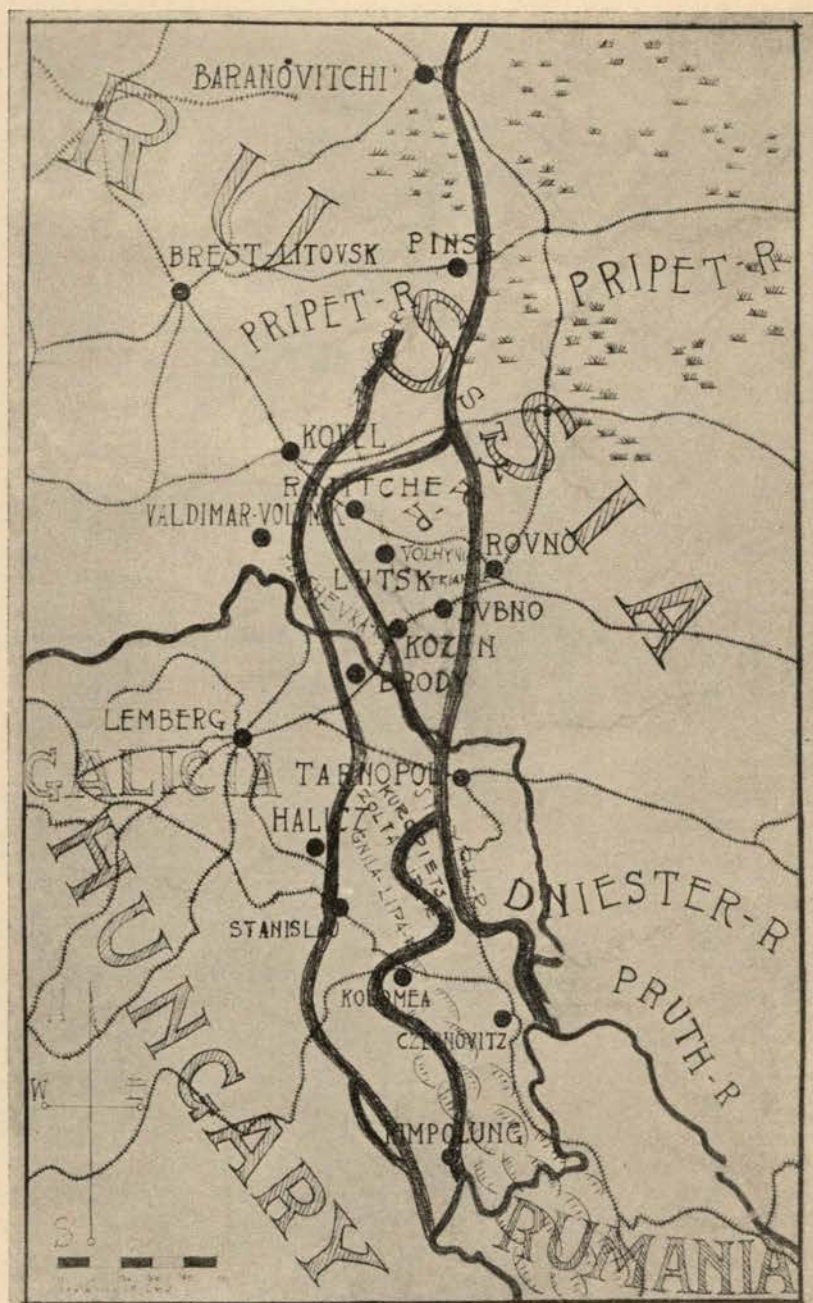
The lack of applying this principal in the 3rd Phase, and in the attack of the Guard Army, was disastrous.

Co-ordination.

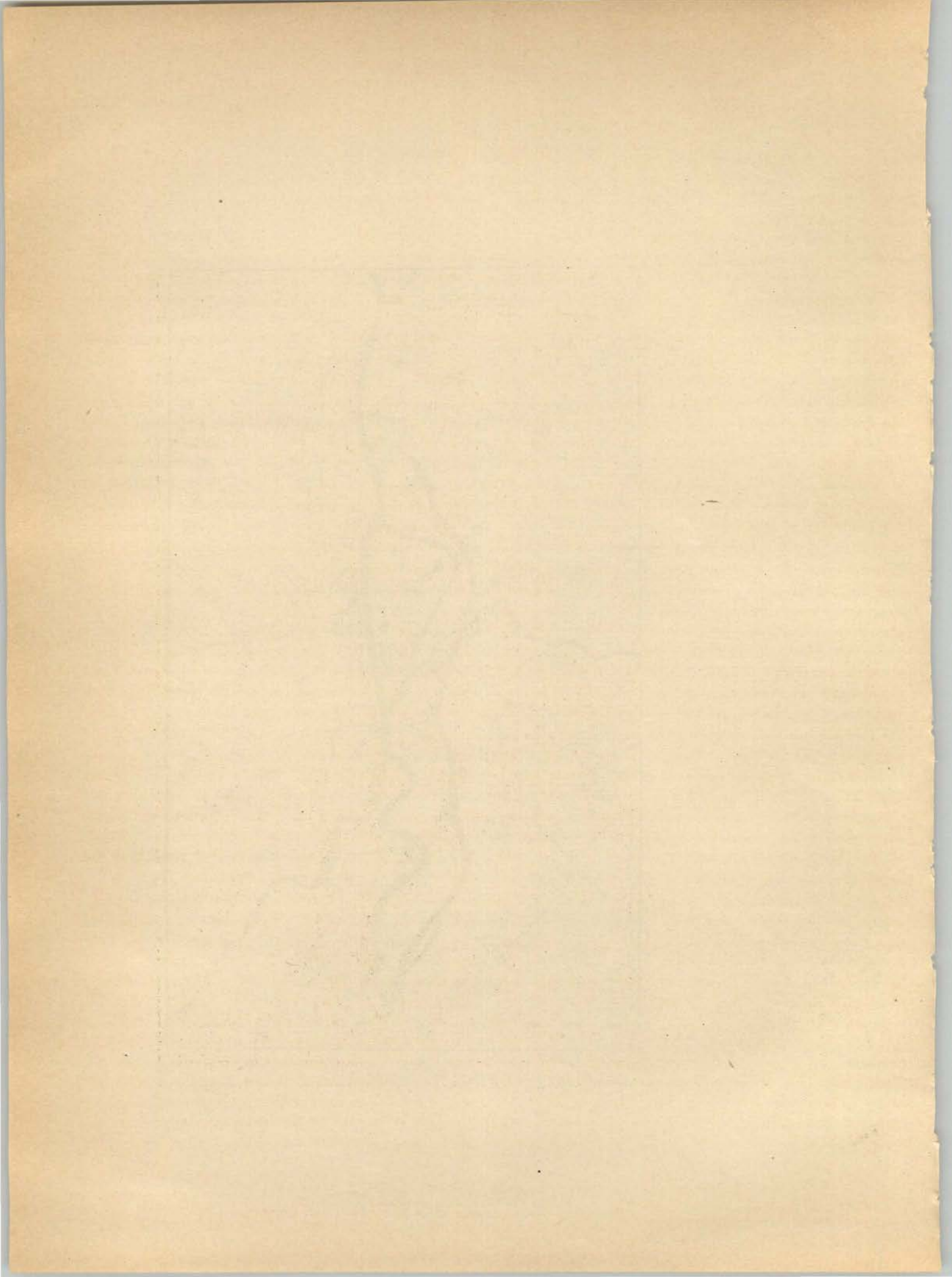
The actions of the 1st Phase and those of the 2nd Phase, in the south, were fine examples of complete co-ordination and close co-operation of units.

The destruction of the Guard Army is a lesson in the lack of co-ordination with and subordination of command to the one plan.

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A.C. -34



THE ROUMANIAN CAMPAIGN OF 1916.

—By—

Lt. Col. M. Norton, Infantry.

The Roumanian Campaign of 1916 is one of the most interesting campaigns of the World War. The reason for this interest are geographical, historical, and political.

The area of Romania has more than doubled by treaties of the World War. Before the war it was slightly smaller than England. The acquisitions by treaty have made it larger than the whole British Isles. In 1914 Roumania was a Kingdom of southeastern Europe situated to the northeast of the Balkan peninsula and on the Black sea. It begins on the seaward side with a band of territory called the Dobrudja and broadens westward into the form of a blunted crescent. The northern half is called Moldavia and the southern half Wallachia. Along the inner edge of the crescent run the Carpathian Mountains, also called, along their western extremity, the Transylvanian Alps. The frontier which separated Roumania from Austria extended along the crest of these mountains. West of the mountains is the Province of Transylvania, which had once belonged to Roumania and which was one of the provinces added by treaty since the war. The mountains make a fairly regular angle and enclose Transylvania on two sides separating it from Wallachia on the south and Moldavia on the east. This Transylvania frontier is about 300 miles long. The eastern boundary was formed by the river Pruth, between Moldavia and Russia, the northern mouth of the Danube and the Black Sea. The southern boundary, except for a distance of about 85 miles from Turtukai to the sea, is formed by the Danube. Except for this small strip on the southern border of the province of Dobrudja, Roumania was supplied with natural protective barriers, the mountains on the north and west, the Pruth river and the Black Sea on the east and the Danube on the south. The only dangerous gap in this natural defensive line and the only portion of the entire frontier which is not formed by some natural topographic boundary is this small strip on the southern border of the Dobrudja. It is an open gateway and is absolutely unprotected.

The Balkans are the gateway to western Europe through which the invaders of Europe have passed since the beginning of time. Moldavia is the ancient Roman province of Dacia which had been cut off from the Roman Empire in the 3rd Century. Since then it had been a sort of a lost land where the people had continued to speak the old Roman tongue and still called themselves Romans and their land Romania.

The strategic importance of the Dobrudja was recognized by the Romans who defended in on the south by Trajan's Wall, a double rampart from Constantza on the Black Sea to the Danube. It was utilized in later times by the Russians and Turks, as in the wars of 1828, 1854, and 1878, when it was finally wrested from Turkey. By the treaty of Berlin, 1878, Russia gave the Dobrudja to their Allies, the Roumanians. It was a land of mountains, swamps, and barren plains peopled by Turks, Bulgarians, Tartars, and other aliens. This transfer was unsatisfactory to the Roumanians because the Russians annexed instead the fertile province of Bessarabia which was largely populated by Roumanians. After 1880, the steady decrease of aliens and the development of the Black Sea ports made the Dobrudja a source of prosperity to Roumania.

The Danube, as a river barrier, is one of the most remarkable rivers in the world. It is rarely less than a mile wide and very deep. In some places it reaches a width of 12 miles. It is subject to constant inundations and is for the most part a chain of swamps, lakes and backwaters. From the Iron Gates to the Delta the northern shore of the river is lower than the southern shore. This results in a belt of marshes which borders the river on both sides and more particularly on the Roumanian side. The lakes and marshes are filled with stagnant water. Many of the lakes are practically covered with floating bogs. This is especially so in the marshes of the lower Danube, known as the Balta. The patches of firm land on the river can be picked out by noting where a town or village on the Roumanian side is faced by a town or village on the Bulgarian side. These pairs of towns mark the places where for hundreds of years there have been ferries across the river. Several are rail-heads and are provided with wharves for handling cargo. There is a bridge at Cernadova. This bridge is 9 miles long. There is not another bridge across the river between Cernadova and Belgrad, a distance of 500 miles. Even at the most favorable crossing places no troops could force a crossing in the face of an enemy equipped with proper artillery and plenty of ammunition.

There are three groups of passes of military value which cross the mountains and connect Roumania with Transylvania. For convenience they are classified as the Northern Group, the Central Group, and the Western Group. The Northern Group are those lying north of the great bend in the range. The farthest north is the Bekas Pass, crossed by a wagon road. The next pass is the Gyimes Pass which has a railroad and a wagon road uniting the two sides of the mountain. The farthest south of the northern group is the Oituz Pass, which is crossed by a wagon road only. The Central group include two which are of primary importance; the Predeal Pass through which passes a railroad and highway connecting Bukharest and Kronstadt; and the Torzburg Pass which is crossed by a first class wagon road. The 3 passes of the Western Group are the Red Tower Pass, the Vulcan Pass, and the Iron Gates. The Red Tower is remarkable in that the Olt River has cut a deep narrow gorge through the mountains. Along this river runs the railroad and the highroad which connects Roumania with the important Transylvania Town of Hermannstadt. Between 40 and 50 miles farther west is the narrow gorge of the Jiu River. This is the Vulcan Pass. It has a wagon road only. The railroad stops at Targu Jiu. The extreme western pass is called "The Iron Gates", so named by the Turks on account of the submerged rocks in the water way. It is cut by the Danube, is occupied by both road and railway, and is a very important highway both by water and by land. In addition to the 3 groups of passes mentioned there are several other minor passes cut by inferior roads and trails. It is important to note that the northern and western passes consist of the valley of a stream which rises on the Hungarian side and flows down the valley on the Roumanian side. These passes, therefore, are not saddles at the crest of the range but are portions of narrow valleys. This would make the movement of troops easier down the valley on the Roumanian side and the greater advantage of the defensive would rest with troops on the Transylvania side. This should be remembered in connection with the Roumanian invasion of Transylvania.

During the first two years of the war Roumania found herself in a very peculiar position. She had great difficulty in remaining neutral. External and internal pressure was being constantly brought to bear on her. Great influence had been brought to bear on her by both sides, especially Germany and Russia. The question frequently asked in Bukharest was, "Would the assumed sympathies of a Hohenzollern King, comparatively fresh from Germany and German influence, prevail over the natural Franco-Italian tendencies of the Roumanian nation and cause them to go Teutonic?" Kingly influence and German relationship had helped to bring Bulgaria to Germany to opposition to her old friend and liberator, Russia. It is easy to see that the status of Roumania was that of a wavering neutrality. The first Russian successes in Galicia swayed her toward the Allies but that tendency was corrected by the Russian retreat of 1915. Italy's entrance into war made her sit up and take notice and the alliance of Germany with Bulgaria and the Serbian debacle almost forced her in. Brussiloff's successes brought the decision still nearer. Finally, and simultaneously with, the apparent successes of the Russian offensive, came Italy's capture of Gorizia. This decided Roumania to go into war on the side of the Entente Allies. The Italian government declared war on Germany August 27th, 1916, at the same time Roumania's ambassador in Vienna handed to the Austrian government Roumania's declaration of war. Germany promptly declared war on Roumania.

Behind every act there was a motive and when we examine the motive behind Roumania's declaration of war we find that her position and decision was influenced by Territorial ambitions, economic interests and internal politics. Her territory did not correspond to racial boundaries. Transylvania was a lost province. It had been given to Austro-Hungary by Francis Joseph in 1867. Over 4,000,000 Roumanians in Transylvania were clamoring to be taken back. Above everything else Roumania wanted to win back Transylvania. The principal of nationality was at the basis of Roumania's actions, the principal that kindred peoples desiring to be united should be united.

She had profited enormously through her commercial agreements with the Central Powers.

She had an army of approximately 550,000 men at the time she declared war. They were imperfectly trained and very imperfectly armed. They were short of heavy guns, and rifles. There was no aircraft at all. Since she was dependent for material on foreign imports, by way of Russia, the supply had fallen short of the demand. There was no great reserve of ammunition. In every branch of equipment she was far below the Germans. She counted on the help of her allies in equipment.

There were two plans of action open to her; first, she could invade Transylvania, and second, she could invade Bulgaria through the Dobrudja. There were two advantages to the first plan; i. e., it would straighten out the Transylvania salient and it would win back the lost province of Transylvania. Its disadvantages were that it would have only one local result and Roumania. herself, might be invaded through the Dobrudja, while the Transylvanian invasion was in progress.

The advantages of the second plan were:

1. Invasion of Bulgaria and capture of Sofia.
2. It would cut the Orient Railway.
3. Provide a union with Serrail's Soloniki Army.
4. Eliminate Turkey from her European Allies.
5. Capture Constantinople.

Roumania did not have troops enough to undertake both of these operations at once. Neither did she have troops enough to block an unprotected gateway nearly 100 miles wide and also carry on a successful invasion in difficult mountain country. For political reasons Roumania chose the first plan and Transylvania was invaded. A prime minister thinks first of his own political situation at home and what effect his acts are going to have on his own job. This is the reason that sound military plans and strategy must give way to political strategy and statesmen's plans have the right of way.

Before continuing with the invasion of Transylvania we will now glance at Germany for a moment.

Germany welcomed the breach with Roumania. Everywhere her offensive had failed. She was strategically and tactically on the defensive. She needed to win a decisive victory. The appearance of Roumania in the war seemed to promise such a chance. The German General Staff knew to a dot Roumania's strength and knew, too, that she would not play the game properly. They knew that Roumania's eyes were so unswervingly fixed on her unliberated kinsfolks in Transylvania that she would go there forthwith. She would invade Transylvania to make the war popular.

It was foreseen early in the year that Roumania would declare war. On January 30th, 1916, in Bukharest, the following telegram was given wide circulation in the Frankfurter Zeitung, "The kind of neutrality which finds favor in Roumania—a neutrality which delays decision up to the point when events render the decision more easy and also as little dangerous as possible". The Germans expected the declaration after the harvest, about September 15th. The Roumanian's plan to invade Transylvania was known to the Germans.

The German plan was:

- (a) Mackensen to invade Dobrudja from Bulgaria.
- (b) Overrun Roumanian bridgeheads at Turtukai and Silistria and press forward to shortest line between the Danube and the Black Sea.
- (c) A new army formed from:
 - 1st The German 101st Division (Now in Rustchuk).
 - 2nd. 4 Bulgarian Divisions (3 in north Bulgaria and 1 in Macrdonia).
 - 3rd. 2 Turkish Divisions (From Adrianople).
- (d) The army to be equipped with heavy artillery, mine throwers and gas, all of which were not yet known to the Roumanians.
- (e) After Machensen's Army had reached the line agreed upon, strong detachments were to be withdrawn from it and sent to Sistov in Bulgaria; from which point they were to cross the Danube and march to Bukharest.
- (f) While these operations were being carried out by Mackensen, Austria was to check the advance of the main Roumanian forces over the mountains until the attacking troops, which were to be dispatched immediately upon the declaration of war, were in position. To assist in this Germany provided 5 Infantry, and between 1 and 2 Cavalry Divisions.
- (g) Unity of cammandeon the Roumanian front from the Danube to Bukovina was established by placing the Austrian 1st Army under General Arz von Straussenberg.

ROUMANIAN INVASION OF TRANSYLVANIA.

The first phase of the campaign was the Roumanian Invasion of Transylvania. There were three Roumanian Armies engaged in this operation; the Army of the North, 3 divisions (106,000 men); the 1st Army, 5 divisions (142,000 men); and the 2nd Army, 4 divisions (132,000 men). In addition to these three armies there was the 2rd Army, 6 divisions (146,000 men), which was in reserve along the Danube and another reserve of 51,000 men at Bukharest.

The mission of the 3 invading armies was to seize the central Maros valley.

A strong force of Russian troops was reported on its way from Odessa to Dobrudja to prepare for an attack on Bulgaria and Serrail at Saloniki was also expected to keep Bulgaria occupied.

The plan was to break through quickly and win their objective before the enemy could be reinforced. Speed was of the essence of success in this operation. For if the Roumanian Armies did not accomplish their mission quickly they would find themselves checked on a line where they could not hold.

General Averescu was placed in command of the assaulting armies. He was the ablest of the Roumanian Generals. He had risen from the ranks to be Chief of Staff. On August 28th, movement was commenced. The Army of the North crossed through the Predeal and the northern passes; the 2nd Army through the Red Tower and Torzburg passes and the 1st Army through the Vulcan pass. The troops crossed the border at 18 points. They moved fast and found but little opposition. Kronstadt was occupied. On September 4th they were close to Hermannstadt. On September 9th Hermannstadt was evacuated and the enemy withdrew to the hills in the north. Falkenhayn arrived September 17th. It will be remembered that the topography of Transylvania is more suited to the defense than that of Roumania. Furthermore, Austria was well supplied with railroads. The literal line of the Maros valley was well connected with cross roads and these were linked up with a railroad along the mountains. This permitted of a concentration of troops at any point. Roumania, on the other hand, was not so well supplied with railroads. There was no literal line running near the mountain frontier and single lines only ran to four of the passes. In the case of the important Vulcan Pass, the railroad ran to Targu Jiu and stopped. Furthermore, it was the mission of the Austrians and Germans to hold the Roumanian Armies in the mountains until the decisive moment came for an attack. At no time did they offer much resistance. As the Roumanians advanced the enemy withdrew. As the Austrians drew near to the Maros line they gained strength because they were nearing their literal supply lines along the roads and railroads of the Maros valley. On the other hand, as the Roumanians advanced they lost strength. Their lines extended through the mountainous country and they had to depend upon the single road and railroad through the passes for supplies. Their line of communications became longer. Their supply became more difficult. In the latter part of September they were strung out on a 300 mile frontier separated, in some cases, by rocky, mountainous passes as much as 40 miles apart. They were in a very precarious position against a strong enemy. This was the decisive moment for Falkenhayn. He attacked. A detachment of Bavarian Alpine troops executed a difficult march over mountains and through mountain passes, broke through Roumanian outguards and on September 26th, were at the Red Tower Pass. They attacked the pass, seized both ends and the adjoining peaks; cut the railroad lines from Hermannstadt to Roumania and captured large quantities of supplies that were on their way to the Roumanian Armies. While this was going on, September 26th, the Germans bombarded and attacked Hermannstadt. Falkenhayn's big movement to the East was well under way October 5th. The pressure was too great. The Roumanians retreated. They recaptured the Red Tower Pass and by October 6th they were back again in their own passes and prepared to defend them against any invader. The Roumanian Armies had failed completely in their mission and the invasion of Transylvania resulted in a catastrophe.

Before leaving this phase of the campaign, two comments are necessary; first, the operation of the Bavarian Jager troops in capturing the Red Tower was very brilliant and successful. Had the other elements of Falkenhayn's Army accomplished their mission with the same skill and dash as the Bavarian detachment, it is probable that Falkenhayn would have broken through and occupied Roumania immediately. Second, the Roumanians should have had some information of the enemy's movements and intentions. They apparently knew nothing of what was going on. They had no aircraft and a very poor intelligence service and they

were obviously not rich in trained officers or experienced generals.

THE DOBRUDJA CAMPAIGN.

The second phase is the Dobrudja Campaign. Mackensen was in the Balkens when Germany declared war on Roumania. His forces, which he rapidly concentrated, consisted of 5 Bulgarian divisions, (3 Infantry and 2 Cavalry). 2 Turkish divisions (on the way from Adrianople) and nearly one German Corps. So well laid down were the German plans for the Roumanian Campaign that, when war was declared, it was only necessary for the Great General Staff to send a few telegrams to set the machinery in motion. Mackensen was especially strong in artillery. The Roumanians were weak in artillery and the Germans counted on superiority in this arm to crush their enemy.

Mackensen's mission was to close and lock the Dobrudja Gate. The advantages of this were many:

1. As long as this Gate was open it was a serious menace to Bulgaria, the Orient Railway and Turkey.
2. It would close the Black Sea to Russia.
3. It would result in the destruction of the only bridge which made possible a turning movement.
4. It would add territory to the German holdings.

His plan was simple. He would,

1. Clear Dobrudja of all the enemy.
2. Hold the narrowest part with as few troops as possible.
3. Leave detachments at critical places for crossing the Danube.
4. Use his main army for defensive action.

The execution of this plan can be compared to the solution of a map problem. The southwestern frontier of the Dobrudja is approximately 100 miles long. It narrows toward the north until it reaches the narrowest portion at the Constantza-Cernadova railroad. Here it is only 30 miles wide. If he can reach this line he will master the Dobrudja and cut off Russia from Roumania by the sea and be in position to cross the Danube and march on Bukharest.

Every mile he advanced toward the north makes his frontier shorter. In his march to the north his right flank rests on the sea and his left flank on the Danube. His left flank is safe because the Danube is a wide river bordered with marshes and the Roumanians have no heavy artillery. His right flank is safe because it is a hazardous proceeding to land troops on a coast in the face of a determined enemy.

He crossed the border September 1st and moved on the towns of Dobritch, Baltchik, and Kavorna. The out-guards fell back and the towns were occupied September 4th. His next objective was Turtukai and Silistria. Turtukai is an important town because there is a ferry there across the Danube and the town is fortified. It was garrisoned by the 15th and 117th Roumanian Divisions and had an armament of about 100 guns.

Mackensen arrived here September 6th and the town was taken the following day.

Silistria was unprepared and fell 3 days later. This was a hard blow for the Roumanians and here, again, they suffered because they had no airplanes and a poor intelligence service. They did not know what the enemy was doing. Of the troops holding Turtukia and Silistria, 21,000 men, 400 officers, and all of the armament was captured. Many were drowned in trying to swim the Danube. And this was only the tenth day of her campaign.

Mackensen continued to march to the northeast keeping close to the river. When he arrived within 12 miles of the Cernadova-Constantza line his advance was checked. His right was forced back 10 or 15 miles.

The Roumanian advantage was not followed up. Mackensen ran short of munitions and was forced to wait for an additional supply. For about a month nothing happened. But Mackensen soon received re-enforcements of guns and munitions. He resumed the offensive. After a heavy bombardment Tuzla fell October 19th and Constantza on the 22nd. Before Constantza was evacuated the large stores of oil and wheat were destroyed. The remaining Roumanians and Russians retreated to the north of the Dobrudja. The small force of Roumanians holding the Cernadova bridge blew it up on October 25th. The Dobrudja Gate was closed and locked.

Before leaving this phase of the campaign one comment is necessary. Of the large force of Russian troops supposed to be on their way from Odessa to invade Bulgaria, on the out-break of war, only one division arrived. This division assisted the Roumanians in driving back Mackensen's right wing. Had this advantage been followed up it is probable that the defeat would have become a riot, because Mackensen put most of his faith in his artillery and he was short of ammunition.

THE BATTLES OF THE PASSES.

While Mackensen was operating in the Dobrudja, Falkenhayn was attempting to force his way through the Passes. The Germans looked upon the Roumanian campaign as a plundering expedition. They wanted to get possession of the great oil region before it could be destroyed and of the harvest before it could be removed.

Falkenhayn had a choice of 3 ways in which to break through; the northern passes, the central passes, or the western passes. The advantages of the Northern route were the greatest. It would cut the railroads in the Sereth Valley, separate Russia from Roumania, shut up the Roumanian Armies in Roumania and lead to their surrender and capture. In any attack on the passes he had an advantage over the Roumanian on account of the literal line running along the mountains with the connecting lines running to the passes. He made his first attempt to break through at the northern passes. The fighting here was very severe, especially at the Oituz Pass. At one time the Roumanians thought the Germans were going to be successful at this point and some of the troops retreated and moved to the south from the Gyimes Pass so as not to be cut off. Falkenhayn's attempts here were unsuccessful.

He next directed his efforts towards the Central Passes, Predeal and Torzburg. A break-through here offered the next greatest number of advantages. It would cut Roumania in two and he would be on the direct railroad line to Bukharest. But he was no more successful here than he was in the north. After several weeks of severe fighting, the Roumanians were pushed back to a secondary position where they held firm and could not be dislodged.

It was now getting along toward the middle of November. Falkenhayn saw that he could not break through the Central Passes. He decided to make his supreme effort at the Western Passes. He selected the Vulcan Pass. While a successful attempt at the Vulcan Pass offered the fewest advantages for plunder and loot it offered greatest chance for success. This was because, on the Roumanian side, there was no railroad running up to the pass. The Roumanians had to depend for their supply on wagon roads only. Falkenhayn's plan was to make simultaneous attacks at all other passes on the frontier and at Orsova so as to distract the attention of the Roumanians and divert their re-inforcements from the principal theater. This was successfully done. One of the fiercest battles was fought here. On November 16th and 17th, in spite of the most courageous defense, the Roumanians were decisively beaten. The road to Wallachia lay open.

The Orsova division was completely cut off. This division was commanded by Colonel Anastasiu. It left Orsova November 25th and attempted to retreat southeast to the Olt Valley. After three weeks of wild and thrilling adventures it finally reached the valley only to find it held by the enemy. It was compelled to surrender.

THE ROUMANIAN RETREAT.

Early in November, Mackensen turned his attention to the crossing of the Danube. During the late Autumn the river is at its lowest; the current is about 8 to 10 miles per hour. We have seen that the north or Roumanian side is lower than the south bank. The northern shore is mostly swamp and backwater. An army holding the high bank on the south and equipped with modern guns, can sweep the northern shore for 3 or 4 miles inland and command the narrow strips of hard ground between the marshes. As soon as Orsova and Turnu-Severin had fallen long trains of barges with abundant material came down stream through the Iron Gates.

Mackensen crossed at Zimnica, about 30 miles east of the Olt River. He selected this point because the Olt river would be one of the first natural defense positions for the Roumanians to hold their retreat from Falkenhayn's army. The crossing was made with but little opposition because Mackensen's overwhelming superiority in guns made it impossible for the river detachments to offer much resistance.

It was about this time, too, that the shortage of ammunition began to be felt in the Roumanian Army. Had it not been for this shortage of ammunition the German Armies, in debauching from the Vulcan Pass, would have been in a serious peril.

The Roumanian retreat was orderly but they did not halt for any serious engagements. They could not on account of a lack of ammunition. They could not hold any position long against heavy German artillery fire because they could not retaliate.

Their first defensive position was on the Olt River. This looks like a good defensive position, but the railroad which parallels the river is on the west side instead of the east side which gives the Germans an advantage in supply which the Roumanians would not have. Furthermore, Mackensen, having crossed at Zimnita, made the position untenable. So the Roumanians continued to fall back. There was a fight along the Niaslov River and another and more determined fight along the Arges River. This delaying action at the Arges River was fought to cover the evacuation of Bukharest. Averescu attempted one last stand here. A Russian division had arrived in support. North and northwest lay what was left of the 1st Army and south and southwest Presan had gathered together all that was left of what had once been the 3rd and 4th Armies to hold the lower line of the Arges. He counter-attacked, December 1st, with the intention of driving a wedge between Mackensen and the German center under Kuhne. He almost succeeded. He drove Mackensen back over the Niaslov and took 30 guns and 1,000 prisoners. But the expected reserves came too late and Mackensen was re-inforced before Presan could clinch his victory. As a result Presan was driven back to Bukharest.

On December 1st the capitol was moved to Jassy. On December 5th the Arsenal was blown up and on December 6th Mackensen entered the city.

After abandoning Bukharest the Roumanian forces retreated to the northeast. There was a rear-guard action on the Jalomitza River and another at the Buzeu River.

There is a railroad north of and parallel to the Jalomitza River. It looks as if this would be a good place for a defensive action because the railroad would provide a good supply line. In the meantime, however, in the north Falkenhayn was approaching Ploesti. His presence there would render the Jalomitza line untenable. Ploesti was the center of the oil region. As the Germans approached, the oil wells, tanks and refineries were blown up, burned and destroyed. The air was rank with the fog and fumes of burning oil. Fugitives of every class and description were driven in front of the German Armies. The roads and railways were congested. There was scarcely any shelter or food in the towns on the line of retreat so that it was a starved and frozen crowd that struggled into Jassy and Galatz.

The Roumanian finally withdrew to the Sereth-Putna line. This is an excellent defensive position. The Danube on the left, from Galatz to the Black Sea is an impassable barrier. There are plenty of railways north of the line to deliver supplies, re-inforcements, etc. The mountains on the right proved an effective barrier against the enemy.

The Germans made several more attempts to break through the northern passes, capture the town of Onesti and cut the railroad communications with Russia. They were unsuccessful in all of them and the two armies were deadlocked.

ANALYSIS AND CRITICISM.

The Roumanians made a serious blunder when they invaded Transylvania. They should have held the passes with one army and used the others for an invasion of Bulgaria through the Dobrudja.

They completely failed to make a correct estimate of the situation. Their first mistake was their failure to properly understand their mission. Even if the invasion of Transylvania had been successful the results would only have been local and would have contributed but little toward ending the war; whereas an invasion of Bulgaria through the Dobrudja would have had far-reaching results. It would have cut the Ottoman Railway and might even have led to the capture of Constantinople.

They did not give enough consideration to the enemy; neither his strength, position, armament or probable intentions. Instead of believing that the enemy would bother them the most, they evidently believed that he would do practically nothing.

In considering their own troops they put far too much faith in probable re-inforcements and the help they expected to get from their allies.

They did not consider carefully the factors of terrain or time and space. Had they done so, would they have attempted an invasion of hostile territory in mountainous country, on a line 300 miles wide, and left their own back door wide open and guarded by only isolated detachments? Such a mission as they undertook, and over such terrain, could be accomplished only by the most marvelous good luck. Having failed to make a correct estimate of the situation, they came to the wrong decision and one disaster followed another. They had several chances to snatch defeat from victory but continued reverses had robbed them of all their morale.

There were many excuses for Roumania. Some historians say that she was sacrificed; that she was led like a lamb to the slaughter; that Russia promised her that Bulgaria would remain neutral; that Russia made many extravagant promises—some of which were never intended to be kept. We know that German propaganda had undermined Russian Civil Government. There is some reason to believe that the Sturmer government in Russia deliberately planned a Roumanian defeat as a part of its scheme for separate peace with Germany.

There is no doubt but what Roumania was influenced by Russia. But after once Roumania made her decision and entered the war she followed her own councils in the details of the campaign. The Russian General Staff tried to persuade Roumania to enter the war in June at the moment of Brussiloff's great victory. Had she done so, the result might have been different.

Roumania expected Lechitski's progress in the Carpathians to embarrass the Austrian left wing; she expected Serrail's advance in the Balkens to distract the attention of Bulgaria; she expected a steady flow of munitions across the Russian border; in all of these things she was disappointed.

There were strange stories of trainloads of munitions for Roumania side tracked and delayed by pro-German officials high in authority; of enormous quantities of supplies intended for Roumania being accumulated at Vladivostock and other remote places. It was not only German strategy and German generalship that defeated Roumania, but also German treachery and German perfidy.

Roumania expected an easy victory. Her plans were based on the assumption that she would receive much help from Russia. When Russia failed her, Roumania's chance of success was gone.

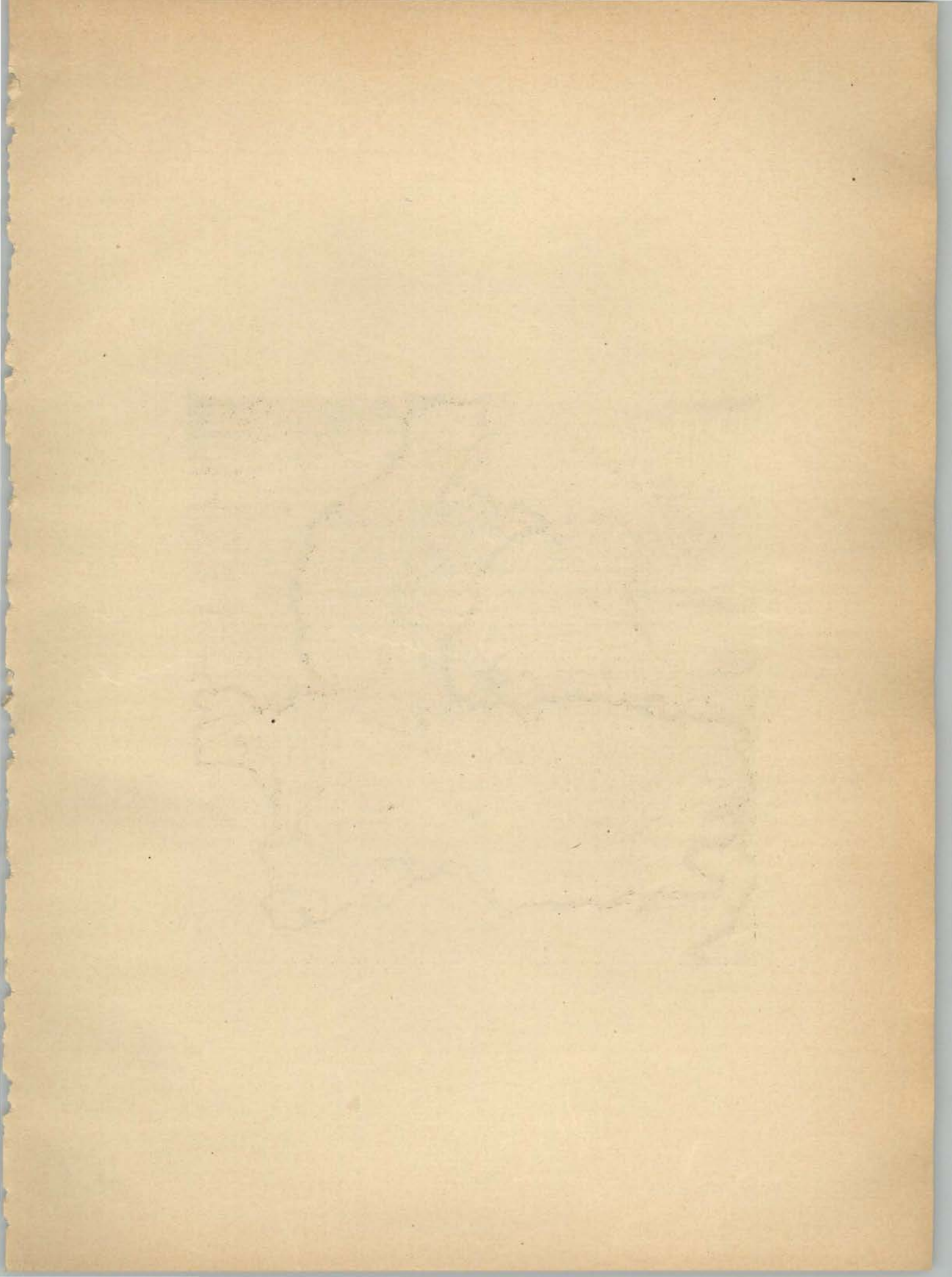
The Germans expected a rapid entry through the mountain passes into Roumania but it was only after many weeks of the hardest fighting that Falkenhayn forced a passage through the Vulcan Pass. Even then he would not have been successful had it not been for the Roumanian shortage of ammunition.

Roumania lacked teamwork in handling her armies. She lacked experienced generals. Her infantry out-fought the German infantry. Her defense of the passes after she was brought to bay and the conduct of Colonel Anastasius' divisions after it was cut off at Orsova proved that the valor of the Roman legionaries still lived in the Roumanian armies.

LESSONS.

There are many lessons to be learned from a study of this campaign. Some of the most important are:

1. Thorough preparation is necessary in the conduct of military expeditions. An army should be as well trained and equipped as its adversary.
2. Von der Golz says, "War is the end of politics". War having been declared, political strategy should give way to military plans and strategy.
3. Teamwork is as necessary in a group of armies as it is in a division, a brigade, a regiment or smaller units.
4. A victory should always be followed up in order to reap its fullest benefits.
5. Too much care and thought cannot be given to the estimate of the situation.
6. The mission must be thoroughly understood and due consideration given to all of the factors leading up to the decisions.
7. An army must have "eyes" in the form of aircraft and an efficient intelligence service.





8. Undue extension is always to be discouraged and in mountainous country it is fatal without proper liaison.

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THE FINAL RUSSIAN OFFENSIVE AND COLLAPSE OF THE RUSSIAN ARMY IN 1917.

—By—

Major Summer Waite, Infantry

POLITICAL EVENTS

The "Final Russian Offensive and Collapse of the Russian Army in 1917" is so intimately connected with the Russian political situation that it becomes necessary to mention some of the more important political events in order to secure a back ground for the principal military operations which featured the final offensive and collapse of the Russian Army.

The assassination of Rasputin, the Russian Monk, in December 1916, celebrated by the country as a deliverance but viewed by the Czarine as a personal affliction, had been the signal for the ousting of the traitors who surrounded the Czar, by the Revolution of March 12, 1917, in which so-called democracy overthrew a weakened and corrupt autocracy.

The revolution brought about the abdication of the Czar who was succeeded by a provisional government, headed by Prince George Lvov and composed of leaders of the liberal and socialistic parties in the Duma. Two members of this government are of special interest—Alexander Kerenski and Alexander Gutchkov, the former because of his efforts to keep Russia in the war on the side of the Allies and the latter because he failed as Minister of War to prevent the publication and distribution of that vicious order to the Army known as "Ministerial Order No. 1". This order established a "hierarchy of ultra democratic soldier councils" or committees which practically superseded the authority of the officer personnel and destroyed all discipline. In brief it called on every military unit to form a deliberative council to decide internal administrative questions and to answer for the discipline of the respective unit. Needless to say the chaos and insubordination resulting from this order was catastrophic.

Through the efforts of Kerenski, who for a time was Minister of Justice in the provisional government, capital punishment, as the penalty for desertion and other military crimes, was abolished. Under the protection of "Ministerial Order No. 1" agitators and demagogues began to appear and harangue groups of soldiers in defiance of their officers. These traitors, many in the pay of Germany, preached that only the capitalists desired War, that the poor working men were now free to do as they chose and that they might return to their homes and divide up the land of the nobles. What was the result? Thousands, demoralized by the cry of "land and freedom", deserted and wandered aimlessly about the War zone blocking railway traffic and seriously aggravating the difficulties of transport.

The Germans were quick to take advantage of this situation and systematically flooded the Russian Armies with pamphlets proclaiming international socialism and other rapid forms of pacificism. Russian outposts were invited to fraternize and did fraternize with their "German brothers" who professed to agree with the Russian desire for "a democratic peace and no indemnities".

Russian commanders watched events with the deepest misgivings and made most urgent appeals to the provisional government to take steps toward the restoration of discipline. Things went from bad to worse and finally Gutchkov resigned his portfolio as Minister of War and was succeeded by Alexander Kerenski.

Kerenski, the son of a Russian school master, was now destined to play the leading part in the great Russian Tragedy. Barely thirty-five years of age he seemed to be the only man in the provisional government who had any influence with the mob. Before the revolution he had practiced law and had earned more or less of a reputation from defending workmen, political offenders and Jews. He was a man of fiery energy, who had the theatrical qualities of Napoleon, but who lacked the great captain's moral courage and utter ruthlessness. He was sagacious enough, however, to sense the dangerous military situation resulting from the utter collapse of discipline in the Army and it was due in great measure to his efforts that the government finally agreed on May 16, 1917, to a basic program including the continuation of the War. Kerenski was convinced that only an immediate offensive could tighten up discipline and restore the morale from front to front, exhorting, upbraiding, inspiring and beseeching the army to stand fast against the treacherous Germans—"for Russians would soon find that they had exchanged a Romanof autocrat for a Hohenzoller despot".

PLANS FOR OFFENSIVE.

The Russian Eastern front covered a distance of about 700 miles extending from Riga on the Baltic generally south to the Carpathians. The Russians divided this line into the northern front, the central or western front and the southwestern front. It was naturally desirable, in consideration an operation on a large scale, to launch an offensive simultaneously on all fronts. A conference, however, between the supreme commander-in-chief, General Brusiloff who had relieved General Alexeiev June 6th, disclosed the fact that such an offensive would mean infinite delay. The northern front was quite out of the question because of its proximity to Petrograd and its demoralizing revolutionary and socialistic influences. The western or central front, recently commanded by General Gourko, was in better shape being farther away from the Bolshevik strongholds of Petrograd and Kronstadt but did not lend itself to an immediate operation on a large scale. The southwestern front looked more promising and it was finally decided to conduct the main operations in this theatre, the most important blow to be delivered in Galicia and Bukovina followed by a second offensive in the direction of Vilna and a third in Roumania.

In Galicia the enemy stood behind the upper stream of the Styr which rises south of Brody and flows generally northward. Their center was along the Zlota Lipa with their extreme right center bent back north of the Dniester and crossing at a point near Jezupol. South of the Dniester their line ran behind the Bystritza just west of Stanislav and thence south to the Carpathians. The enemy position along the Zlota Lipa was turned inasmuch as the Russian line crossed the lower stretch of the river. This left the Austrians the Gnila Lipa position, that is the position behind the river which rises in the hills east of Lemburg and flows generally south entering the Dniester in the vicinity of Halicz. This is the natural covering position of an army defending Lemburg, itself an open town and on important railroad center.

The Bug River, rising in the same hills as the Gnila Lipa and at one point flowing within a half dozen miles of it, flows northward across eastern Galicia into Russia, thus making a natural extension northward of the Gnila Lipa position. Together the lines of the Bug and Gnila Lipa constitute the last and best defensive position before Lemburg. South of the Dniester the Bystritza and behind it the Lominca serve as an extension of the Gnila Lipa Line.

The country between the Zbruch and Lemburg, is drained by the Dniester and is studded with countless lakes and streams both to the north and south of the river. The country is wooded and broken and is traversed by river canyons deep and narrow at source but broadening out at confluence with larger streams. The streams north of the Dniester flows in a general southerly direction while those to the south of the parent stream flow generally northeast. The general topography of the country is such as to introduce difficult military hazards and to require a high degree of training and skill in the art of maneuver by troops attempting to negotiate a thrust in a general direction of Lemburg.

From Brody south to the neighborhood of Zborov lay the 11th Russian Army under General Erdelli. South of it to the Dniester was the 7th Russian Army commanded by Blekovitch and between the Dniester and the Carpathians was situated Kornilov's command, the 8th Russian Army. The group of armies namely; the 7th, 8th and 11th was commanded by General Gutor.

The enemy lines were thinly held about one division per seven miles—not counting reserves. Boehm Ermolli commanded the 2nd Austro-Hungarian Army in the vicinity of Brzezany, Count Bothmer's Austro-German Army was astride the Dniester and in front of Halicz while the Austrian Group of Armies under the Archduke Joseph Ferdinand filled the gap between the Austro-German Army and the Carpathians.

The Plan was to strike for Lemburg making the attempt in the Brzezany sector with the 7th Army and then to draw the 11th Army into battle as if the operation was to be extended northward. On having deceived the enemy on his main purpose, Brusiloff proposed to throw the 8th Army from the south of the Dniester against Halicz and ultimately against the vital point of Stryj which would mean the outflanking of Lemburg.

In the meantime look for a moment behind the scenes. As a result of the operation of "Ministerial Order No. 1" there had been kaleidoscopic changes in the staffs and among troop commanders. For example take the 6th Corps of the 11th Army which is quite typical. In three months time, since the revolution in March, the Commanding General had twice been changed, all the division commanders and eight out of twelve

regimental commanders. From five to six officers, mostly regulars, had been expelled from each regiment. Influenced by propoganda, agitators and so on some of the men in this particular Corps had said "We'll attack, but if we fail we'll kill the Corps Staff." A soldier at one of the committee meetings proposed the illuminating scheme that in the attack the Corps Commander should lead followed by three divisional commanders who in turn should be followed by the regimental commanders and then the officers of the respective regiments and last, but not least the men. The foregoing is a fair criterion of the discipline existing in many units of the Russian Army which was soon to be put to the test of a rigorous offensive.

For once the Russian were well munitioned and equipped and were never better prepared for an offensive from the point of view of supply.

THE FINAL OFFENSIVE AND COLLAPSE OF THE RUSSIAN ARMY.

After many delays, occasioned mostly by the indecision of unit committees who had enlarged their powers to include the larger consideration of tactics and strategy and who were engaged in extended debates as whether or not they would attack, the artillery preparation was begun on June 29th. On the morning of July 1st, the 7th Army attacked against the enemy center in the vicinity of Brzezany and surprised the world by taking Koniuchy that evening. On the second the Zlota Lipa was crossed south of Brzezany and by night fall over 18,000 prisoners and twenty-nine guns were in Russian hands.

On the 2nd the 11th Army launched its attack north of the Lemburg-Tarnopol R. R. and captured the heights west and southwest of Zborov. On the 3rd and 4th the enemy counter-attacked in this vicinity but not in numbers. The 7th Army was pressing directly on Brzezany and the 11th was operating between Koniuchy and Zborov.

Meanwhile this gallant fighting had been marred by indiscipline and even mutiny on the part of some of the units. Instead of improving, the men were growing less reliable. In some instances whole divisions refused to stay in line more than twenty-four hours and that, only on the condition that they would remain strictly on the defensive.

On the 7th of July Kornlov's Army south of the Dniester (8th Army) began its bombardment west of Stanislav along the Bystritza and at noon on the 8th launched its attack—quickly pierced the enemy's lines and took the town of Jezupol and a number of small villages to the west and south. By the evening of the 9th the Austrians had been forced across the Lominca with a loss of over eight thousand prisoners and forty-eight guns. On the 10th the important town of Halicz on the Dniester was captured by a joint attack of the right of the 8th Army and the left of the 7th Army. By the 11th Kalusz fell and Kornilov had forced the Lominca. The Russians now found themselves to the west of the Gnila Lipa line both north and south of the Dniester. Kornilov's Army was now moving westward between the Dniester and the Carpathian foothills driving a wedge between the Austrians north of the Dniester and those south of that river and threatening to open up a wide gap through which masses of troops could be poured in order to invest Lemburg. The next strategic objective after Kalusz was Stryj. With that town in the possession of the Russians the evacuation of Lemburg was well nigh certain.

In three days the Russians had made an advance of fifteen miles to the west of Stanislav—a remarkable success for General Kornilov.

Following the capture of Kalusz heavy rains fell and the Lominca became a boiling torrent sweeping away all bridges. The advance of the 8th Army had spent its force, the enemy now had a chance to obtain a breating spell and straight way brought up reserves and artillery making it necessary for Kornilov to evacuate Kalusz and to withdraw the bulk of his forces to the right bank of the Lominca. This he successfully accomplished on the night of July 15th.

The high water mark of the advance of the Russian Army had been reached. On the morning of July 19th after strong artillery preparation, the enemy attacked in the vicinity of Zwyzyn north of Zborov. In the following laconic sentences Russian G. H. Q. recorded the defection of its troops. "At 10:00 o'clock, July 19th, the 607th Mlynov Regiment situated between Batkav and Manajov (in the same region) left their trenches

voluntarily and retired with the result that the neighboring units had to retire. This gave the enemy the opportunity for developing his success. Our failure is explained in considerable degree by the fact that under the influence of the extremists (Bolsheviks) several detachments, having received the command to support the attack echelons held meetings and discussed the advisability of obeying the order, whereupon some of the regiments failed to obey the military command." Later on the 6th Grenadier Division deserted wholesale and fled in disorder.

On the 18th General Kornilov had been ordered to Tarnopol to succeed General Gutor as commander of the group of armies in the southwest. It was necessary, however, for him to return to Stanislav in order to turn over the 8th Army to his successor, General Chorimisov. Much valuable time was thus lost.

Comparatively speaking the break in the line north of Zborov was a minor affair inasmuch as there were eight divisions in reserve. Orders were given to move adequate forces into the gap but the majority of the troops, however, either did not leave their billets or began to assemble meetings to decide to "momentous" question of going forward. The question of moving to the attack was debated with great earnestness until late into the night, the meetings in some instances finally breaking up without having reached a decision. By evening on the 19th panic had spread, deliberately encouraged in many instances by certain suspicious characters-hangers on from the House of Lenine and Company. One after another division sent to engage the enemy either refused to attack or fled at the first encounter. Witness the incident related here below as illustrative of what happened frequently in some of the Bolshevik ridden organizations brought on as a result of the dry rot of Revolution. The following is translated from a book entitled "From Double Eagle to the Red Flag" written by General Krassnov. It is a brief account of the demise of a Russian Colonel near Zborov. Kozlov was the Colonel's name. He was bringing up his command to relieve a regiment in line. While endeavoring to rally his regiment, his men suddenly turned on him pulled him from his horse and carried him to a near by grove and after stripping him chained him practically naked to an oak tree. A young soldier barely more than a boy fixed a bayonet on his rifle and placed himself on guard two paces in front of his Colonel.

"Prick him a little then hit him with the butt", somebody ordered, laughing. A terrible shudder passed through Kozlov's body.

Savagely the soldier drew back his rifle and lunged again and again and finally smashed the Colonel's head with the butt. The bones cracked. The nose, the mouth all were bathed in blood and the eyes half open in their sockets looked on in horror. With a sigh of suffering the body fell forward. "It's necessary to finish him", said one, "for he just sighed." Rifles cracked and Kozlov was dead.

"Comrades! Let's go to the village! Others are already amusing themselves there! A cry "Death to the Jews!" sounded. They took some young women, some Jewish girls and young boys and dragged them into the woods. The wild beasts satisfied themselves with lust.

A Commissaire of the front endeavored to punish the murderers and he was killed. A colonel of the Quartermaster Department was crucified on the well of the neighboring chapel by means of bayonets.

In the light of many such incidents it hardly seems necessary to search for strategical and tactical reasons as causes for the crash of the Russian Front.

On the 20th the riot continued and the debacle of the 11th Army compelled the retirement of the 7th and 8th Armies. Boehm-Ermolli pushed forward rapidly and crossed the Strypa, taking Tarnopol on the 22nd and occupying the Tarnopol-Trembowla Line along the Sereth. Stanislav was evacuated on the 25th. Cernovitz, the capital of Bukovina, had to be abandoned a day or so later. The 11th Army had gone to pieces, its commander, General Erdelli, had been foully murdered and the 7th and 8th Armies were in disorderly retreat. The Galician front had crumbled. It was not military defeat for the enemy had no great weight of numbers. It was not a break down of sheer physical exhaustion for Russia as a whole had not suffered to the degree of France or Germany. It was the collapse of the spirit of the nation, the intangible side of the Russian nation had given away.

On taking over the command of the army group, Kornilov had flung his volcanic energy into the vain task of reconstruction. As explained previously the death penalty had been abolished for certain military offenses. The doughty cossack chieftan now took the law in his own hands and sent the following telegram

to army commanders "I consider the voluntary retreat of units from their positions as equivalent to treachery and treason. Therefore I categorically require all commanders in such cases should, without hesitation, turn the fire of machine guns and artillery against the traitors. I take all responsibility for the victims on myself. Inspection and hesitation on the part of commanders, I shall count as neglect of duty, and such officers I shall at once deprive of their commands and commit to trial." He had to check the retreat of his armies and at the same time disengage the 8th Army now under Cheremisov from its awkward position south of the Dniester. The enemy was pushing forward north of the Dniester so as to cut off the Russian forces in the Carpathians and Bukovnia.

On the 27th of July the 8th Army was on the line Kolomea-Zaleschyki. On the last day of July Cheremisov found himself 20 miles farther to the east on the line Kutu-Sniatyn. By that date what was left of the 7th and 8th Armies had been pushed across the River Zbruch, the Russian frontier.

On July 31st Brusiloff was dismissed as supreme commander-in-chief and Kornilov appointed to succeed him.

By the first week in August, the Russian Army had fallen back a distance of about 100 miles. Galicia and Bukovina had been lost, Moldavia threatened and Russian Besarabia together with the great seaport of Odessa on the Black Sea menaced. All that Brusiloff had won in his glorious campaign of 1916 was but a memory. The hopes, which almost in defiance of reason had sprung from shattered prospects and had brightened and expanded, were suddenly extinguished. The Russian Empire ceased to be an active combatant. The military collapse of Russia was patent to the World.

Riga fell September 3rd and General Kornilov seeing his armies melt away, discipline had gone, his country floundering in the quagmire of near monarchy and actuated by intense patriotism conceived the idea of a dictatorship as the only cure for Russian ills. He set out on his task, but the decay of the army and nation had gone too far to leave either the discipline or the patriotism necessary to rally to authority at this critical time. Russian sentiment, in the control of an organized minority mobilized against Kornilov. Kerenski who some time before had been made Prime Minister threw in his lot with Bolshevism and made himself commander-in-chief of the army, arrested Kornilov, evicted such patriotic moderates from the government who had been his associates and proclaimed a republic.

In the meantime the Germans continued slowly and deliberately to exploit their success at Riga by seizing and organizing the important islands Oesel and Dagoe in the Gulf of Riga, thereby menacing Petrograd and causing the Russian government to move to Moscow. On November 7th Lenine and Trotsky with the extreme radicals gained control. Kerenski became a fugitive and Russia sank into the depths of anarchy, civil war and red revolution.

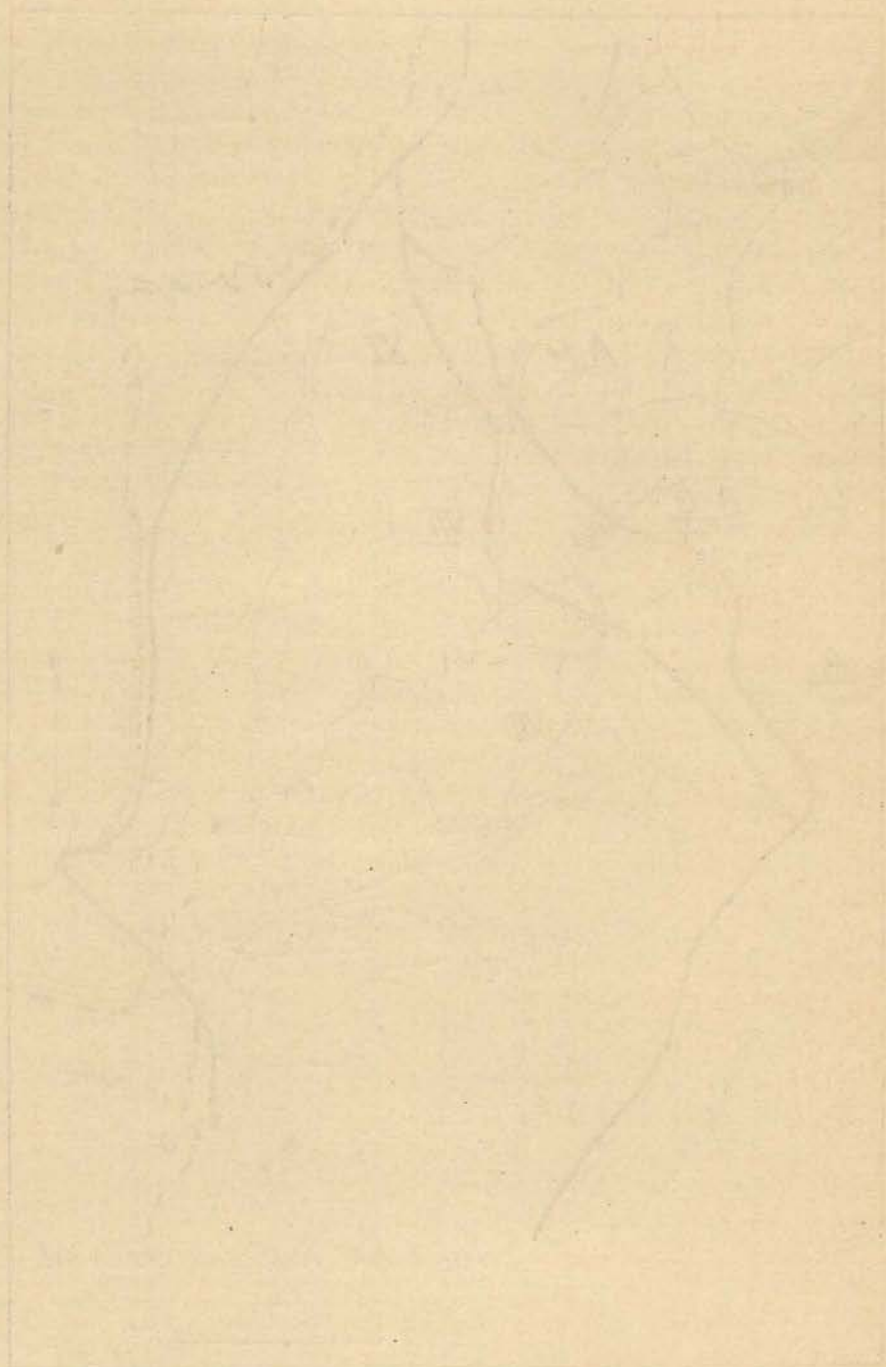
ANALYSIS AND CRITICISMS.

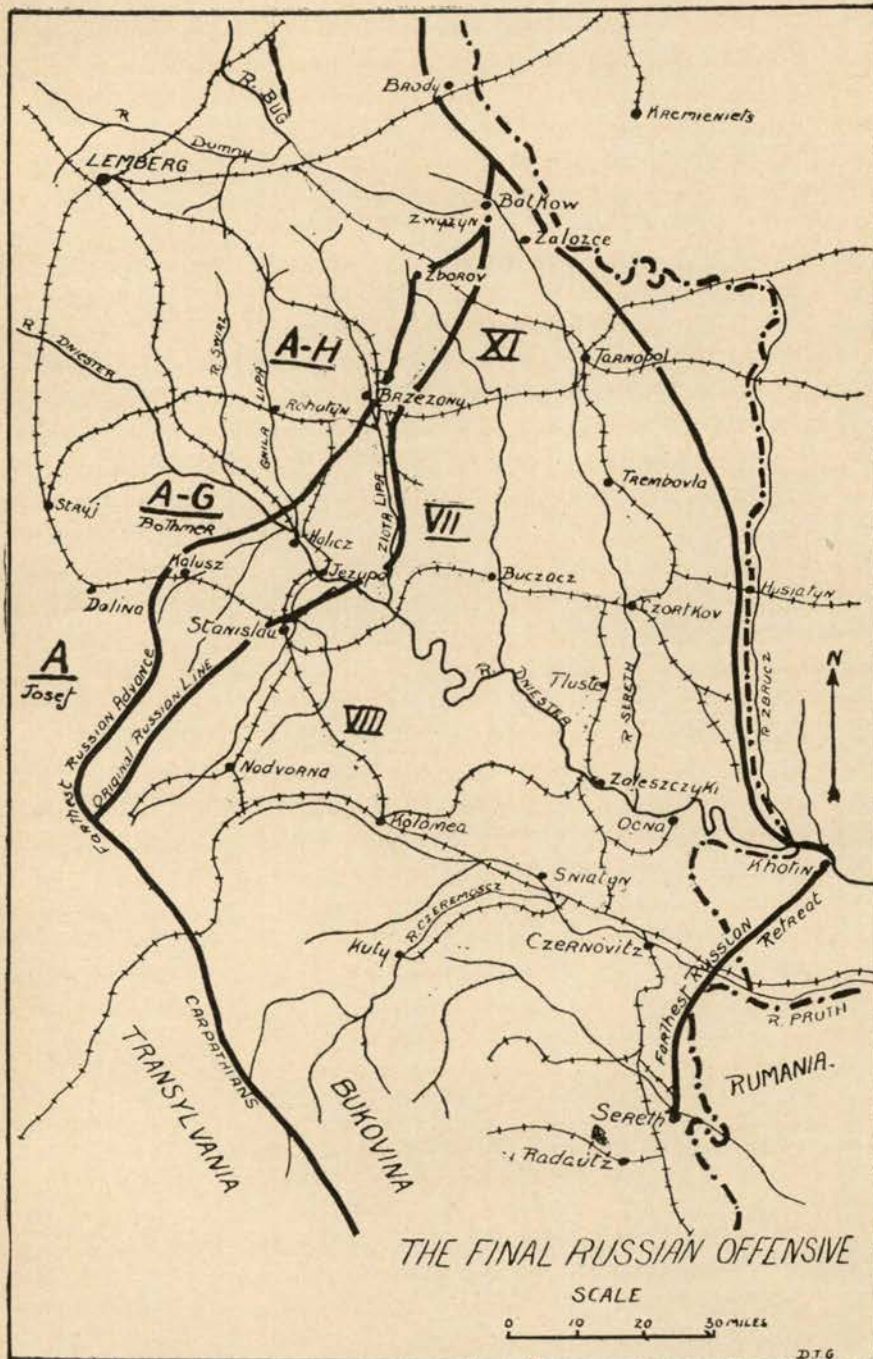
When the very heart of a nation has rotted it seems hardly worth while to look for military errors in the final offensive of the Russian Army, inasmuch as other matters appear to outweigh the military mistakes, in this particular offensive.

There are one or two things, however, which stand out and may be mentioned.

The selection of General Gutor as commander-in-chief of the group of armies on the Southwestern Front was in error, though a brave and gallant soldier, he was not of the required caliber for this particular command. He had been an excellent Corps Commander and was elevated to the position of Army Group Commander more or less against his will.

In this offensive High Command seemed to be obsessed with the idea of the frontal attack against strongly fortified positions. This was particularly evidenced in the vicinity of Brzezany where a dense forest and a deep river valley rendered a position of exceptional strength. General Gutor sent a loosely disciplined force poisoned with the virus of Bolshevism against this strong position of Brzezany and saw it shaken and later on dispersed. If, however, he had disposed his group so as to exert all available pressure on the flanks (Halicz and Zloczow) he would have obviated the difficulty and danger of frontal attacks and would have had the advantage of operating in fairly open country. Though the Russian Army was incapable of a sustained offensive





nevertheless there is the possibility that a rapid advance accomplished by not too heavy losses might have made the men less amenable to the urgings of traitors, spies and Bolshevicks to desert and would thus have prevented the shameful wasting away of the Galician Front.

There is one thing for which to commend General Gutor. His dispositions were well taken insofar that his thrust was directed against Austro-Hungarian Divisions which were of inferior quality.

The value and importance of General Kornilov's drive was not appreciated and reserves were slow in reaching him. If adequate forces had been forthcoming he might have easily reached Rohatyn from Halicz turned the Brzezany position and following his success at Kalusz reach Dolina, south of Lemburg, thereby severing the enemy's communications and isolating a goodly portion of his forces.

As pointed out the changes in commanding officers from the smallest units to supreme command of the Army were kaleidoscopic—success never crowns such a policy.

The committee system for handling interior administrative and disciplinary matters in organizations needs no comment—an army is not run on such principals.

LESSONS.

An army must be an autoocracy operating through the hierarchy of command.

Discipline is the foundation of success.

An organized minority can control an unorganized majority.

Bolshevism something to be feared and detested—an expression of all that's evil and violent in the lower strata of the human race! Something to be fought against and not tolerated for an instant! We have in our country—in large cities, today—certain foreign elements recruited from dregs of Europe, dissatisfied with their own country, incapable of understanding the freedom of ours and impregnated with class hatred—an excellent medium for the propagandist and a fine breeding ground for Bolshevik doctrine. We, as citizens of the U. S. A. and as officers of the Army, must bear in mind that we have in our midst this smouldering fire which must be stamped out and smothered at the first blaze of activity—for a determined and noisy minority can control a heedless and inarticulate majority.

There is a striking parallel between the French Revolution and the Russian Revolution which may enable us possibly to look into the future. In the case of both there is an indifference to religion and to human life, a lowering of moral standards, but there is also present in both an awakening of the people to their power and a welding together of the nation. Who knows but Red Russian may not bring forth another Napoleon to lead the Russian hordes over Europe? And remember that the Russian masses dumb, stupid and illiterate give no promise of relieving the burden of their tyranny with the good things which came out of France of Napoleon.

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PART III.

GALLIPOLI, MESOPOTAMIA, ITALY, PALESTINE. THE PLANS, ORGANIZATION OF FORCES AND ACTIONS OF THE GALLIPOLI EXPEDITION UNTIL MAY 6, 1915.

—By—

Major Lathrop B. Claphan, Infantry.

Geographically Gallipoli Peninsula appears as an insignificant strip of land extending southwest from Europe toward the Aegean Sea, and separating that body of water from the Dardanelles Straits. This apparently insignificant strip is a military feature of extreme importance because forming a boundary of the Dardanelles, that "meeting place of the East and West which has been the source of some of the most momentous events in human history."

The Dardanelles Straits and the Sea of Marmora form a water frontier of some 200 miles between Europe and Asia. The Straits are forty-five miles long. Their width varies between seven miles and about three-quarters of a mile. Along the European or north and western shore of the Straits extends the Gallipoli Peninsula. The Asiatic or southern and eastern shore is the mainland of Asia Minor.

There is no tide in the Dardanelles. However, a strong current, rising to four knots, continually sets down the Straits from the Sea of Marmora. Northeasterly winds are prevalent. Approaching the Dardanelles from the south, the entrance is about two miles wide. Immediately northeast of this entrance the Straits abruptly widen, then gradually continue to spread until attaining a width of about seven miles at a point five miles northeast of the entrance. From here northeastward the Straits contract until, at a point twelve miles northeast of the entrance, the distance between the shores is less than one mile. This portion of the Straits is now called "The Narrows"—in ancient times, "The Hellespont." Here the Straits make an abrupt turn due north, continuing in that direction for about three miles. Now they turn abruptly to the northeast and continue in that direction, having a general width of about two miles until meeting the outlet of the Sea of Marmora. The sharp double turn met at the Narrows in sailing up the Straits is a military feature of primary importance.

Both shores of the Straits are generally overhung by high ground. On the Asiatic side, at the Aegean entrance of the Straits, are the heights of Hum Kale rising suddenly to over one hundred feet above the sea. Adjoining these heights to the east is the flat, marshy plain of Troy, cut by the river Menedre, and bounded on the east by mountains rising to 3000 feet further inland. The heights along the shore average about 100 feet above sea level. These heights are cut by a few small streams flowing generally west. On the Gallipoli side, for the entire distance of twelve miles from the Aegean entrance, the shore is lined with cliffs having an average height of 200 feet. Here and there streams make gullies in these "ramparts." At the basis of the cliffs the ground rises to 700 feet. North of the Narrows the heights along this shore are rugged but gradually decrease in elevation.

A glance at the map of Europe will show that the Dardanelles is of immense commercial and strategic importance not only to the states of southeastern Europe, but to all nations of the world having intercourse with the former. This fact, together with their character as a boundary between Europe and Asia has made the Dardanelles the scene and source of many military and naval expeditions, treaties and controversies, from the beginning of history down to the present day conference at Lausanne.

The Gallipoli Peninsula is about fifty miles long. It varies in width from two to twelve miles. The bodies of water washing its outside or western shore and which are worthy of note are, beginning at the north; the Gulf of Saros (or Xeros), the Aegean Sea and Suvla Bay. At the northern extremity is the Isthmus of Bul-

air connecting the peninsula proper with the mainland of Thrace. The Isthmus is less than three miles wide between the Gulf of Saros and the Sea of Marmora. The peninsula terrain is a tangle of hills and gulches, with no pronounced valleys either east and west or north and south. The mass of rocky ridges rise to a height of 700 feet above sea level. The hills are so steep and sharply cut that in many places summits "can only be reached by sheer climbing." In the large depressions are stunted forests, while, in general, the remainder of the terrain is covered generally, with a dense brush from three to six feet high. There are but few villages; little civilization; and no properly engineered roads. In fact the communications are so bad that the usual routes between villages have always been by boat along the coast rather than overland.

In the spring of 1915 a road extended from Maidos through the center of the peninsula to Cape Helles. A few roads radiated to the coast from this. All were poor. A narrow-gauge railway followed this center route built for military purpose during the winter of 1914-1915.

It will seem that the entire peninsula has unusual defensive possibilities. This applies generally, from the highest, most rugged heights to the beaches, which are shallow, exposed and subject to observation and galling fire of a military force equipped with modern arms, and occupying properly constructed field work.

In 1914 the Dardanelles were Turkish territory. The strategic and economic importance of the Straits to Russia and to the Central Powers is the primary reason why Germany forced Turkey into the World War on October 29, 1914.

Turkey's entrance into the war was reluctant as far as the Sultan and majority of the people were concerned. But the political situation was abnormal with a revolution constantly threatening. The Young Turk movement had degenerated into a political machine controlled by the "Committee of Union and Progress" which was intensely pro-German, and which governed the ruling house by intimidation. The leaders of the Young Turks, viz Talaat Pasha, Djemal Pasha and Enver Pasha had become, respectively, Minister of the Interior, Minister of the Marine and Minister of War. These usurpers were the bosses of Turkey. They were German agents first—the willing tools, the German Ambassador—and Turkish statesmen afterwards.

The immediate acts which led to declaration of war on Turkey by Russia and the western Allies were:

- (a) Turkey's annulment of the Capitulations, conferring special privileges on foreigners.
- (b) The "Goeben" and "Breslau" incident.
- (c) The closing of the Dardanelles by a German officer without reference to the Sultan.
- (d) The "Breslau" bombarding the Russian Black Seaport of Theodosia.

These acts were the results of machination on the part of German officials in Constantinople who had begun the mobilization of the Turkish army in August 1914.

CAUSES OF ALLIES ATTEMPT AGAINST THE DARDANELLES.

The communications of Russia to the Mediterranean Sea were cut when Turkey joined the Central Powers. The Baltic Sea was also closed to Russia by the German navy. Archangle was closed a good part of the year by ice. The Trans-Siberian Railroad line was costly and circuitous. The route through Norway and Sweden was always precarious. Russia was sorely in need of a channel for the exportation of accumulated wheat supplies and the importation of munitions. France and England needed Russia's food products.

The capture of the Dardanelles by the Allies meant the removal of the most harmful factor in their military situation, i. e. the barrier separating France and England from Russia. It would have simplified Russia's problem not only in regard to exports and imports, but would have released troops from the Turkish front for use in Poland and Galicia. With the Allies in Constantinople, the Turkish army and government would be isolated in Asia; Italy and the hesitating Balkan states would be brought in the war on the side of the Entente; and Germany and Austria-Hungary would be closely beleaguered in Central Europe."

On January 2nd, 1915, Russia, alarmed by the situation of her armies in the Caucasus, requested the western Allies to make an attack on the Dardanelles. This caused the British War Council to seriously consider the project, and finally decide upon it.

The possession of the Dardanelles at the beginning of 1915 would have been the richest prize in the world for the Entente. Mr. Winston L. S. Churchill, First Lord of British Admiralty, in a speech in the sum-

mer of 1915 defined the prize as follows: referring to the British troops on Gallipoli: "Beyond these four miles of ridge and brush on which our soldiers are now battling lies the downfall of the hostile empire, the destruction of an enemy fleet and army, the fall of a world famous capital, and probably the accession of powerful allies. There never was a great subsidiary operation of war in which a more complete harmony of strategic political and economic advantages combined or which stood in truer relation to the main decision. Through the Narrows and across the ridges of the Gallipoli Peninsula lie some of the shortest paths to a triumphant peace." "The language may be overcolored, but substantially the claim was just."

That the Germans appreciated the importance of this operation is shown by a letter of Admiral von Tirpitz, written in August 1915 in which he wrote, "Should the Dardanelles fall then the world war has been decided against us."

III. ALLIED PLAN AND ORGANIZATION OF FORCES.

In late 1914 chief members of the British War Council were War Secretary Kitchener, Prime Minister Asquith and First Lord of Admiralty Churchill, the last named being responsible that the "Gallipoli Expedition" was undertaken.

As early as September 1st 1914, Churchill suggested to Kitchener a plan of seizing the Dardanelles by means of a Greek Army, and admitting the British fleet to the Sea of Marmora.

Late, on November 25th, 1914, Churchill suggested to the War Council a plan for striking at Gallipoli as a feint. However, Kitchener decided and carried his point that such a move was premature. On January 2nd 1915 Russia requested help because of her situation in the Caucasus. The War Council decided that Russia's request must be met and that an operation against the Dardanelles was the only likely plan.

The War Council originally favored a combined land and naval expedition, but obstacles in the way of furnishing 150,000 troops—the force estimated as necessary—led to immediate consideration of a purely naval attack.

On January 3rd, 1915 the War Council telegraphed to Vice Admiral Carden, Commanding the Mediterranean forces, asking his opinion as to the practicability of forcing the Dardanelles by the fleet alone. Carden replied that he thought the Straits could not be "rushed", but "might be forced by extended operations with a large number of ships." And on January 11th he outlined, upon request of the War Council, the following four successive steps for the operation which would cover one month:

- (a) Reduction of the entrance forts.
- (b) Clearing the Straits of mines and defenses up to the Narrows.
- (c) Destruction of defenses at Narrows.
- (d) Passage of fleet through mine field up to Sea of Marmora.

At the meeting of the War Council on January 13th 1915, it was voted "That the Admiralty should prepare for a naval expedition in February to bombard and take the Gallipoli Peninsula with Constantinople as its objective.

First Sea Lord Fisher, of the British Admiralty, bitterly opposed this expedition, but was overruled by the War Council, who, on January 28th 1915, ratified the decision to attack the Dardanelles by the fleet alone.

IV. ALLIED NAVAL FORCES.

Accordingly a powerful Allied fleet commanded by Vice Admiral Carden was concentrated at the Aegean entrance of the Dardanelles by the middle of February, and the Islands of Tenedos, and Lemnos occupied as naval and military bases. Tenedos, a Turkish possession was seized, without fighting. The use of Lemnos, with its immense land-locked harbor of Mudros, was tolerated by the Greece to whom it belonged.

The British battle ships of the fleet were: "Queen Elizabeth", a new super-dreadnaught; "Inflexible", a battle-cruiser just back from the Falkland Islands; and eight pre-dreadnaughts, viz: "Albion", "Agamemon", "Irresistible", "Vengeance", "Lord Nelson", "Triumph", "Ocean" and "Majestic."

The French battleships, commanded by Vice Admiral Guepratte, were: "Bouvet", "Charlemagne" and "Suffern" all of the pre-dreadnaught type.

The Allied fleet was also provided with an auxiliary fleet of light cruisers, destroyers, submarines and mine-sweepers.

V. TURKISH ORGANIZATION AND DEFENSES OF DARDANELLES.

In 1914 the defenses of the Dardanelles were divided into two general groups—one at the Aegean entrance which was merely an outpost for the second group or real defenses at the Narrows.

On November 3rd 1914, a small Allied squadron had bombarded the entrance forts for ten minutes. This was in the nature of reconnaissance to ascertain whether or not the entrance forts were equipped with long range guns. The British Admiralty had ordered this. Such premature action was a costly blunder as it put the Turks on the alert, and stirred them to activity in improving the Dardanelles defenses. In this they were ably assisted by expert German officers on duty with the Turkish army, viz: General Liman von Sanders, head of the German military Mission in Turkey; General Bronsart, German Chief of Staff of Turkish Armies; General Weber, in charge of Dardanelles fortifications; General Mertens, Chief Technical Officer of the Dardanelles; Admiral von Usedom, German Inspector of Turkish Coast Defenses.

The Turkish General Djavad Pasha was Commander-in-Chief of the Dardanelles theatre. Although the German generals in this area were ostensibly subordinate to him there is little doubt that he was guided by their expert advice.

By the time the Allied fleet was ready to attack the defenses were as follows:

On the Asiatic side at the Aegean entrance were Fort Kum Kale and Fort Okanich. The former mounted four 11.2 inch guns and two 5.9 inch guns while the latter had two 9.2 inch pieces, all old model. These batteries were manned by Turks. Behind the hills bordering the north end of Erenkui Bay was a battery of old style Model 1885 Krupp guns which had been obtained by dismantling the forts north of the Narrows. On the hills south of this Erankui Battery were several howitzers each of which had four or five alternate emplacements built of concrete.

Buffaloes—as many as sixteen to a team—were employed to move the howitzers from emplacements to emplacement. At the entrance of the Narrows on the Asiatic side was the Dardanos Battery, which commanded the whole lower section of the Straits. This battery was manned entirely by Turks. It consisted of five guns—Krupp Model 1905 and later models taken from German and Turkish Battleships. Each piece was mounted on a steel turret. These guns were located on a hill forming part of the skyline in full view of the ships creating an "optical delusion", as the Germans claimed, which would deceive the ship's gunners. Up to March 16th 1915, some 4000 shells had been fired at this battery by the ships and not one gun was even slightly damaged.

About four miles north of Dardanos was Chanak, the most commanding point of the Straits. Here, on the water's edge, was eighty-five per cent of the men being from the crews of the "Goeben" and "Breslau." This battery mounted ten Krupp guns, Model 1885, having a range of about nine miles. These guns swept the entire Straits and their gunners had a clear view to the entrance. It was the most important fortification of the Dardanelles. Colonel Wherle, a German officer, was in charge.

From Chanak north to Point Negara were a few smaller batteries covering the mine field which extended southward from Chanak. From Negara Point across to the Peninsula was stretched a cable and submarine mines and nets.

On the Gallipoli side of the Straits at the Aegean entrance were two forts—Sedd-el-Bahr and Cape Helles. The former had six 10.2 inch guns and the latter, two 9.2 inch guns—all old model.

Opposite Erenkui Bay there were several howitzers with alternate howitzer emplacement corresponding to those on the Asiatic side.

At Kilid Bahr, opposite Chanak, was a battery of old model Krupp guns. This battery was of little value.

North of Kilid Bahr were a few small batteries for the protection of the mine field.

All batteries on the Gallipoli side were manned by Turks.

There was a mine-field containing close to 400 mines that covered the channel for seven miles south of the line Chanak-Kilid Bahr. The Turks obtained many of these mines from the Russians, who daily sowed them in the Black Sea entrance to the Bosphorus only to be fished out by German and Turkish trawlers to be transplanted in the Narrows.

Another and most important means of defense was employment of floating mines carried down the Straits by the current. These were employed with great success during the later stages of the naval attack. At the prominent points on the mainland and along the outer coast of the Peninsula were observation posts connected by wire to headquarters at Chanak and to the howitzer batteries.

VI. OPERATION OF ALLIED FLEETS.

The ships had the advantage of the forts in range and armament. They could attack the entrance forts at long range, but once inside the entrance the number of ships that could be brought into action at the same time was limited as was the maneuvering space. Also after passing the entrance the fighting had to be done at close range.

The Allies believed that the fifteen inch guns of the "Queen Elizabeth" and other heavy guns of the fleet would reduce the Dardanelles defenses as the Germans had reduced the land forts of Belgium. Admiral Carden was confident that he could force the Straits in his four operations as scheduled.

On February 19th 1915, the Allied fleet began the attack by bombarding the entrance forts. The forts were apparently silenced, but when the vessels drew near, the forts opened a heavy fire causing the ships to withdraw. They had held their fire because of being outranged.

Bad weather now interfered until February 25th. On that date, at 10:00 a. m. the "Queen Elizabeth", "Irresistible", "Agamemnon" and "Gaulois" attacked the entrance forts at long range. These ships had in action twenty guns heavier than any of the sixteen in the forts.

At 11:30 a. m. the "Vengeance" and the "Cornwallis" joined the attack against Cape Helles forts while the "Suffern" and the "Charlemagne" went into action against the Asiatic forts at the entrance. Later the "Triumph" and the "Albion" joined the attack against Sedd-el-Bahr. But the last gun was not silenced until 5:00 p. m. which spoke much for the Turks.

That night—the 25th—the entrance was swept for mines for four miles up the Straits. On the next day—on February 26th—the "Albion", "Vengeance" and "Majestic" entered the Straits and bombarded Dardanos at long range. Dardanos and unlocated shore batteries returned the fire, but did little harm. The ships also fired on several bodies of Turkish Troops observed on the Asiatic side, driving them back from the shore. Parties of Marines were sent ashore to complete the destruction of the entrance forts in which they were successful except near Kum Kale where they were attacked and driven off by Turkish troops.

Operations were now postponed until March 1st on account of bad weather.

When the fleet renewed the attack on March 1st it again was necessary to silence the entrance forts where mobile guns had been installed. On this day and the three succeeding days Allied battleships of old type entered the Straits for about seven miles bombarding Dardanos and other forts. The mine-sweeping operations continued, and some landing parties were put ashore in the vicinity of the ships to complete the demolition of small batteries.

March 6th and 7th saw a violent attack on Dardanos and other land forts, the fleet moving in each day to the Erenkui Bay. During this attack the "Queen Elizabeth" and two other battleships took station in the Gulf of Saros firing over the Peninsula on Chanak and Kilid Bahr with a range of 21,000 yards.

By March 6th the original Allied Fleet had been increased by twenty-five ships including the British pre-dreadnaughts; "Queen", "Swiftsure", "Cornwallis", "Implacable", Goliath", "Canopus", and "Prince George"; the French old-type battleships, "Jaureguiberry", "St. Louis", and "Henri IV"; the British monitor "Humber"; the Russian cruiser "Askold"; and some additional French and British cruisers. Also the British War Council had decided to send troops to co-operate with the fleet, and these troops were being concentrated at nearby basis.

After the Attack of March 7th Admiral Carden believed that great damage had been done the forts and that the Straits could be forced. He was of the opinion, however, that troops to co-operate with the fleet were necessary. He accordingly suspended operation pending the arrival of the land forces.

In response to the British Admiralty urging a renewal of the attack on the forts, Admiral Carden, on March 11th strongly recommended that operations by land troops be undertaken at once.

On March 16th Carden resigned on account of ill health and the British Vice-Admiral Pohn M. de Robeck took over the command of Allied fleets.

The British General Sir Ian Hamilton, Commander of the land forces, arrived at Tenedos on March 17th. At a conference with the naval officers that day he deprecated the immediate use of the land forces because of instructions he had from Lord Kitchener and because the troop transports then at Mudros were not loaded to meet the tactical requirements of a forced landing. Admiral de Robeck therefore decided to "go it alone" immediately.

March 18th saw the greatest and last attack on the Dardanelles by the Allied fleet, which for the first time approached within moderate range of the forts on the Narrows. And the fleet was surprised to find that the damage previously inflicted on the forts was considerably less than estimated.

At 10:45 a. m. the "Queen Elizabeth", "Inflexible", "Lord Nelson," "Aganemnon", "Triumph" and "Prince George" entered the Straits and began the bombardment of the forts. "A heavy fire was opened on the ships—all ships being hit several times during this part of the action."

Shortly after noon the "Suffern", "Charlemagne", "Gaulois" and "Bouvet" joined the attacking force. At 1.25 p. m. the forts were reported silenced, but the ships continued the bombardment.

About 2:30 p. m. the "Vengeance", "Irresistible", "Albion", "Ocean", "Swiftsure" and "Majestic" appeared on the scene to relieve the French ships. At 2:36 p. m. as the French ships and the "Triumph" and "Prince George" were relieved and starting back to the lower Straits, the forts opened a hot fire. Three large shells hit the "Bouvet" simultaneously. At the same time she struck one of the floating mines which now appeared in spots previously swept clear. The "Bouvet" sank in three minutes with practically all hands lost.

Later the "Ocean" and "Irresistible" were sunk by mines, though most of the crews were saved by destroyers. The "Gaulois" and "Inflexible" were so badly damaged by shell fire that they had to be beached on the islands outside the Straits.

Evening found the forts still firing, but "the bombardment and mine-sweeping operations terminated when darkness fell." The fleet withdrew to their bases outside the Straits never to return to an attack on a large scale in an attempt to force the Dardanelles without the assistance of land forces.

During the great attack of March 18th, twelve British and four French battleships had fired some 2000 shells at the land defenses. The two-fold defense—forts and mines—of the Turks had stopped the attack. Of the sixteen battleships engaged, three had been sunken and four badly damaged—two so badly that they had to be beached. The personnel of the fleet had suffered one thousand casualties.

On March 19th Admiral de Robeck telegraphed the British Admiralty that he intended to renew the attack, and was told to go ahead if he thought fit to do so. However, on March 22nd after having a detailed report from his ships engaged on the 18th his opinion was that "to obtain important results and to achieve the object of the campaign, a combined operation" of land and naval forces was essential. This he telegraphed the Admiralty on March 26th.

VII. EFFECT OF DARDANELLES NAVAL ATTACK ON TURKS.

From the beginning of the war the Turks had been apprehensive of an attack on the Dardanelles. The real reason for their expedition against Egypt was to divert a British attack from the Gallipoli peninsula. As early as January 1st 1915 the Turks had prepared two trains—one to take the Sultan and his suite to Asia Minor, the other to take the diplomatic corps of the Central Powers northward—to be used in the event of an attack. IN early January 1915, the German Field Marshal Von der Goltz, who was in Constantinople and who probably knew the Dardanelles defenses as well as anyone, having been Turkey's military instructor for years thought "it was almost impossible to force the Dardanelles, still, if England thought it an important move of the general war, they could, by sacrificing the ships, force the entrance, and do it quickly, and be up in the Marmora within ten hours from the time they forced it." The German General Staff, the Diplomatic Corps and practically all the military and naval experts then in Constantinople were generally of the same opinion.

When in February the news of the first bombardment reached Constantinople there was evidence of panic among the official class who believed the fleet would break thru causing a revolution which would bring

the Young Turk Bosses to a bloody end.

During the attack of early March the Turkish women and children were moved to the interior. The Diplomatic Corps prepared to leave. The most valuable of art in Constantinople that could not be moved were buried. The banks were forced to move their gold to Asia Minor where the archives of the Sublime Porte were also transferred. Not only did the officials in Constantinople believe a "break thru" by the fleet imminent, but the true estimate of the situation by the German officers on duty to the defenses was far from reassuring. The Turkish officials planned to burn Constantinople as the Russians had destroyed Moscow upon the approach of Napoleon.

Evner Pasha was the only official who expressed assurance that the Straits would not be forced. He stated that he would demonstrate the vulnerability of England and her fleet, proving her navy not invincible." Competent observers on the ground had good reason, however, to characterize his boasts as "graveyard whistling."

The material damage done the forts was comparatively slight, however, the great and general weakness of the defenses after the attack of March 18th lay in fact that their ammunition was nearly exhausted. For example, on the morning of the 19th Anadolu Hamidie had only seventeen armor-piercing shell left while Kilid Bahr had but ten. The officers in charge of the Straits defenses expected the fleets to return, and that it would effect a passage in a few hours. "The troops had orders to man the guns until the last shell had been fired and then abandon the forts." To the great surprise and joy of the defenders, the fleet never returned.

VIII. ORGANIZATION AND PLANS OF LAND FORCES.

The Turkish attack against the Suez Canal failed, the British War Council decided on February 16th, 1915 to concentrate troops in the Mediterranean for the Dardanelles campaign. The British troops were drawn largely from India and Australia with one regular division to be sent out from England. France was to furnish one division from Africa. During late February and early March these troops—except the division from England—were being concentrated in Egypt and at Lemnos. The French were to remain at Tunis until the day required.

On March 12th General Sir Ian Hamilton was appointed commander of these land forces which were officially designated "The Mediterranean Expeditionary Force." General Hamilton's first knowledge that such a force was being organized was on March 12th when he was summoned by Lord Kitchener to receive his appointment.

No plan for the expedition had been worked out by the British General Staff, and Hamilton's instructions, which he received in person from Lord Kitchener both verbally and in writing on March 12th and 13th were extremely vague as to what he should do. They were very emphatic as to what he should do. The provisions of his Letter of Instructions worthy of note says:

- (a) The enterprise is framed on the basis that the fleet can force the Straits. The Army is "string No. 2" and is not to be used unless the navy has failure.
- (b) If the army has to be used no serious operations is to be attempted until the "whole force is complete; ready, concentrated and on the spot. No piecemeal attack is to be made."
- (c) No landing is to be made on Asiatic side even after the Straits are forced.
- (d) Gallipoli Peninsula should be garrisoned except at Bulair, and this should be done by the naval division.

Kitchener informed Hamilton that Turkish troops were dispersed in the provinces and elsewhere that he hoped the army would not have to land at all, and that it would be better not to land a powerful fleet would allow him the choice of time and place for a landing. He also stated that "all things east are stolen from the west", and that the division from England was to be concentrated only as a loan to be returned soon.

The instructions gave no facts about the enemy; the country and terrain; the politics, or the Russians, who were expected to co-operate.

General Hamilton was not permitted to take his own staff. Kitchener had appointed the staff for the expedition, nine officers—all General and no Administrative Staff—only the one of whom Hamilton knew, viz,

General Braithwaite, Chief of Staff.

One feature of the arrangement which Hamilton did not know before leaving England on March 13th was that his force was not to have the usual ten per cent margin of reserves to replace casualties.

March 17th General Hamilton and five of his staff arrived at Lemnos where a conference was held that afternoon with the Allied admirals and General d'Amade, who was commanding the French division of the Land Forces. Neither commander—Hamilton or de Robeck—was in supreme command of the entire Allied forces charged with forthcoming the Dardanelles. They were to co-operate, but unity of command, at the scene of action, was lacking. However, complete harmony between the two services prevailed.

At this time, a Royal Naval Division, Commanded by Major General A. Paris, which was part of Hamilton's forces, and a portion of Australians—New Zealand Army Corps, were at Mudros. Most of the troops were ashore, but the animals and material remained loaded mainly because there was no piers, water or equipment there to accommodate reloading.

General Hamilton learned now that the transports had been loaded as in peace times—guns in one ship, their limbers in another. He received further information from the officers who had been on duty at the Dardanelles prior to his arrival that the peninsula was being strongly fortified by large parties of Turks working every night; that all landing places were commanded by trenches and "registered" by field guns; and that the enemy were equipped with the latest pattern fixed mobile searchlights operated by trained observers.

At the conference on the 17th, then, General Hamilton deprecated the immediate employment of the land forces because of his instructions and until he could make a reconnaissance. The 29th Division had not yet arrived. Kitchener had countermanded its sailing order due to situation on the Western Front, but subsequently released it for Gallipoli after a three weeks delay.

On March 18th Hamilton visited Mudros. He decided that it was unsuitable as a military base, and immediately opened negotiations for sending the transports to Alexandria to be reloaded.

On this day General Hamilton, from the deck and observation post of a cruiser, made a reconnaissance of the Aegean side of Gallipoli. He followed the coast at from one to two miles from the shore. The reconnaissance showed:

(a) The head of the Gulf was an enormous marsh which made a landing there impossible. To land west of there would necessitate marching around the marsh or attempting to cross it by a single road on which there were a number of easy destructible long wooden bridges spanning bogs.

(b) Bulair was fortified with newly dug and very extensive narrow trenches protected by new wire. The whole of the isthmus on the Aegean slope was scarred with trenches for a depth of a mile.

(c) Between Bulair and Suvla Bay a landing appeared impracticable because of the precipitous cliffs that had no gullies or extensive beaches in connection with them.

(d) Suvla Bay was too far north for a landing to be combined with an attack at the toe of the peninsula although the bay itself seemed a fine harbor. Here was the broadest part of the peninsula. General Hamilton considered that to land his whole force there for an attack toward the Narrows was out of the question for his small force, and that such an operation would require two divisions for his line of communications.

(e) The shore from Suvla Bay to Gaba Tepe appeared feasible for landing on a calm day without serious opposition.

(f) Gaba Tepe beach appeared ideal. However, it was commanded by a ridge north of it; was protected by numerous trenches; and was within range of guns on Kilid Bahr plateau.

(g) Between Gaba Tepe and Cape Helles there were many sandy beaches at the foot of cliffs which rose from 100 to 300 feet. Many of the numerous trenches along this portion of the coast could be reached by naval guns, and the cliffs, though difficult seemed climbable.

After his reconnaissance, and after witnessing the disastrous naval attack of the 18th, General Hamilton felt that the army must land, and conduct a "deliberate and progressive military operation at full strength to open a passage for the navy." He so informed the British War Office on March 19th.

He was anxious to land somewhere as horses and mules on the transport were dying, and on the 22nd

of March he urgently recommended to Lord Kitchener that the transports be ordered to Alexandria that they could be reloaded for a landing under fire.

On this date Admiral de Robeck decided that the navy could not get through the Straits without the co-operation of all of Hamilton's forces.

During the latter part of March, the British War Office having approved, the transports moved from Lemnos to Alexandria. Before leaving Lemnos for Egypt General Hamilton requisitioned trench mortars, hand grenades, engineers equipment and small, lightly-armored boats needed for the landing. Having no administrative staff much of this detail had to be worked out by General Hamilton himself, and his Chief of Staff.

While the transports were being reloaded at Alexandria the troops were ashore through extensive training nearby at Aboukir. The Anzacs, newly formed units, improved greatly during this period.

General Hamilton was engaged inspection and reviewing troops, completing arrangements, establishing a permanent base for his force at Alexandria and reorganizing and increasing his staff. At this time the New Zealand Division was short one brigade, General Hamilton made efforts to obtain an Indian Gurkha brigade from the Egyptian forces to fill out, but met opposition in this from General Maxwell, Commander-in-Chief of the Forces in Egypt, who expected another Turkish attack against the Suez Canal.

During this period the Egyptian Press openly discussed the arrival of British and French troops at Alexandria, and published full details of the forces, naming Gall'poli as their destination. This continued despite General Hamilton's protest to General McMahon, British High Commissioner in Egypt.

Hamilton, Maxwell and McMahon were independent and co-equals and this added to the confusion and delay at Alexandria.

During the second week in April the troop transports began moving from Egypt to concentrate at Mudros. While waiting for the concentration to be completed the troops went ashore and continued training, special emphasis being placed on landing operations for which small boats were employed. During this time the British War Office was urging a landing, but bad weather prevented this and all the transports had not yet arrived.

About this time, on April 12th General Hamilton made another reconnaissance by ship of the Peninsula. From the information he gained then and from air photographs he saw a few days later he estimated that the "Turks staying power had doubled since the end of March."

By the middle of April the entire force was assembled in Mudros Bay which was crowded with the ninety-six transports they required.

General Hamilton's staff now consisted of eighty-four officers. It was divided into:

- (a) General Staff.
- (b) Headquarters of the Base.
- (c) Headquarters of Administrative Services.

The troops now assembled in Mudros for the landing were:

- (a) The 29th (Regular) Division, Major General Hunter-Weston, Commanding. The Division included:
 - 86th Infantry Brigade, (Brig. Gen. S. W. Hare, Comdg).
 - 87th Infantry Brigade, (Brig. Gen. W. R. Marshall, Comdg).
 - 88th Infantry Brigade, (Brig. Gen. H. E. Napier, Comdg).
- (b) The Australian-New Zealand Army Corps, Major General W. W. Birdwood, Commanding. The Corps included:
 - The Australian Division.
 - The New Zealand Australian Division.
 - Divisional Otago Mounted Rifles. Two Indian Mountain Batteries.
 - Corps Troops: 2nd Australian, Light Horse (Arty) Brigade.
 - 3rd Australian, Light Horse (Arty) Brigade.

(c) The Royal Naval Division, Major General M. G. Paris, Commanding, consisting of the 1st, 2nd and 3rd Naval Brigades.

(d) The French Division, Major General E. F. d'Amade, Commanding, consisting of the:

1st. Metropolitan Infantry Brigade.

Colonial Brigade.

Six batteries (24 pieces) 75 mm guns.

Three batteries (12 pieces) 65 mm mountain guns.

The total force was under 70,000—not more than 60,000, including reserves, being available for use.

All mounted units had left their horses in Egypt, not only because water was scarce and had to be carried or transported from Alexandria, but it was believed little need for mounts would be evident in early stages of landing.

The army air service was stationed at Tenedos under command of Commander Sampson, Naval Air Service. He had fourteen air planes of various types, but only five of these were serviceable. There were also some seaplanes, not under Sampson, only two of which were serviceable, the others being wrong-type and under-powered. There was a general shortage of two-seated planes for reconnaissance and "spotting", and a total lack of bombers which would have been of great value in the restricted area of operations.

By the middle of April, although there was a lamentable shortage of shells for the field guns and howitzers; not enough small arms ammunition for extended operations; less small craft than desired for a landing and hospital arrangements incomplete, General Hamilton, urged by the War Office, decided on his plan of landing.

General Hamilton considered his mission to be: To neutralize the Turkish defenses on Gallipoli Peninsula that prevented the fleet from passing through the Straits. His objective was the high ground—Kilid Bahr plateau—on the Peninsula commanding the defenses at the Narrows.

The enemy was known to hold good and well prepared positions. His strength immediately available at 40,000 rifles and 100 field pieces, not one-tenth of which would be south of Achi Baba during the first two days.

The general plan decided was: To land the 29th Division on the toe of the Peninsula at five points around Cape Helles. The first objective of these troops was Achi Baba heights.

The Anzacs (Australia and New Zealand Divisions) to land at Gaba Tepe, and seize heights south of Sari Bair cutting enemy's line of retreat toward Kilid Bahr.

One French Brigade to land at Kum Kale to draw fire away from the toe of the Peninsula and to prevent enemy troops crossing Straits to reinforce those on Gallipoli. These troops to be withdrawn after landing on the Peninsula is secured.

Transports containing troops not scheduled for first two days landing to make demonstration at Buliar, but not land.

Navy to make a feint at Besika Bay.

Battleships to support each landing, and to fire on roads and narrow-gauge road from Maidos to Sedd-el-Bahr.

All landing operations to be executed simultaneously to confuse enemy, preventing hostile concentrations.

Major General Hunter-Weston is executive for and commanding everything south of Achi Baba; Major General Birdwood has identical responsibilities to the north.

Each landing column to be equipped with radio to communicate with the "Queen Elizabeth", the command post of General Hamilton and Admiral de Robeck during the landing operations.

Hamilton's principal reasons for landing on the Peninsula were:

"The occupation of the Asiatic side by military forces is strongly depreciated" by the British War Office.

The force was too small and poorly equipped to attempt operations on mainland north of Gulf of Saros.

Likewise it would lose touch with the fleet.

The Asiatic side does not command Gallipoli whereas the heights at Kilid Bahr do dominate the Asiatic Narrows.

Landing at the points selected places the troops on the most direct and shortest available route to the objective—the Narrows.

The five beaches selected as landing places on the toe of the Peninsula were designated by the British as S, W, X and Y. V, W, and X were considered of great importance because of subsequent operations. S and Y were considered as subsidiary—in the nature of flanking groups to cover the main landings at V, W, and X, and two threaten rear of enemy, keeping re-enforcements away from these points.

On April 18th, at a conference of all higher commanders, the final details of the operation were decided. The landing was to be attempted at dawn on April 23rd. A night operation had been considered, but was discarded because it was believed that the strong current at the toe of the peninsula would add to the confusion and make the landing more hazardous. There was to be no preliminary bombardment by the navy, it being feared that such action would betray the points selected for landing.

The orders for the landing were issued on April 21st.

TURKISH FORCES AND PREPARATIONS AGAINST LANDING.

Up to the time of the first naval attack little had been done in the way of preparing Gallipoli Peninsula against a land attack. In early February Von der Goltz inspected the peninsula. A plan of defense was worked out by the German General Staff in Turkey. Positions were selected. Trenches and auxiliary defenses were planned by German officers and their execution begun by Turkish soldiers.

Although the Turks could not know where a landing would be attempted, still the possible landing places were not many in number. Every boat crew moving on the water could be observed from the Peninsula. On the other hand, the Allies, who had but few airplanes available could get very little information of Turkish movements.

On March 24th the Turkish V. Army was formed to protect the Dardanelles. Field Marshall Liman von Sanders was its Commander-in-chief.

Turkish forces on the Peninsula were supplied and re-enforced from the Asiatic side via the Straits and Sea of Marmors. Bulair Isthmus could be employed as a line of communications with safety during hour of darkness.

It became apparent late in March that the Allies were preparing a land attack soon. Turkish activity toward the improvement of the Gallipoli defenses increased which resulted in their material improvements by the middle of April. In the meantime German Taubes were made available and employed to make reconnaissances of the Allies activities off the Dardanelles.

Von Sanders did not know where the landing would be attempted. He had to disperse his troops in the most likely areas, and rely on his force on the ground to hold its defenses while necessary concentrations were being affected.

His force comprised six Turkish divisions. On the morning of the 25th of April, when the landing was actually attempted they were disposed as follows:

The 3rd and 11th Divisions were guarding the outer Asiatic coast.

The 5th and the 7th were in the vicinity of Bulair to meet any landing attempted in that region.

The 9th and 19th, under Essad Pasha, were in and near the toe of the peninsula and along the western coast.

The Turkish forces numbered 90,000. They had about 300 field pieces and were well supplied with machine guns and infantry mortars or "pom-poms."

THE LANDING.

Although April 23rd had been selected for the day of the landing, on the night of April 20th a storm broke, the wind continuing at very high velocity for two days. This forced a postponement of operations.

On April 23rd the weather was perfect. That afternoon the transports began moving slowly out of Mudros harbor. The troops were starting on the journey to Gallipoli at last. They were cheering and wildly enthusiastic.

On the 24th the troops acting as the covering force were transferred from the transport to smaller war vessels and mine-sweepers off Tenedos. At midnight these vessels, towing cutters and other small crafts, started for the peninsula escorted by seven battleships and four cruisers. Rear Admiral R. S. Wemyss commanded the convoy.

The vessels arrived at their appointed places off the coast at just before dawn on April 25th. The sea was smooth and there was no wind. The transfer of troops to the smaller crafts began immediately. The battleships moved to their positions and opened fire simultaneously as the troops started for shore at all points soon after daylight.

The troops selected for the landing at Y consisted of two battalions, viz: 1st King's Own Scottish Borderers and Plymouth Battalion (Marine), Royal Naval Division. Lieut. Col. Koe commanded the detachment. The "Goliath" supported this landing.

In landing the troops met no resistance. They climbed the precipitous cliffs in single file; found their tops deserted; and proceeded to haul up ammunition and other supplies. Trenches were dug. Up to this time there had been no casualties. The Turks were strongly entrenched about 800 yards away awaiting reinforcements. When Koe began his advance inland to threaten the enemy's rear he met resistance and was held up. Shortly after noon the Turks launched a strong counter-attack against him from the direction of Kri-thia. The attack was supported by a very heavy, converging artillery fire. The "Goliath" could give him but little aid. His command was pushed back to the trenches they had prepared upon first reaching the top of the bluffs that morning. The Turks attacked again and again that afternoon and night, on several occasions small numbers of them reaching the trenches but never driving the British from them. When the morning of the 26th came the fighting subsided. Koe had lost fifty per cent of his command, and he himself was mortally wounded. That afternoon the force was withdrawn to the ships under cover of the "Goliath", "Dublin", "Sapphire" and "Amethyst". A rear guard covered the withdrawal of the wounded and main-body from the top of the cliffs.

At S the landing force consisted of one battalion—the 2nd South Wales Borders under Lieut. Col. Casson. The landing met slight resistance which was soon disposed of with the help of the battleships. The chief obstacle here was the current which made the boats difficult to handle, some of which were damaged and overturned. However, after two hours the whole force was ashore. By noon it had advanced and established itself on high ground near De Tott's Battery with only fifty casualties. Casson was not able to advance, however, for that afternoon he was attacked in his position by the Turks. The Position was held for two days against continued attacks. On the night of the 26th the French division took over this sector, Casson's detachment rejoining the 29th Division on the 27th.

The first landing at X beach was accomplished just after daylight by one battalion of Royal Inniskilling Fusilliers. Protected by the fire of battleships the first troops got ashore with few casualties though the enemy trenches on Tekke Burnu enfiladed the beach. As soon as landing the battalions attacked and carried these Turkish trenches. Enemy re-enforcements launched a counter-attack very soon before which the Fusilliers began to give way. In the meantime, however, the two remaining battalions available of the 87th Brigade under Brig. Gen. Marshall were landed. These attacked in conjunction with the hard-pressed Fusilliers. By evening they had cleared the country for half-mile inland. Here they established and held on entrenched line.

W beach was entrusted to the Lanchashire Fusilliers under Major Bishop. The four companies of the battalion were in thirty-two cutters, four of which were towed by one picket boat.

This flotilla started for shore—the picket boats in line—just after six a. m. It was broad day light. The ships had ceased firing. Not a sound or sign of life came from the shore.

At the shoals the shallow water made it necessary for the picket boats to cast loose their tows, who now began rowing. Twenty-four cutters containing three companies pulled straight for the shore. Eight cutters, holding one company and Brig. Gen. Hare, commanding 88th Brigade, rowed toward Tekke Burnu.

Soon the leading boats of the group moving straight for shore struck the under-water wire entanglements. This was a signal for the enemy to open a withering fire from the bluffs, gulleys and sand-dunes. The ships, which were standing close in immediately replied with every available gun. Many of the troops were killed or wounded, but the remainder cut through the under-water entanglements, and reach the beach. Those troops attacked straight to the front, assisted by the fire of the one company which had landed under the protecting bluffs of Tekke Burnu. They passed through the broad entanglement on the beach, and then moved to the left to the beach under Tekke Burnu Bluffs. The enemy fire had now slackened, and here the battalions was reformed protected by the ship's fire.

The battalion attacked the trenches on the Tekke Burnu side. By 1:00 a. m. three lines of trenches had been taken in spite of enemy resistance and land mines between the lines of trenches. Shortly before noon the top of Tekke Burnu was reached, and junction effected with troops of the 78th Brigade.

While the above mentioned attack was in progress a detachment of this same battalion attempted to advance against trenches on the Helles Burnu end of the beach. They were too weak to break through this, but "held on" in front of the enemy's entanglements while the ships artillery pounded the defenses in this area and the approaches thereto.

Shortly after noon the 4th Worchester battalion was landed. At 2:00 p. m. it attacked toward Helles Burnu, capturing the heights and redoubts by 4:00 p. m. By night fall the right of their line was established at the Lighthouse.

V Beach! The troops selected for the first landing at this point comprised about four battalions, viz: Dublin Fusilliers, Munster Fusilliers, one-half battalion of Hampshires, the West Riding Field Company and a beach detail.

Three companies of Dublins were to land in cutters. The remainder of the troops mentioned were carried below the decks of the collier "River Clyde" which was to be beached.

Large openings had been cut in the sides of the "River Clyde" through which troops were to pass to lighters in tow. These lighters, after discharging their initial cargoes at the beach were to be placed abreast between the shore and "River Clyde" forming a "bridge" over which the troops were to pass.

As the boats approached shore not a shot was fired. The cutters, due to the current, reached the beach simultaneously with the "River Clyde."

Constantly a tornado of rifle and machine gun fire struck the foremost boats making casualties of all but a few of the leading Dublins who dashed forward to a slight depression in the beach for protection where they were pinned down. Many of their small boats were cut to pieces, so fierce was the enemy's fire.

Attempts was now made to arrange the "lighter bridge" as planned. In addition to the enemy fire (which was but slightly effected by the ships fire) a factor which made this extremely difficult was the current. Eventually, but only after heroic work on the part of the naval detachment, this bridge was established.

A company was now prepared to make a dash for the shore across this bridge. The distance equalled only a few seconds running but two gaps, necessitating leaps, existed in the bridge.

The ill-fated Munster Company started its dash from the "River Clyde" across the fire sweep bridge. Nearly 100 per cent casualties resulted.

Now a second company was made ready, and started. As they crowded upon the bridge its moorings broke—the lighter nearest shore going adrift. Many sprang overboard to escape the hail of bullets. A few reached the shore, but the heavy packs dragged most of them under the water and to death.

The lighters were finally replaced, this arduous task being performed under small arms and shell fire.

A third Munster company was now made ready for the dash. In spite of an enemy concentration of rifle, machine-gun, "pom-pom" and shrapnel fire the attempt was made. The bridge held under this fire, but few of the company survived it to reach the beach.

Attempts to cross the "lighter bridge" was suspended for a time. Then two companies of Hampshire made ready. As the enemy fire slackened they started. When the "bridge" was crowded, the moorings again gave way because of the weight, current and enemy fire. The men could only lie down on the drifting lighters,

trying where possible to return, if but feebly, the enemy's murderous fire.

This unfortunate detachment suffered enormous casualties, among the killed being Brig. Gen. Napier, Commander of the 86th Brigade.

Attempts to land were now indefinitely suspended. Only one-half of the force had left the boats for shore and over fifty per cent of these had become casualties.

Those troops on shore were pinned down by enemy fire, and were only saved from bayonet attacks during the afternoon by machine-guns which had been mounted in sand-bag emplacements on the "River Clyde."

After nightfall all troops from the "River Clyde" were put ashore without serious difficulty, although in the bright moon-light the enemy's fire was not negligible.

Once ashore, although the troops were greatly fatigued, the British attempted several night attacks against the fort Sedd-el-Bahr and the fortified ruined village. These attacks failed.

The greatly depleted force with few senior officers left, remained on the beach that night, April 25th.

On the morning of the 26th a naval squadron covered the slopes of Helles Burnu, Sedd-el-Bahr and the ruined village with a heavy fire. The bombardment began at daybreak. The 500 British survivors left from the original 2000 strong landing force attacked toward Sedd-el-Bahr. The Turk resistance was stiff in spite of the bombardment but by 10:00 a. m. the British had cleared the village.

They now attacked the Old Castle on the summit of the hill. It was carried at 2:00 p. m.

On the night of April 26th with Tekke Burnu and Helles Burnu were in British hands.

At Gaba Tepe the covering force detailed for the first landing consisted of 40,000 men. Fifteen hundred of these were loaded on the "London", "Prince of Wales" and "Queen", the remainder on transports escorted by destroyers.

One convoy, commanded by Rear Admiral C. F. Thursby, included five battleships, one cruiser, a balloon ship, a sea-plane mother-ship, 15 travelers. The transports and destroyers constituted the other.

The "Triumph", "Majestic", and cruiser "Bacchante" had been detailed to cover the actual landing.

The convoys arrived at the rendezvous, well off Gaba Tepe, about 1:00 a. m. April 25th. The sea was calm in the bright moonlight. The transfer of troops to smaller boats began at once. At 3:30 a. m. the first boat started for shore. By happy mischance they were slightly deflected from the landing point selected, and actually approached shore about one mile north of Gaba Tepe.

This point was unoccupied, but a Turkish battalion was rushed to it as the boats neared the beach. Under the rifle fire of the enemy which caused a few casualties, the leading boats raced for the beach almost in line.

The first Anzacs landing rushed the enemy immediately with the bayonet. The Turks offered little resistance. They were scattered by the Anzac attack which cleared the ridges of the enemy for a mile inland and two miles north and south of the landing point.

By noon that day 12,000 had effected a landing including two batteries of Indian Mountain Guns.

That night the forces occupied an entrenched position on a spaced semi-circle, the left of which rested on Fisherman's Hut and the right on the beach about four miles south of that point.

At 11.00 a. m. on April 26th a Turkish counter-attack estimated at 20,000 (the 19th Turkish Division reinforced by parts of the two Bulair divisions), launched a heavy attack against the Anzac line while enemy artillery north of Fisherman's Hut fired on boats bringing re-enforcements. The Turks naval squadron in the Narrows also fired on this point, but was soon made to withdraw by fire from Allied ships.

The attack, though fierce and persistent, did not break the Anzac line which was supported by a bombardment from the ships and steady re-enforcements being landed.

About 1:00 p. m. the Turks again attacked, this time massing against the left of the Anzacs line. The line bent back slightly but did not break. Two hours later the Turks gave up the attack only to renew it at 5:00 p. m. after receiving heavy re-enforcements. The line still held. Finally, the attacking line broke and ran.

After dark a number of local attacks and one big assault were made by the Turks without success.

During the next two days, during which the Turks made numerous but unsuccessful attacks, the Anzacs continued to consolidate the ground they had occupied on April 25th. Extreme difficulty was experienced in getting supplies—water, ammunition etc.,—up the heights. Four naval battalions were landed to assist in this, and also to do service in the front line.

The Turks now entrenched, determined to hold the Anzacs in the lines established.

At Kum Kale the French brigade effected a landing on the morning of April 25th. It met strong resistance but finally gained the heights. Attempts to advance, however, were frustrated by the arrival of strong Turkish re-enforcements. On the night of April 26th, they evacuated their holdings on the Asiatic side, and joined their division on the right of the Allied line near De Totts Battery.

On April 27th, General Hamilton ordered a forward movement to straighten his line and to relieve the congestion of the Allied area.

The British conditions were improved by wells of drinking water located in this new area. They continued putting supplies ashore while organizing for further operations.

XI. BATTLE FOR KRITHIA.

While the British had been landing and reorganizing Turkish re-enforcements were being brought to the toe of the Peninsula from Bulair and the Asiatic side.

General Hamilton realizing the necessity of advancing before enemy preparation could be completed ordered an attack along his entire front for April 28th. The objective was Krithia, three miles away.

The attack began at 8:00 a. m. with the French Division on the right and 29th and detachments of the Naval Division on the left.

By 11.00 a. m. the Allies had advanced a few hundred yards only. At that time some of the British units were without ammunition. Further progress was impossible, the Turks resisting stubbornly and occupying well prepared positions.

At 2:00 p. m. the Turks launched a heavy counter attack which lost the Allies some of the newly gained ground.

When night fell Hamilton's forces occupied practically the same ground they had at the beginning of the day.

On April 29th and 30th the Allies on Helles made no forward movement. They were heavily attacked on the nights of May 1st, 2nd and 3rd, but though driven back at first were able to regain their positions.

The Anzacs were subjected to strong night attacks on the night of May 2nd which lasted until May 3rd, but here also the Turks were beaten off.

XII. SITUATION MAY 5th.

At Cape Helles and Gaba Tepe the allies held the lines indicated respectively on accompanying maps.

General Hamilton's forces had suffered upward of 15,000 casualties; had penetrated the enemy territory for less than three miles and had been far from successful in gaining the selected objective.

In addition to casualties inflicted by the enemy his troops suffered from scarcity of drinking water, and proper hospital arrangements. There were but two hospital ships. Many wounded died while being evacuated to Alexandria by transports.

On May 1st re-enforcements were received, viz; One Indian Gurkha Brigade, commanded by Brig. Gen. Cox. These were landed at Helles and attached to the greatly depleted 29th Division.

General Hamilton was expecting the 42nd Division and a second French Division to join his forces within a few days.

On May 4th two brigades were sent to Helles from Gaba Tepe. These with the brigade from the Royal Naval Division were organized as a complete division on May 5th in anticipation for the renewal of the attack on the 6th.

General von Sanders' Turkish troops had shown themselves willing and courageous fighters. They now held good and well prepared positions facing the Allies at all points.

The Allied plans had now been unmistakably indicated. General von Sanders had not only complete

such concentrations as he desired with his six divisions, but had been promised five more—the 2nd, 4th, 15th, and 16th Divisions which were now enroute and preparing to join him.

CRITICISMS AND COMMENTS.

“Excluding Foch’s Victory Offensive of 1918, the Dardanelles-Gallipoli campaign was the one bold and aggressive conception of the Entente.” Up to May 5th, 1915, “it had failed, not because it was not eminently sound in theory, but because it was faultily executed.” The charge of faulty execution is properly made against both the naval and land expeditions, but they were infinitely less culpable than the higher authorities who ultimately were responsible for it.

That the expedition was regarded as secondary in importance by the British War Council is evident—and perhaps rightly so, in view of the situation on the Western Front. But to have given notice, by the bombardment of November 3, 1914, and through the Allied press, that the attempt was to be made, and then failing to wholeheartedly support the expedition indicates a policy of vacillation ruinous to any conception, no matter how sound.

The experience of years—yes, centuries—showed: in an operation of ships against forts that an overwhelming advantage is with forts even though they be much inferior in armament. Also that ships that ran past the defenses of the Dardanelles were in grave peril unless their defenses were in friendly hands. If the fleet had accomplished its attempted “break through” it is difficult to believe the mission of opening the Dardanelles to the Allies, would have been accomplished thereby. It could have been supplied with provisions (but not munitions) by Russia then, but whether or not the fleet could have caused Russian troops to capture the Dardanelles defenses or Bulair Lines is a matter of speculation. The fact remains however, that the power of the fleet did not make it possible for the Allies to capture more than three miles of the toe of Gallipoli Peninsula.

The only way to complete success was a combined land and naval operation coming as a complete surprise to the enemy.

After the initial bombardment on November 3rd, 1914, Allied sailors, according to the verbal report of a Naval Officer, went ashore on Gallipoli for a little holiday and qualy shooting with no sign of an enemy. If the Turk could have been kept in his state of mind of that day until the Allies had prepared a proper operation, it is not hard to believe that the World War would have ended years before it did, and that Russia and world-peace would not be the problems they are today.

Kitchener’s estimate of the situation was far from correct in so far as knowledge of the enemy—perhaps the most important factor—is concerned. Accurate knowledge of the enemy is usually lacking before and during an operation, but his staff could have obtained more information than was on hand if proper effort and study had been made. He based his selection on the policy that “he wouldn’t land a man until the Turks came to terms.” His gross ignorance of the situation is apparent to anyone conversant with the story of the Turks fierce resistance. It is true that he was hard-pressed by the situation nearer England, but he never should have sent a soldier far from that situation unless he knew absolutely that a real opportunity for success existed in the other locality,—Gallipoli

Admiral Carden’s belief that the Dardanelles could be forced in January 1915 by extended operation was not, as subsequent events proved far from correct. How very near the fleet came to success is known. But that success would have been due, probably, to the enemy’s shortage of ammunition (of which the fleet was ignorant) rather than a superiority of the ships over the land defenses.

Possibly the date on which Carden began operation was due to urging by the War Council. However, being on the ground and conversant with weather conditions in his area, he is to be criticised for beginning operations that were sure to be impeded by the spell of bad weather which was imminent.

Knowing as we do now that the Turkish defenses had orders to abandon their positions on exhausting their ammunition in the expected attack which failed to materialize on March 19th, we are, without great thought or responsibility likely to criticise severely the man who was “on the ground”, commanding the fleet—Admiral de Robeck—for not continuing the attack on that date.

That he did not again attack is no doubt due to the fact that General Hamilton's arrival and the presence of land forces persuaded him to believe that the mission would be accomplished without further sacrifice of ships. Also serious losses such as experienced on March 18th were new to him.

De Robeck had a mission to perform with the fleet alone. Admiral Fisher, First Sea Lord, British Admiralty, had estimated that the accomplishment of the mission would cost the fleet twelve capital ships. De Robeck must have known this opinion. And he surely knew the Turks were not going to present him a passage through the Dardanelles without exacting a heavy toll.

He gave up the effort without exhausting the means available for the accomplishment of his mission.

Since General Hamilton's mission was to co-operate with the fleet and operate to insure its passage thru the Dardanelles it is believed that his plan for landing suited the size of his command, the restrictions imposed by Kitchener and the situation in general.

Insufficient reconnaissance, to a great extent enforced, resulted in a failure to select the most promising points for landing. Further information of enemy defenses and activity would have shown the desirability of a long preliminary bombardment and subsequent barrage by the fleet.

Though Hamilton's delay in landing gave the enemy amply time to perfect the defenses there is little doubt that the delay was imposed by conditions beyond his control.

That Hamilton practically relinquished command of his first landing forces is borne out by his own statements. For example: From on board the "Queen Elizabeth" he sees at Y Beach that the troops are landed with resistance and are grouped on the bluffs—some lounging in the sunshine others liesurely getting up supplies. At V Beach he sees his troops pinned to the ground and being wiped out by enemy fire. What does he do! Wig-wags to Gen. Hunter-Weston, c/o "River Clyde" suggesting that more boats are available if the V Beach detachment would care to land some of their men at Y Beach. Receiving reply from the over-wrought detachment at V Beach that navy men there believe any attempt to change the plan would result in more confusion, he does nothing further in this matter. Very proper are his actions in regard to having made the plan try to carry it through", and "having given a subordinate duty let him perform it without interference." But right in that situation he lost an opportunity to succeed in gaining his first objective, and his failure to exercise his prerogative of making any change that the new situation justifies, cost his troops thousands of casualties—perhaps failure.

In justice it must be said that the dual responsibility for the operations of the land and naval forces, respectively, is without doubt an important factor which contributed to the poor success of the landing operations, despite the fact that "complete harmony existed between the two commanders.

"The great objectives to be gained justified great risks (on the part of the Allies), but this all-important campaign demanded the plans should be made that would insure every possible means of success.

It cannot be said that the efforts (of the governments) were equal to the occasion, nor that the preparations were ever on a basis to promise victory."

XIV. LESONS.

Before reaching a decision in regard to any operation a careful estimate of the situation must be made based on reliable information and logical conclusions.

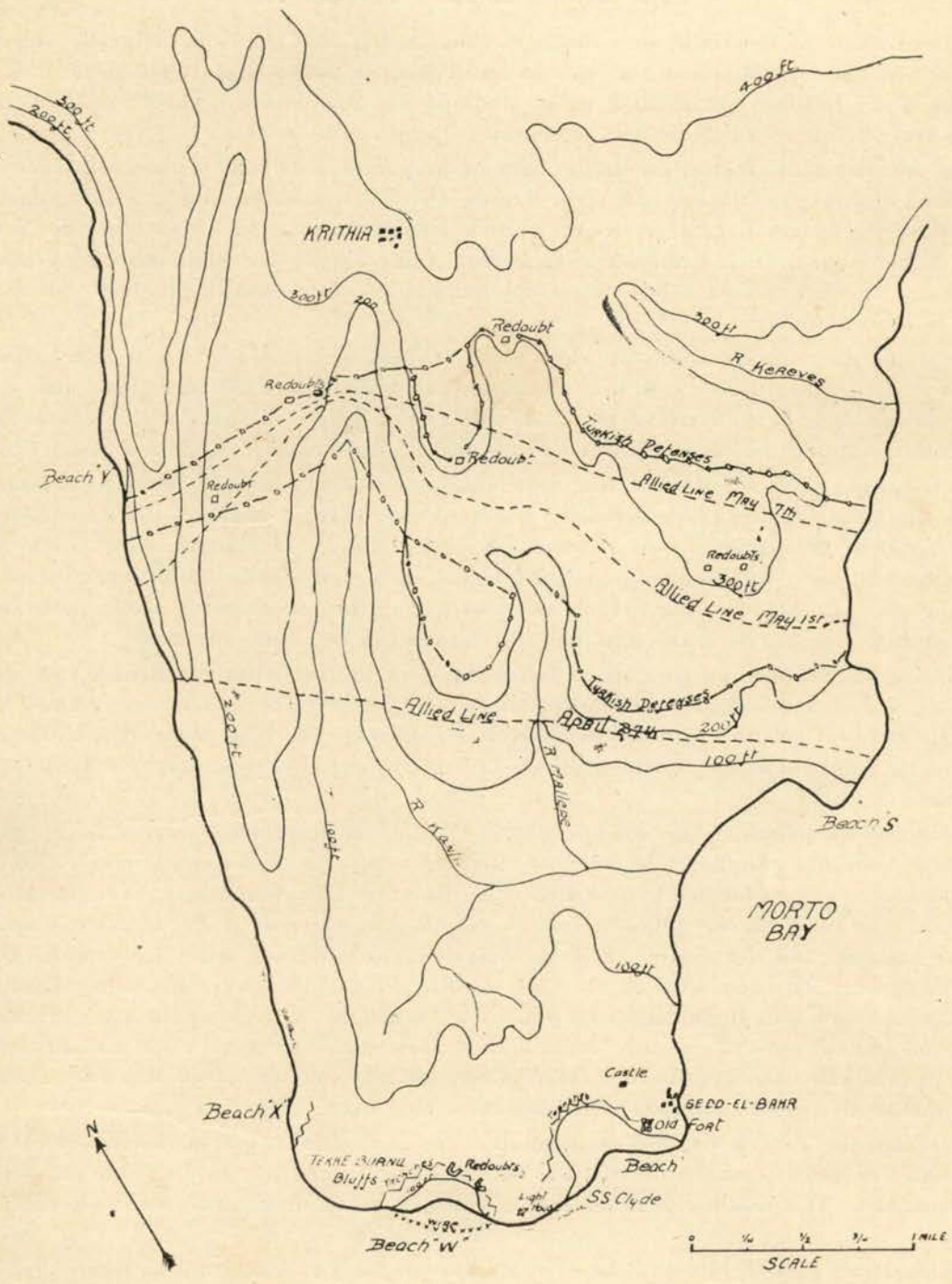
"By proper preliminary reconnaissances, deployment on wrong lines or wrong direction, and surprises may generally be prevented."

"Surprises is an essential element of a successful attack. In small, as well as large operations, the effect of surprise should be constantly striven for."

Supports are in principal put into action where least losses are being suffered rather than where they are greatest. Commanders must endeavor to locate and exploit the weak points in enemy resistance."

Personal responsibility is inherent in command, and in any group unity of command is essential to the highest development of perfect teamwork between its elements.

References:—History of the World War, Buchan; Encyclopædia Britannica, Vol XXX; The Great War, F. M. Bridge; British Campaigns in the Nearer East, Dane; A Guide to the Military History of the World War, Frothingham; Diary, Hamilton, Vol. 1 & 2; A Short History of the Great War, McPherson; Ambassador Morgenthau's Story; The Dardanelles Campaign, Nevinson.



THE SECOND PHASE OF THE GALLIPOLI CAMPAIGN

MAY 6th to include the BATTLE OF SARI BAIR

—By—

Major Matthew J. Gunner, Infantry.

The second Phase of the Gallipoli Campaign, commencing May 6, 1915, naturally sub-divides itself into three parts, 1st, the Operations on the Apex of the Peninsula in the Cape Helles Area, 2nd, The Engagements from the Anzac Position Culminating in the Battle of Sari Bair, and 3rd, The Suvla Bay Landing. These three sub-divisions of the Second Phase will be considered in the order named.

On May 6th, the Allies had in the Helles area in preparation for the planned offensive of that date about 33,000 men disposed as follows: Left, 29th British Division (re-enforced by a Lancashire Territorial Brigade and the 29th Indian Brigade). Right, French Division supported by part of the Naval Division Reserve, Two Anzac Brigades that had been brought from Gaba Tepe. The plan was simply a push forward by the entire line. The left and center were to occupy the Krithia Ridge and the Right to advance across the valley of the Kerevez Dere.

At 11 a. m. on the morning of the 6th, the French Division, preceded by a half hour artillery preparation, advanced to the assault, and by 5:30 that afternoon had pushed forward about one mile, and had dug themselves in on the slope of the Kerevez Dere, but could not dislodge the Turks on the reverse slope. During the same period, the 29th Division on the left had advanced a few hundred yards with heavy casualties.

On the following morning, May 7th, the fleet bombarded the Turkish right on Achi Baba and at ten a. m. the 87th and 88th Brigades (29th Division) assaulted the Turkish positions between Krithia and the Sea while the Naval Brigades pushed forward toward Krithia Village. This attack successful at first was held by the Turkish second line. At about six p. m. these forces attempted to take the hill between Krithia and the Sea without success. On the right, the French attacked during the afternoon and held their slight advance after severe fighting. The result of the days fighting showed but very little advances.

The fighting was resumed at ten a. m. on the morning of the 8th when the British Left and Center attacked following a fleet bombardment. Slight advances were made. The attack was resumed at five p. m. with only small successes and the fighting ceased at seven thirty p. m. The three days battle advanced the Allies line more than one thousand yards, but utterly failed in its objective to dislodge the Turk from his strongly held position.

The balance of the month of May was spent by the Allies in improving their landing places and in strengthening their positions. Neither side took the offensive except for an occasional minor raid. During this period the Allied force was augmented by two divisions. the 2nd East Lancashire (Territorial) and a new French Division. On June 4th the Allies undertook an offensive preceeded by artillery preparation from both the shore batteries and the ships. Their force at this time numbered about 17,000 with 7,000 in reserve. The French 2nd and 11th Divisions were on the right, the Royal Naval Division, right center, 42nd Division, left center, 29th Division and 29th Indian Brigade, left. The French on the right made some advances at the beginning of the attack, but were to give way under violent Turkish counter-attacks. As a result the Royal Naval Division, and the 42nd Division were in turn taken in enflade and compelled to fall back. The net result of the offensive was an advance of about 400 yards on a three mile front.

On June 21st, the French established themselves on the forward slopes of the Kerevez Dere. On June 28th, several hundred yards of Gulley Ravine was taken by the British. On July 12-13th, general attack along the line was launched. This resulted in an advance of two to four hundred yards, but did not in any way alter the situation.

During the latter part of July and the early part of August, General Hamilton received re-enforcements of three complete divisions and the infantry of two Territorial Divisions, so that by the beginning of August his army numbered on paper 160,000 men. Actually he had about 110,000 effectives. This force was made up of the 10th, 11th, 13th, 29th, 42nd, 52nd, 53rd, 54th, Royal Naval, 1st Australian, Australian and New Zealand,

1st and 2nd French Divisions, an Indian Brigade and four Anzac Mounted Brigades. The Turkish Army at this time consisted of probably more than a dozen divisions in the Gallipoli Area though nothing definite on this has ever been published.

General Hamilton now decided on a push from Anzac to capture the dominating heights of the Sari Bair Mountains. From these commanding positions further advances toward the Kilid Bahr Plateau and the Narrows were to be made. At the same time a landing was to be effected at Suvla Bay for the purpose of securing a new base and to assist the left of the Anzac attack. A general offensive was to be made at Helles in order to prevent Turkish re-enforcements from going from this Area to Anzac. The plan involved a surprise landing at Suvla Bay and the disembarkation of troops and supplies at Anzac in the dark. As the bulk of the re-enforcements would arrive during the first few days of August when the moon would be dark, it was decided to launch the attack at this time.

The British forces at Anzac having made good their landing of April 25th had held on to the narrow strip of coast-line in spite of numerous Turkish counter-offensives, and had beaten back a particularly violent one on May 18th. On the nights of August 4th, 5th and 6th, the re-enforcing troops for the attacking force on Sari Bair were landed and placed in prepared under-ground passages. The plan of attack from Anzac was for the main assault to be made against the higher ridges of Sari Bair, and for a secondary attack to be launched against the Turkish positions from the Neck to the Lone Pine Plateau.

The secondary attack was launched on the afternoon of August 6th by the 1st Australian Brigade on Lone Pine Plateau. The Turkish trenches were taken, and the position held against Turkish counter-attacks on the 6th, 7th and 9th. Other parts of the line were unsuccessful in their attacks between the Pimple and Quinn's Post, and against the Turkish trenches on the Neck and Baby.

The troops for the attack on Sari Bair consisted of the Australian and New Zealand Division, 13th Division, 29th Brigade of the 10th Division, 29th Indian Brigade, and the New Zealand Mounted Brigade. The geography of the country over which this force advanced is so well described by Callwell that it is quoted in full. "Three valleys debouching on Ocea Beach bite into the hill mass on this side. The two nearest to Anzac, the Sazli Beit Dere and the Chailak Dere lead up to the main ridge known as Chanak Bair. The other further north, the Aghyl Dere runs up Hill Q and Koja Chemen Tepe which latter is the culminating point. All three of these pronounced depressions partake of the character of gullies and ravines rather than valleys, they are deep, winding, rocky, rise rapidly and are choked with scrub, while the spurs between them are also the minor promontories separating the small gullies that fork out from the main depressions are steep-sided, serrated in some cases crowned with hillocks of most difficult access." The troops were divided up into a Right Assaulting Column which was to move up Saxli Beit Dere and Cailak Dere with Chanak Bair as its objective; and a Left Assaulting Column which was to move up Aghyl Dere with Q as its objective. The Assaulting Columns were preceded by two Covering or Advance Forces. The Right Covering Force was to take the foot-hills at the mouth of the Sazli Beit Dere and Chailak Dere and the higher ground of Bauchop Hill and Table Top. The Left Covering Force was to take Demajalik Bair, to cover the left of the advance and to connect up with the troops landing at Suvla Bay.

During the night of August 6th and 7th, the Right and Left Covering Forces quickly and successfully accomplished their missions. The Left Assaulting Column worked its way up the Aghyl Dere without attempting to assault Hill Q. The Right Assaulting Column was considerably delayed in their night advance by the difficult and unknown ground and by the Turkish defenses. They took Rhododendron Spur, but their advance had been so delayed and tedious that, instead of launching a surprise attack on Chanak Bair at dawn as had been planned, they were only able with the utmost effort to assault Chanak Bair at nine thirty a. m. This they did with exhausted troops and upon an enemy who was now fully aware of their plans. The attack was unsuccessful, and the attackers decided to hold fast and reorganize for a fresh attack in the morning.

At four-fifteen of the 8th, both Assaulting Forces launched an attack, The Right against Chanak Bair and the Left on Hill Q. (Hill Q is separated from Koja Chemen Tepe by a well marked depression. Its elevation is about fifty feet above Chanak Bair to which it is connected by a neck). The Right was able to

bite into the southwestern end of Chanak Bair. The attack on Hill Q was unsuccessful.

On the morning of August 9th, the attack was to be continued under the following plan: The Right was to hold its position on Chanak Bair, the Center was to attack on neck joining Chanak Bair to Hill Q, and the Left was to attack Hill Q. The assault was to be preceded by a heavy bombardment by everything ashore and afloat. The Left did not come up in time to join in the attack due to difficulties of the ground and to getting lost, and failed to support the Center. The Center succeeded in reaching their objective, the neck connecting Chanak Bair with Hill Q. Their success (6th Lancashire and 6th Gurkhas) was but momentary for almost the instant they reached this crest a salvo of six inch shell from British guns burst in their midst. The Turks seized the opportunity of resultant confusion to counter-attack and drove the Center down the slope upon the Left which was just arriving on the scene. The days fighting left the British positions unchanged. The Turks attacked the British position on Chanak Bair at dawn on the 10th and drove them from the heights. The net results of the four days fighting had been an extension of the Anzac lines, but the commanding heights of Sari Bair remained in Turkish hands.

As a part of General Hamilton's plan, a landing at Suvla Bay was to be made simultaneously with the launching of the attack from Anzac on Sari Bair. The objective of the landing as already stated was to secure a new base and to assist the left of the Anzac attack. The immediate objectives of the landing force was the high ground at Lala Baba and Ghazi Baba and the Hills near Yilghin Burnu (Chocolate Hill) and Ismail Oglu Tepe (Hill W). A small force was to take possession of the hills due east of Suvla Bay. The plans were shrouded in the utmost secrecy.

The British forces consisted of the 11th Division, 10th Division, Highland Mountain Artillery Brigade and 1st 4th Lowland Howitzer Brigade. The Turkish forces in the vicinity of Suvla Bay according to British information consisted of three battalions at the Anafarta villages, one battalion at Ismail Oglu Tepe, one battalion near Yilghin Burnu, small outposts at Lala Baba and Ghazi Baba, and a few Gendarmarie on the hills due east of Suvla Bay. The total Turkish forces in the vicinity of Suvla Bay that would have to be combatted at the out-set was probably not more than 4,000.

The troops which were to make the landings had been concentrated at Mitylene, Lemnos and Imbros. The largest contingent, the 11th Division came from Ombros. It was planned that this division should make a surprise night landing and that all of its brigades should be put ashore south of Nibrunesi Point. The 32nd and 33rd Brigades landed south of this point beginning at about ten p. m. August 6th, and by two p. m. the 2nd Battalion took Lala Baba Heights. The 34th Brigade was put ashore at A Beach where the landing was retarded due to fire from Lala Baba and Ghazi Baba. The Turks who had been forced out of Lala Baba entrenched themselves at Hill 10. From this position they were driven out about dawn by the 34th and 32nd Brigades.

Shortly after dawn, part of the 10th Division dis-embarked at C Beach, though it had been intended that all troops of this Division should be put ashore at A Beach. The original plan had been for the 10th Division to support the Left of the 11th Division. When they landed at C Beach the same instructions were given them which made it necessary for these troops to march up the narrow causeway of the Salt Lake in order to take up their originally intended position. Parts of the 30th and 31st Brigades (10th Division) which had dis-embarked at C Beach moved across the causeway, and in the early afternoon received instructions to support the right of the 34th and 32nd Brigades, and to move against Chocolate and Green Hills. The 34th and 32nd Brigades which had remained at Hill 10 and scarcely moved for six hours, had suddenly started moving eastward. This change of instructions caused a further dispersion of the 10th Division and a useless march around the Lake for these troops. In the meantime, the balance of the 10th Division, which had been put ashore at A Beach, moved toward the Karakal Dagh and the Kititch Tepe Sirt and at night the line ran from these points to Anafarta Ova-Sulajik to Green Hill.

The following day, August 8th, the landing troops did absolutely nothing with one exception. The 32nd Brigade occupied Scimitar Hill and as far south as Abrikja with almost no opposition. Sir Ian Hamilton arrived at Sulva in the afternoon and urged General Stopford, who was directly in command of the landing, to make an immediate attack, but this was not deemed practical by the Divisional and Brigade Commanders.

They were opposed to night operations with new troops, also there was some doubt at Division and Corps Headquarters as to the exact location of the different units.

A general attack was planned for the 9th to be made between the southern Azmak Dere and the heights north of Kuchuk Anafarta by the 11th Division assisted by the 31st Brigade. The 32nd Brigade was brought back during the night from its position on Scimitar Hill to take part in this offensive. The 32nd Brigade was placed on the Left, the 31st Brigade in the Center, to attack over the same ground the 32nd had just given up, and the 33rd on the Right. The 32nd Brigade took Baka Baba, the 33rd made some advances on Oglu Tepe and the 30th obtained a position on Scimitar Hill. However the 30th was driven back and Oglu Tepe and Scimitar Hill recovered by the Turks in violent counter-attacks. The day closed with the 11th Division practically back to where it started.

On the following day, August 10th, the attack on the high ground east of the Sulva Plain was repeated without results, and the British dug in on the line of the 7th.

COMMENTS.

This exceedingly brief sketch of the events of the Second Phase of the Gallipoli Campaign has been made up entirely from British resources. As far as is known, nothing on the subject has been written in Turkish, and the few German accounts of the operations in existence were written during the War for consumption in Germany, and are consequently of small value. So necessarily, this Campaign has been viewed from only the British side. It is regrettable that there is not at hand their opponents thoughts, plans and actions. It is with these recognized handicaps that these comments are made.

Viewing the Second Phase of the Campaign as a whole, it is questionable, even, if any of the offensives from Helles, Anzac or Suvla had been successful in obtaining their immediate objectives, that, it would have solved the main problem, namely, first, the possession of the Narrows, and, second, a safe passage through the Dardanelles. It does not seem that there were ever sufficient reserves to have pressed on to exploit an initial victory. Even had the British taken Sari Bair Mountain. It does not follow that they could have marched on to Maidos. The Turks always had as many division in the Gallipoli as the British, and undoubtedly had more available in the interior. And also their source of supply of men and munitions was close at hand. Lack of replacements near at hand made it impossible for the British to push their offensive after a few days effort. Their losses could not be replaced. They could go so far, and then settle down to hold what they had until replacements were sent from England—a matter of months. The ability of the Turks to quickly bring their divisions to threatened points indicated a well-working staff. It would seem that the British had sadly underestimated the Turkish fighting organization and ability.

The three days battle for the Krithia Heights were undertaken two weeks after landing. During this time the Turks had time to strengthen their defensives and to pour re-inforcements to this threatened area. It is well recognized that, the element of surprises having been lost, to attack an enemy in a strong defensive position unless the attacker has an overwhelming preponderance of men and munitions serves merely to court casualties. The push should have been made immediately upon landing, not two weeks later when the Turks had had time to concentrate and prepare.

Reconnaissance and knowledge of the terrain over which an advance is to be made is highly essential for the success of any operation. The advance of the forces from Anzac at night over practically unknown ground, topographically exceeding difficult and through unknown Turkish defenses could only have been successfully made as a surprise against a weak defender and with good fortune. The plan to attack Chanak Bair at dawn undoubtedly was a bit ambitious. Even so, had it been possible, it probably would have brought success where the attack four hours later against a prepared and rapidly gathering foe brought failure. The attack on the Heights of Sari Bair at dawn on the 7th of August was a part of the plan that was absolutely essential for success and had it been made at that time would probably have won the Battle.

Likewise, lack of knowledge of possible landing places about Suvla Bay resulted in the necessity of dis-embarking units at places other than those intended by the Commander-in-Chief, and brought about in-

termingling of units and confusion of plans.

The surprise landing at Suvla Bay, in an area held by a greatly numerically inferior foe, held for the attackers a golden opportunity that they threw away by enaction and inertia. In making a surprise landing is absolutely essential for the attacker to push on with utmost vigor before the defense can gather. If he does not take the ground before him at once he may never have another opportunity. The 32nd Brigade of the 11th British Division was able to take Scimitar Hill almost without opposition. The entire Turkish line was weakly held by hardly more than groups of outposts. Had the advance been vigorously pushed during the first and second days, it would undoubtedly have been successful and with but a small loss. After the second day Turkish re-inforcements arrived on the scene in such large numbers that the delayed attacks were fruitless.

The recall of the 32nd Brigade from Scimitar Hill on the night of August 8th to take part in a general offensive which included the ground they had been withdrawn from merely indicates that General Headquarters had no information of their location. It is always essential that every command should know the location of its units, and more necessary than ever that they should have this information when there is an intermingling of units with its incident confusion.

The secrecy maintained by General Headquarters in the plans for the Suvla Bay landing was carried to such an extreme that when the troops were put ashore they apparently had no clear idea of what they were to do. Secrecy of plans was necessary to prevent the Turks from knowing just where the landing was to be made, however, once the transports having put out to sea there was no necessity for further concealment. Information should have at that time been given different units as to what the general plan was and what they were to do once they were ashore. This probably would have been a great step in overcoming the in-action of the first two days.

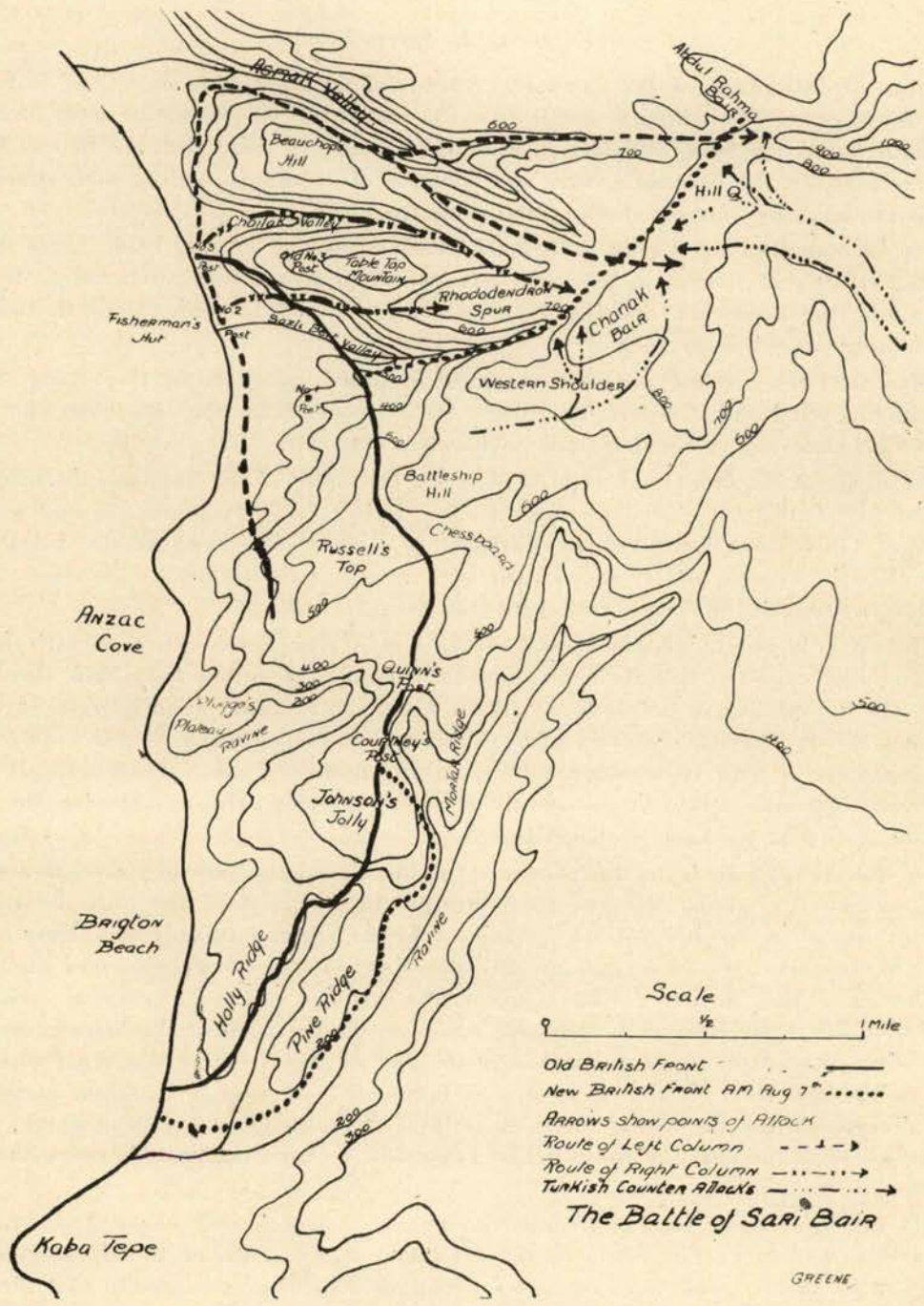
The salvo of six inch shell that had such a disastrous effect at Chanak Bair will probably always remain a mooted question as to their source. That they were British no doubt. It but illustrates the absolute co-ordination necessary for all arms when the Infantry is advancing behind an artillery barrage.

The value of an immediate counter-attack was demonstrated time and again in this campaign. As soon as a British attack would spend itself, and before they had time to fully consolidate their position, the Turks would vigorously counter-attack, and almost invariably regain the ground they had lost.

LESSONS.

1. In a campaign it is necessary to have replacements near at hand to make up losses.
2. In any advance, information of the enemy, and reconnaissance are of prime importance.
3. Surprise is of greatest value in an assault. With this element lacking, unless the attacker has much greater strength, the outcome is apt to be disastrous.
4. It is of utmost importance to make an immediate push forward on landing.
5. The different headquarters must know the location of their units.
6. There must be absolute co-ordination between the Infantry and Artillery when the former follows an artillery barrage.
7. Secrecy of plans can be carried too far.
8. A vigorous and immediate counter-attack will often be successful in regaining lost ground.

References:—The Dardanelles, Callwell; History of the World War, Buchan; Gallipoli, Masterfield; Gallipoli Diary, Hamilton; British Campaigns in the Nearer East, Dane.



Scale
 0 1/2 1 mile

Old British Front ———
 New British Front AM Aug 7'
 ARROWS show points of ATTACK
 Route of Left Column - - - - -
 Route of Right Column - · - · -
 Turkish Counter Attacks · · · · ·

The Battle of Sari Bair

GREENE

FROM BATTLE OF SARI BAIR, AUGUST 10, 1915, TO INCLUDE.

THIRD PHASE OF THE GALLIPOLI CAMPAIGN

EVACUATION, JANUARY 9, 1916.

—By—

Capt. Charles E. Speer, Infantry.

Consideration of this phase of the campaign consists of the fighting from August 10 to 29th, the political situation in England, the climatic conditions, the causes of the evacuation and, finally, the evacuation. As the main points are being considered, it must be borne in mind that the British forces, clinging to their scanty positions on the peninsula, were the subjects of constant shelling and attack, which they repulsed, and discouraged, by counter shelling and constant raids.

The loss of Chanak Bair on August 10th marks the end of the advance from Anzac in the battle of Sari Bair, and the chances of success in the great advance from Anzac and Suvla, in so far as the main objects of dominating the peninsula, opening the Straits for the fleet, thereby paving the way for the capture of Constantinople, were almost gone.

Sir Ian Hamilton telegraphed orders to General Stopford, commanding the attack at Suvla, not to renew attacks with his tired and disinterested troops, but to consolidate the line from the Asmak Dere, past the front of Chocolate Hill, through Sulajik to Kireteh Tepe Sirt.

During the night of the 10th and 11th of August, the 54th (East Anglian) Division, commanded by Major General Inglefield, was landed at Suvla Point. It formed the last reserve, and was composed of inexperienced New Army units from various districts, as some of the best original battalions had been withdrawn for service in France, and replaced with such units as were available. Therefore it had no spirit of cohesion, and even the bond of Territorial spirit had been severed.

Sir Ian Hamilton hoped to capture Kavak Tepe and Tekke Tepe, two high hills in front of the Suvla position, and had expected this division to make a night to position, and attack them on the morning of the 11th. On the evening of the 11th, no attack having started, he sailed over to Suvla for the purpose of urging one, before Turkish re-inforcements could arrive and entrench, but General Stopford raised objections, and asked for at least twenty-four hours delay, as he hoped that by that time the 53rd Division, which was badly disorganized, would be sufficiently reformed to clear the passage for the 54th, through the shrub covered ground at the foot of the hills.

This hope was disappointed, as the proximity of the enemy shortage of water, lack of training and experience, and separation of units were too great, but on the afternoon of the 12th, the 163rd Brigade of the 54 Division, composed of the 4th and 5th Norfolks, and the 5th and 10th Bedfordshires advanced to the attack and reached Anafarta Ova farm, though the opposition of the enemy increased and the scrub and brush became thicker as they advanced. Here one of the tragedies of the war occurred. The 5th Norfolks, under command of Colonel Sir Horace Beauchamp, who were on the right of the brigade, were led forward to the attack by him, passed the buildings of the farm, reached the rising ground from which Tekke Tepe mounts steeply and disappeared. A few stragglers, who became lost from a battalion in the thick woods, returned to the division during the night, but there is little doubt that Colonel Beauchamp, 16 officers, and 250 men fell somewhere in the dark woods of Tekke Tepe, where they disappeared, and with them went the last real hope of final success.

In spite of discouragement Sir Ian planned an attack on Kovak and Tekke Tepes for the night of August 13th and 14th, but on visiting Suvla on the afternoon of the 13th, he found that General Stopford and two out of four of the Division Commanders were opposed to it, on the ground that their green troops lacked the attacking spirit, were much disorganized, and were already holding too long a line.

In the face of this attitude of uncertainty and depression, Sir Ian cancelled the attack, and ordered the 9th Corps to reorganize, and consolidate a line as far forward as possible.

On the 15th of August General Stopford ordered the 10th Division to advance along the Kiretch Tepe Sirt in the direction of Ejelmar Bay. The attack, which was supported by fire from gunboats in the Gulf of Xeros, started at noon, with the 30th and 31st Brigades of the 10th Division on the northern slope, and the 162nd Brigade of the 54th Division, on the southern slope in support. The ground was bad, due to being rocky, and cut up by ravines and brush, which made artillery support by the gunboats difficult; fire from trenches and redoubts on Kiretch Tepe Sirt itself and from W and Anafarta Hills made the advance slow and costly. The high point of the ridge named Jephson's Post, in honor of Major Jephson, who lost his life capturing it, was taken and a Turkish redoubt called the Pimple, about five hundred yards further on was taken with the bayonet, and held, against desperate counter-attacks, by units of the 10th Division until the night of the 16th and 17th of August, when the line was withdrawn from its untenable position to Jephson's Post from which it ran to the sea on one side and the plain on the other. The 162nd Brigade did not get into the forward action due to the fact that the southern swept by observed fire from W and Anafarta Hills, as to render it impassable.

The order for this attack was the last given by General Stopford, who was relieved by General De Lisle on the evening of August 15th.

In the middle of August the general situation was follows:

At Suvla the British front line ran from the Gulf of Xeros-Jephson's Post on the Kiretch Tepe Sirt—Anafarta Ova-Sulajik, in front of Green Hill—Asmak Dere, where it joined the Anzac line, which ran from Asmak Dere—opposite Hill 60—Aghzl Dere in front of Little Table Top—opposite Battleship Hill—Quinn's Post—Lone Pine—the Aegean Sea.

At Helles the British line ran from Fusilier Bluff—in front of Krithia—Haricot—Kereves Dere.

Although it was slightly advanced in some places, it remained practically the same at the withdrawal so we will not consider it, again, until that phase of the campaign is reached.

The British position was dominated by that of the Turks at all points in the Suvla—Anzac area. Turkish batteries and snipers on Ismail Oglu Tepe (Hill W) and Hill 60, on opposite sides of the Asmak Dere were particularly annoying, as they had direct observation of the beaches and lines of communication. Although the attack had failed in its main objects, the position at Anzac was greatly improved. There was road communication from Suvla to Anzac, which facilitated the service of supplies. The area had been increased from 300 acres, held at Anzac prior to the attack, to about 9 square miles, including Suvla Bay, which afforded a better winter harbor than Helles. Sir Ian Hamilton estimated the strength of his command, which was divided into three Corps Areas as follows:

IX Corps, Suvla Bay, Major General De Lisle. 10th Division, less 29th Brigade, 53rd and 54th Divisions, 30,000.

Anzac Corps, Anzac, Lt. General Birdwood. 1st Australian Division, New Zealand and Australian Divisions, 29th Indian Brigade, 29 Brigade, 10th Division, 25,000.

VIII Corps, Helles, Lt. General Davies. 29th, 42nd, and Royal Naval Divisions, British, 23,000

1st and 2nd Divisions	French	17,000
	Total	95,000

Nevinson thinks this estimate too high, and puts the British strength at 60,000 and the French at 15,000.

The Turkish forces were estimated at:

Suvla	20,000
Anzac	47,000
Helles	15,000
Reserve	12,000
Total	94,000

Callwell estimates 110,000 Turks on the Peninsula.

The Turkish positions were strongly entrenched and protected by barbed wire in addition to the natural strength given them by the steep, brush-covered ground. The limited land artillery of the British, supported by the flat trajectory fire from the fleet was not capable of destroying the trenches, so that the instant a bombardment ceased, the Turks were able to man their lines and meet any attack with machine-gun and rifle, supported by artillery. They were fully supplied with weapons and ammunition, and their artillery and machine-guns, directed by German officers were perfectly handled, and situated so as to give the maximum service.

The failure of the attack, and the situation being, as described, had not caused Sir Ian Hamilton to give up hope of taking the Peninsula. On the 16th of August, he had telegraphed Lord Kitchener asking for 45,000 replacements and 50,000 additional troops, and stating that this number was essential for a quick victorious decision.

In order to fully understand the campaign from this point, it will be necessary to describe the political situation in England. The fall of Warsaw, on August 4th, destroyed the hope of Russian co-operation and the influence of the "Westerners" as the advocates of decisive action on the Western Front were known, was in the ascendant. The plan to break through German lines at Loos, in September, was under way, and all available forces were to be concentrated on it. A Campaign of hostile criticism, and despondency, was directed against the Gallipoli Expedition, and the re-inforcements asked for were refused. However, the British Cabinet may have hoped to resume the offensive on Gallipoli after a lapse of several months, if the offensive in the West succeeded.

At any rate the 2nd Mounted Division consisting of four brigades and numbering 5,000 men, was ordered from Egypt to Gallipoli. They were a fine body of men and their Commanding Officer, Major General Peyton, and his Brigadiers, were capable and courageous officers. Although of necessity the division was dismounted for service in Gallipoli, and its officers were cavalymen, it did extremely good work, as will be seen later.

In spite of the small number of men sent him, Sir Ian Hamilton decided to attack Ismail Oglu Tepe (Hill W) and Hill 60, with the intention of freeing his line of communications from Suvla to Anzac, and establishing a foothold on the Anafarta Plateau, and ordered the 2nd Mounted Division, and also the 29th Division (from Helles) to Suvla.

Due to the fact that the Asmak Dere, on opposite sides of which the two hills stand, was the dividing line between Anzac and Suvla, the attack on Hill W was given to Major General De Lisle, and the attack on Hill 60, which was to be delivered simultaneously was given to Major General Cox.

We will now consider, separately, the two attacks, which were the last of Major importance in the campaign.

The Turkish position Hill W, was in the shape of a horseshoe, of which, Scimitar Hill and Hetman Chair, were the sides, between which a ravine ran up Hill W. The whole was strongly entrenched. The first line consisted of trenches on Scimitar Hill, at the head of the ravine, and trenches on Hetman Chair with communication trenches running back to the second line on Hill W itself, which dominated the first position, and was shaped like a semi-circle.

General De Lisle's plan of attack was very simple. On the left the line from Kiretch Tepe Sirt to Sulajik farm, was to be held by the 53rd and 54th Divisions; in the center the 29th Division was to storm Scimitar Hill, and on the right the 11th Division was to take Hetman Chair and the trenches in the Anafarta Valley. The attacks were then to proceed along Scimitar Hill and Hetman Chair to Hill W which was to be occupied and held. No troops were designated to attack the ravine between Scimitar Hill and Hetman Chair, as General De Lisle feared it was a trap, which it afterwards proved to be.

The 2nd Mounted Division was held in reserve at Lala Baba.

A supporting bombardment by artillery and the fleet was planned, so the attack was set for the afternoon of August 21st (as the afternoon sun usually performed the double service of showing up the Turkish

position, and shining in the eyes of its defenders.

Unfortunately the day of the attack was very hazy, so that observation of fire by the fleet and land batteries was very poor, and the light was so placed as to outline the attacking British for the Turks. Sir Ian Hamilton did not postpone the attack for "various reasons" which still are unknown, although he stated that he desired to do so, so the attack commenced at 3:00 P. M.

The 34th Brigade of the 11th Division, on the right, took the trenches across Anafarta Valley with few losses.

The 32nd Brigade of the 11th Division, instead of keeping contact with the 34th and attacking Hetman Chair, became lost in the mist, inclined too far to the left, and entered the ravine, between Hetman Chair and Scimitar Hill. Their attempt to advance up it was repulsed with heavy loss, and they were thrown into confusion.

The 33rd Brigade of the 11th Division, which was sent up with orders to take the long communication trench leading from Hetman Chair to Hill W., at all costs, fell into exactly the same error, and met a like fate.

On the left the 87th Brigade of the 29th Division, worked up the northern slope of Scimitar Hill from the valley leading to Little Anafarta, gained the crest and forced the Turks down the other side. However, artillery and machine-gun fire from concealed positions in the second line, Tekke Tpe, and Hill W rendered the position untenable, and in the absence of any help, it was forced to fall back slightly.

In the center the advance of the 86th Brigade of the 29th Division up the western slope of the hill impeded by disorganized units of the 32nd and 33rd Brigades through which they had to pass. Just as the 87th Brigade gained the crest, the upper western slope of the hill, which was covered with dry brush, burst into flame probably fired by the Turks. Being unable to pass this barrier, the 86th Brigade worked to the right, and came to grief in the same ravine which had been the downfall of the 32nd and 33rd Brigades. It attacked bravely and the leading troops of this brigade reached the head of the ravine, but were forced to fall back to a ledge on the southwest slope of Scimitar Hill, where, on finding a little cover they held on.

At this point General De Lisle decided to order up the 2nd Mounted Division, as although both flanks had advanced, the center had failed.

At 5:00 P. M. this Yeomanry Division advanced across the open plain from Lala Baba, under heavy fire, as coolly as though on parade, and though here and there a shell struck down a cluster of men, none hung back, and none hurried, during the advance of a mile and a half.

After reforming under cover of Chocolate and Green Hills, it crossed the front line, delayed by the disorganized brigades in front, and the brush fire, which was still burning in places, and although it suffered heavy casualties, commenced to attack.

Favored by darkness, it gained the head of the ravine, parts of Scimitar Hill, and a small knell in front of Hill W, which was at first thought to be Hill W, itself.

On finding its mistake and realizing that his line was dominated by a second enemy position, further on, Brigadier General Marshall, reluctantly ordered a withdrawal to the original line to avoid the extermination of his forces at daybreak, and the exhausted men fell back.

The British losses in this attack were 5,000 casualties, most of which fell on the 29th Division, although about 1,000 were in the Mounted Division, which also lost two Brigadier Generals, killed.

We will now turn to the attack on the right, which, commanded by Major General Cox, took place at the same time, and had three objectives. On the left to support the 11th Division, in the center to capture the Kabak Kuyu wells, an important and much needed water supply, and on the right to capture Hill 60.

To accomplish these missions, General Cox divided his forces into three columns, and assigned each a mission. The left column successfully swept back the Turkish outposts, and formed a junction with the 11th Division; the center column captured the Kabak Kuyu wells with the bayonet, and held them,

but the right column was held up by Hill 60. However, several units crossed the ravine and gained a footing in the right and center, on the steep sides of Hill 60, and during the night dug a communication trench back to their original positions. On the morning of the 22nd, the newly landed 18th Australian Battalion took the trenches at the foot of the left of the Hill, and the positions were joined.

For five days of continuous fighting the Anzacs clung to the circular trench, which circled the foot of Hill 60, and at 4:00 P. M. on the 27th, of August, made from it a carefully planned attack, with only 1100 men, divided into three columns. The attack was supported by a heavy bombardment, and was under the direct command of Brigadier General Russell, an able strategist.

The right was held up by machine-gun fire, but the New Zealanders gained the top of the Hill in the center, and the Connaught Rangers, although weakened by dysentery, came up on their left. During the night the Turks kept up the bombardment and made frequent counter-attacks. On the 28th the Connaught Rangers were withdrawn but the New Zealanders held on.

At 1:00 A. M., on the 29th, the 10th Austrian light Horse stormed the crest of Hill 60, which was thereafter held by the British. The Turks, however, retained possession of the reverse slope.

The British casualties in this action were 1,000 those of the Turks were estimated at 5,000. Although it was only a small action, compared to some of those on the Western Front, it was fiercely contested, and was the last of major importance fought on the Peninsula.

During the last of August the following changes in General Officers were made at Anzac and Suvla: Major General Byng took over command of Suvla from General De Lisle, who reverted to command of the 29th Division, Major General Fanshawe was given the 11th Division, Major General Maude the 13th Division, Major General Marshall, who had commanded the forward attack on Hill W was given the 53rd Division, and General Inglefield retained command of the 54th Division.

The 2nd Australian Division arrived during the latter part of August, and was assigned to Anzac, where it was a welcome re-inforcement.

During September, several regiments of Yeomanry and North Country Horse, arrived, but they were insufficient in numbers to bring the forces on Gallipoli to any appreciable strength, although they were of excellent quality. The artillery of the 10th Division also arrived.

September, October, and November passed uneventfully from a tactical point of view although there was almost continuous fighting on a small scale, as the Turks shelled constantly, and the British replied, and carried out numerous raids, which trained and improved their units, so that when the evacuation was undertaken, it was much facilitated by the efficiency of the troops.

Marshall Liman von Sanders adapted a policy of passive defense from which he sometime departed to make attacks, when the British and French became too aggressive. His reason for this was to conserve men, and that the mere holding of the British at the Dardanelles aided the political situation in the Balkans and made a drain on the full effectiveness of the British on the Western Front.

During the late summer and autumn the sick rate, particularly from dysentery and diarrhea, rose very high, and this, coupled with the lack of variety of the nations, to which it was mainly due, and the severe strain of duty in the restricted area under constant shelling was very depressing for the troops.

To relieve this situation every effort was made to establish canteens, and to get some variety in the ration, as it was found that even so slight a change as the substitution of a different kind of jam, or the arrival of a few articles in the canteen immediately improved the health of the command.

In addition aided by the comparative quiet of the Turks, practically all units were sent to the islands of Lemnos and Imbros for a tour of recuperation.

At this point we will have to turn again to the political situation in the Balkans and in England in order to fully comprehend the events which led up to the evacuation of the Gallipoli Peninsula.

The Russians had suffered constant defeats, at the end of which they had been driven to the Dvina River and the Pripet marshes, so that no help against Turkey was to be expected from them.

The effect of this was to decide the wavering Balkan States of Bulgaria and Greece against joining

the Allies, and when the German and Austro-Hungarian forces attacked Serbia, Bulgaria declared war, and her armies entered Serbia.

Greece, although bound by treaty to go to the aid of Serbia, if it was attacked by Bulgaria, declined to do so, on the ground that Serbia was at war, not only with Bulgaria, but with the Central Powers.

Prior to the open declaration of war by Bulgaria, it was decided in England and France that a force should be sent to Salonica in Greece for the purpose of aiding the Greek forces to assist Serbia. The forces on Gallipoli being nearest to Salonica, it was decided to call on Sir Ian Hamilton for troops, and accordingly, the 1st French, and 10th Irish Divisions were withdrawn from the peninsula and sent there, about the 1st of October.

Bulgaria declared war on October 5th, but England did not declare war on her until October 15th. Greece decided on a policy of neutrality so Serbia received no assistance, although quite a large Allied force was built up at Salonica.

The British Offensive on the Western Front had not made any decisive impression on the situation there, and there was increased need of men and munitions for the forces employed in that section.

The advocates of the campaign on the Peninsula could no longer claim that the expedition would keep the Balkans from joining the Central Powers, and were reduced to stating that it kept a large Turkish force occupied that could otherwise be used offensively for an attack on Egypt or elsewhere, and that the admission of defeat, shown by a withdrawal, would hurt British prestige in the Orient.

The enemies of the expedition, who were supported by the French, who had never been in favor of an expedition on the European side of the Dardanelles, claimed that the expedition had failed to accomplish any of its objects, namely preventing the Balkans from joining the Central Powers, helping Russia or capturing Constantinople, after opening the Straits and thereby putting the Turks out of the war. They advocated immediate withdrawal, and believed that the loss of prestige so occasioned would be more than offset by the successful employment of the forces thus released in some other more promising sector.

This view was borne out by the development of facts, as will be seen later. The effect on British prestige in the Orient was inappreciable, and the loss of troops in the evacuation, which was expected to be from 15 to 50 per cent by different estimates, was practically nothing.

The advocates of evacuation further strengthened their view-point by pointing out that the defeat of Serbia and Bulgaria's entrance into the war, would mean that German supplies, munitions, and re-inforcements could be sent direct to Turkey, and used to destroy the troops, who were even now barely clinging to the Peninsula.

On October 11th, Lord Kitchener telegraphed to Sir Ian Hamilton asking him for an estimate of his losses in the event of a withdrawal. On the 12th, Sir Ian replied to him that such a step was unthinkable. On the 16th, he was relieved, in order that a new commander might furnish an unbiased opinion of the situation, and General Sir Charles Monro was designated as his successor.

Sir Ian departed on the 17th, after turning over the command temporarily to General Birdwood. This put General Godley in command at Anzac, while Generals Byng and Davies retained their commands at Suvla and Helles respectively.

General Monro arrived at Imbros on the 28th, and took check of the situation in compliance with his orders, which were as follows:

- (a) To report on the military situation in the Gallipoli Peninsula.
- (b) To express an opinion whether on purely military grounds the peninsula should be evacuated, or whether another attempt should be made to carry it.
- (c) To suggest the number of troops that would be required.
 - (1) To carry the peninsula.
 - (2) To keep the Straits open.
 - (3) To take Constantinople.

On November 3rd, he telegraphed his report to Lord Kitchener in which he stated that the situation

possessed every possible military defect, that the communications were insecure and dependent on the weather, that no means of concealment for the employment of fresh troops existed, and that the Turkish positions, strongly entrenched and fortified with great engineering skill, dominated those of the British throughout, and had the further advantage of possessing observed artillery fire over the whole British area.

He thought that the Turks could hold the British, where they were with a small force, that even if the lines advanced they would be no better off, that the capture of Constantinople was not out of the question, and that in his opinion, immediate evacuation was the best policy.

No action was taken on his report until December 8th, when he received orders to evacuate Anzac and Suvla only, and transmitted them to General Birdwood to carry out.

Before proceeding with a description of the evacuation, it will be necessary to describe certain events, which took place during November.

The British Government was still unable to decide on evacuation, as strong parties, now including the friends of the Navy, who wished to hold it for a base were opposed to it. So Lord Kitchener himself proceeded to Gallipoli to estimate the situation on the ground. After a personal inspection of Anzac, Suvla and Helles, and a conference with the commanding officers on the spot, he advised evacuation, although he had formerly been opposed to the idea.

He left the Peninsula in the middle of November, after placing General Munro in charge of all British forces in the Mediterranean east of Malta, excluding Egypt. This command was divided into two; the Salonica Army, under General Birdwood, who retained command of it to the end.

The 27th of November a violent storm broke on the peninsula, which after a heavy thunder-storm, accompanied by a drenching rain for the first twenty-four hours, shifted to the north and gave place to a two day blizzard, which was followed by two days of freezing weather. The scanty piers were destroyed, the beaches covered with wreckage of light boats, and the suffering of the men was intense. 200 died and 10,000 had to be evacuated as a result of their exposure. Sentries were found frozen to death at their posts, rifles in hand. It is believed that the Turks suffered more than the British, but the warning shows how at the mercy of the elements the British forces were.

The Government finally made up its mind to a partial evacuation, as stated before, and on December 8th, General Birdwood received orders to evacuate Anzac and Suvla.

The general principals outlined by General Munro, were that the evacuation was to be made in three stages.

1st. Troops, animals, and supplies not needed for a long campaign were to be withdrawn.

2nd. Troops, guns, animals, and supplies not needed for defense during a period when final evacuation might be held up by the weather.

3rd. Final evacuation of troops leaving guns, animals, and stores needed during this period.

In view of the unique position in which the troops were, he decided against making a feint attack, usually prescribed for such movements in military text books, and decided to make as secret a withdrawal as possible.

General Birdwood's plan was to withdraw men, animals, guns, and munitions in dribbles from the 10th, to the 17th, when one-half the remaining troops were to be taken off the night of the 18th and 19th, and the final evacuation the night of the 19th and 20th, was to be made by jumps.

The greatest attempt was made to keep everything, as usual, supplies were carried to the front, some supplies and animals were even landed. Fire was kept up as usual, except that the artillery slacked up on their night harassing fire, and the Turks slacked up accordingly.

The preliminary evacuations were carried out without a hitch, except that some stores caught fire on the 17th and 18th. However, the enemy had not suspected what was going on. We will now deal with the final evacuation in detail, considering first Suvla and second, Anzac.

The area at Suvla was divided into three sectors, the left under General Fanshawe, the right under General Maud. The dividing line ran approximately from Sulajik Farm to Salt Lake, and the left sec-

tor was to embark from Suvlo Point, the right from Nibrunesi Point.

There were about 12,000 men in these cestors, of whom a little more than 6,000 were to leave Suvla Point, a little less from Nibrunesi.

The plans were simular. Lines of defense between the front line and the embarkation point were prepared, and leaving a few men in the front line, the troops fell back to these successfully, as they moved to embark.

The evacuation was commenced at 5:30 P. M. just as it began to get dark, and completed at 4:00 A. M. from Nibrunesi and 5:15 P. M. at Suvla, according to Callwell, earlier according to Nevinson. However the front line was held until 1:15 by small units, and the evacuation was made without a hitch. There were no casualties on Nibrunesi, and only two or three from casual rifle fire at Suvla Point. The defensive lines were not needed, and 16 guns which were left in the area were successfully taken off.

The evacuation at Anzac was carried on simultaneously. The front line was held until 1:15 A. M. as per agreement with Suvla. Certain posts in the center were held longer and when the last line fell back to embark the engineers fired a charge of ammenel, which blew up the Nek, and started the 8urks shelling the empty trenches, as they feared an attack. Rifles actuated by various devices, were left firing at intervals after the troops left.

The final evacuation was completed at 4:15 A. M., when the last of the final 10,000 were taken off.

Due to the rugged ground and poor beaches, the troops at Anzac were forced to leave behind the ten old guns, which had been left them, and also some 56 mules. The stores were fired as at Suvla.

No casualties are mentioned and the whole affair was so well conducted that General Godley, who was in command, justly received the greatest praise.

The government finally decided to evacuate Helles on the 28th of November, and ordered General Munro to carry out the withdrawal. General Munro had previously warned General Birdwood to draw up a plan so that he was prepared.

The first step was the final evacuation of the French on the night of January 1st, 2nd, to avoid conflict of command. However, by consent of General Brulard, their artillery was left to support General Davies.

The evacuation then followed the three stages outlined for the Anzacs—Suvla evacuation by General Munro, with the provison that the final stage was to take place as rapidly as possible, and that no men were to be sacrificed in the effort to save animals and munitions.

The beaches at Helles were better than those at Anzac and Suvla, and the well organized trenches presented a greater barrier to the Turkish pursuit in event of discovery, but the artillery released at Suvla and Anzac had been moved down, and the position at Helles was difficult to say the least.

However troops, and stores were evacuated without difficulty up to the 7th, when the enemy gave the Helles area the heaviest shelling it had ever been subjected to. The 8th, however, was quiet and the final evacuation was carreid out the night of the 8th and 9th as planned.

In the final evacuation of Helles it was decided to use V and W beaches for the majority of the troops, and Gully Beach for some of the front line units.

The evacuation was made successfully in spite of a heavy sea, and the fact that one ship was struck by a torpedo which fortunately did not explode. It was completed at 3:30, and only twenty-one old guns had been abandoned. However 508 horses and mules and large stores of ammunition and supplies had to be destroyed.

As at Anzac and Suvla the carefully prepared trenches covering the beaches were not needed, and the rifles left in the trenches fired at an enemy who did not understand their meaning. Turkish fire again needlessly swept the empty trenches, after the firing of the abandoned stores.

The losses of the British Army, exclusive of those of the French and the British Navy were:

	Killed	Wounded	Missing	Total
Officers	1,745	3,143	353	5,241
Other Ranks	<u>26,455</u>	<u>74,952</u>	<u>10,901</u>	<u>112,308</u>
Total	28,200	78,095		117,549

The sick admitted to hospital, April 25th to December 11th, were 96,683 of whom a considerable proportion died.

The total losses of the Turks were estimated between 400,000 and 500,000 but no definite figures were available.

The Dardanelles Campaign was brilliantly conceived and several times neared success, however, it must be admitted that it failed. How much the failure was due to faulty execution and how much to lack of support from home will always be a debated question. In spite of the fact that it failed, the expedition inflicted heavy losses on the Turks at a critical time, and they never made any dangerous offensives against Egypt or elsewhere, as the British had feared they would at the outbreak of the War. So far as the troops employed in the campaign are concerned they performed miracles of valor and endurance, and their feat will be spon of whenever phenomal military actions are under discussion.

ANALYSIS, CRITICISMS, AND LESSONS.

The criticisms will be considered in two groups, first those dealing with the tactical handling of units during the third phase, second those covering the campaign. In the first group we will criticise, A the British, B the Turks.

GROUP I.

A. British.

1. The following common errors of the infantry will be found equally applicable to all similar troops.

(a) Failure to maintain direction resulting in failure to attack proper objective, and consequent disaster as shown at Hetman Chair.

(b) Failure to maintain and co-operate with other units, particularly shown in advance, and disappearance of 5th Norfolks on August 12th.

(c) Lack of comprehension of all battlefield conditions, including two errors described above, and in addition, failure to take advantage of ground cover, grouping of men, and general ignorance of where to go, and what to do, resulting in the necessity of higher unit commanders leading their men and attempting to show them what to do under fire. The final result of such a procedure is usually that, although all ranks show great courage, the casualties, particularly among the unit commanders, are very great and the mission is not accomplished.

(d) Failure to advance by co-operative fire power. No mention is made of machine-gun supporting the advance, many instances are given of units gaining an objective, and being forced to fall back, because supporting units were unable to reach them, and many times infantry is reported as taking trenches with the bayonet. The advance should be covered by fire, if artillery is not available, it should be covered by machine-gun and rifle fire. The fierce desire of brave untrained men to get at the enemy with the bayonet at all costs must be curbed and regulated, if the attack is to be a success.

2. The British policy of constant raiding had beneficial results. It trained the individual to war conditions, increased his confidence in his officers and fellow soldiers, and built up a spirit of aggressive self confidence. Carefully planned, successful raids are excellent for preparing green units for concerted offensive spirit in all troops, confined, temporarily, to trench warfare.

3. The capture of Hill 60 at Anzac by infiltration shows the difference between green troops rushing recklessly on the enemy, as at Hill W, and carefully trained troops. The Anzacs had only had about three

or four months experience, but it had been severe and those who did not learn were eliminated. Their leaders had learned two important lessons. First, ability to estimate a situation, and second, the use of patience.

4. The evacuation was very successfully carried out, and the following points which contributed to its success can be profitably noted.

(a) Care was taken throughout to maintain the same routine, and keep the appearance of the sector the same to the enemy.

(b) Artillery harassing fire was gradually reduced during the night, and as a consequence the Turks gradually reduced theirs.

(c) Gradual reductions were made until final evacuation could be made on one night.

(d) Provisions were made to block the enemy pursuit had such developed. Had this been needed it would doubtless have been effective, as the enemy's progress, through unknown trench systems blocked with wire, would have been far from rapid even if not resisted.

(e) The stores and munitions necessary to support the troops at the last were abandoned and destroyed rather than risk heavy loss of life and possible failure of the movement in saving them.

(f) Careful embarkation schedules were worked out, and were scrupulously followed.

(g) No feint attack or demonstration to distract the enemy's attention was made. Instead every was strained to preserve secrecy.

(h) Responsibility of command was definitely placed in each sector, and resulted in a smooth and harmonious carrying out of the plans.

(i) The troops making the movement were thoroughly trained, familiar with their sectors, and had an intelligent idea of what was expected of them.

(j) In the evacuation of Helles care was taken to evacuate the French first, thus avoiding possibility of confusion resulting from dual command.

5. The supporting artillery fire has been referred to throughout this monograph as a bombardment, as it was not a barrage, either in the sense that it kept the enemy down, while the infantry went forward, or that it destroyed the enemy trenches. It was in fact very ineffective, and we can learn a number of lessons from it.

(a) Fire from ships cannot support an infantry attack closely, except in the event of their being on the enemy's flank (as at Kiretch Tepe Sirt) for two reasons, first, inability to observe fire, and second, flat trajectory of their fire.

(b) Short periods of fire will not cut wire, destroy earthworks, nor prevent a determined enemy from occupying his positions and fighting the moment fire ceases.

(c) Heavy, high trajectory, land artillery is needed to destroy defensive positions; light flat trajectory weapons will not do it.

B. Turkish.

In closing we will consider the Turk, the underestimation of whom, as a fighting man, was the principal cause of the failure of the Gallipoli Campaign.

All that we know of his methods is from British sources. His chivalry in battle, particularly his refraining from firing on hospital ships, won the admiration of his enemies, and the lack of bitter animosity and hatred shown in the Gallipoli fighting, fierce as it was, is astonishing.

The attacks made by the Turks show the same error of improper artillery preparation and fire support as those of the British.

The defense was excellent and brings out several important points.

1. The artillery was well sited, had correct ranges, and good observation, so that it always came

into action on the proper target when needed.

3. The ground was well organized, particular attention being paid to utilizing natural found features in conjunction with wire to form machine-gun traps for an unwary enemy.

3. The machine-guns were well sited, and were handled to give maximum results.

4. The infantry manned the trenches and defended them heroically the moment the bombardments ceased, thus showing high spirit and intelligent comprehension of one of the most important features of trench warfare, namely that of not permitting the enemy to enter one's fortifications without loss and thereby nullifying their purpose.

5. The Turks were plentifully supplied with hand bombs, or as we call them grenades, their use of them was extremely effective, and proved the value of these important weapons, at this early stage of the World War.

6. The Turks are sometimes criticised for not being more aggressive. However, in my opinion, they chose the wise course. Decisive defeat at that time would have meant the loss of the Dardanelles, the shipping of munitions to Russia, and probably a strong effect on Bulgaria and Greece. On the other hand prolongation of the campaign meant success, and with an army very slightly stronger than the British they could not afford to take chances.

GROUP II.

1. The small area held on the peninsula made it necessary to constantly replenish supplies by sea, thus placing the expedition at the mercy of the elements. Further if gas were used by the enemy, such small footholds would rapidly be made untenable. Therefore, if a landing is contemplated in hostile territory for the purpose of conducting a campaign, provisions should be made to occupy a large area.

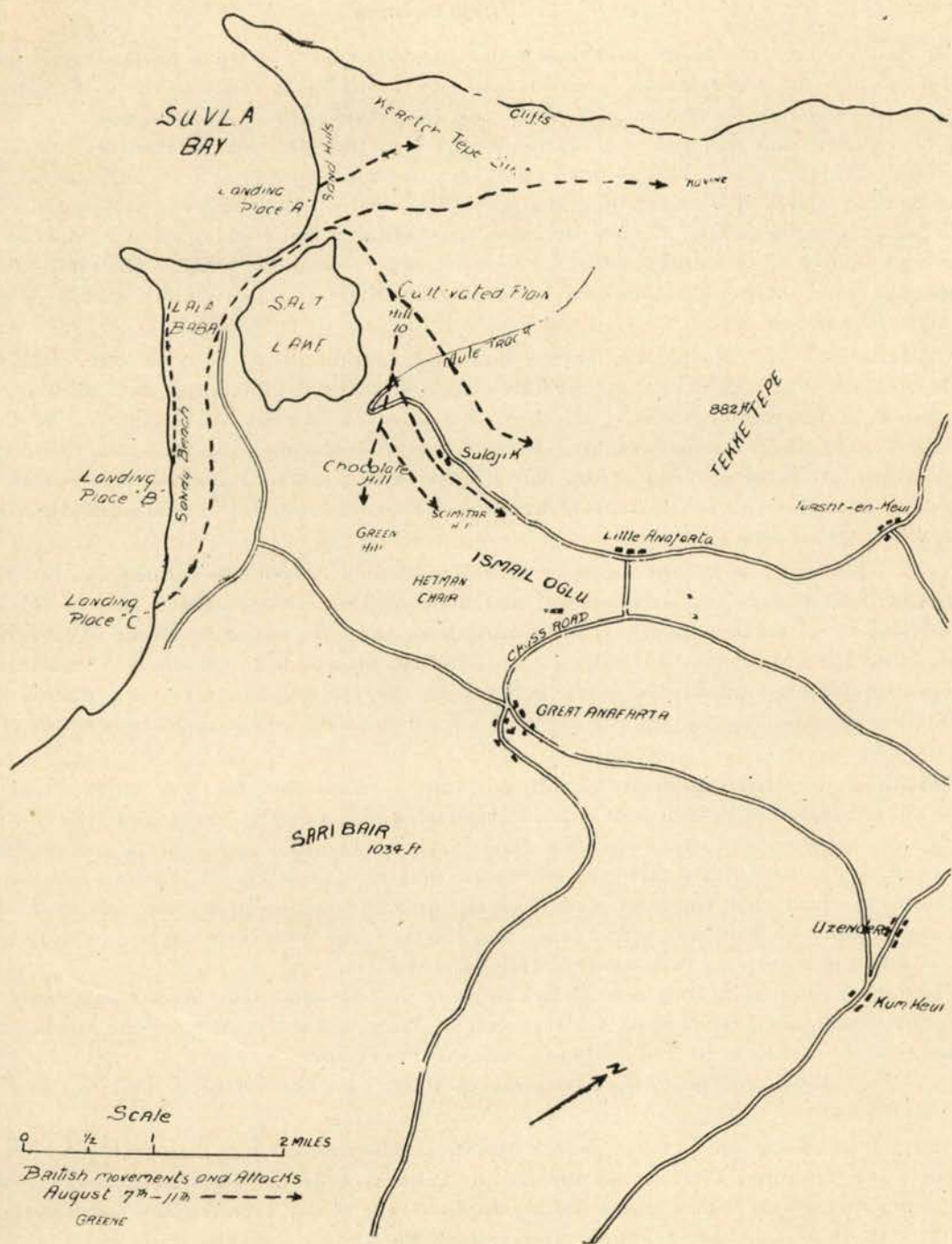
2. Long periods of time were lost in waiting for replacements, reserves and supplies. Therefore, in waging a campaign far from home, a base should be established in the vicinity of the operations where large forces of reserves and supplies should be assembled prior to the opening of hostilities, as otherwise the advantage of initial successes may be lost during the period of organization.

3. The British provision for artillery was scanty, and they were totally lacking in the proper types of guns. Improper ammunition was often sent for those they did have. Therefore, in planning a campaign, the type of work to be done should be considered, and care taken to see that ammunition for the guns selected is sent with them, and not ammunition for some other type.

4. The general health of the command was bad throughout the campaign. This was due to four causes, lack of proper water supply, smallness of area, which gave rise to bad sanitary conditions and did not permit men to be withdrawn beyond shell fire for rest, lack of variety of ration, and unacclaimed personnel. The first two could only be corrected by seizing a large area on landing, but the last two, namely lack of variety of ration and acclimatization of major importance. In this particular instance it is notable that the sick rate among the Indian troops was very low at Gallipoli, while among similar troops in France it was very high due to the fact that the Indians were accustomed to the climate of Northern Europe. The matter of obtaining a varied ration is simple, if considered in proper time, as it always should be.

5. In my opinion, Sir Ian Hamilton habitually expected too much of inexperienced troops. No one who has studied this campaign will doubt their bravery or the final efficiency of the units that took part in it, but that, all operations from the landing, through Sari Bair, and the battles for Hills W and 60 suffered from his over-estimating of their powers of achievement, will probably be noted by the observer.

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THE OPERATION ON THE ITALIAN FRONT DURING THE YEAR 1915.

—By—

Capt. W. L. Mitchell, Infantry.

In order that we may the better understand the operations on the Italian Front during the year 1915, we must first look into the International political situation insofar as it concerns the principals of the operations on which this paper is written namely, Italy and the Austria-Hungarian Empire.

It will be recalled that the outbreak of the World War Italy was one of the very few countries not directly connected with the War. This is not exactly a true statement, it is true only to the extent that Italy was not fighting and had declared her neutrality, but to this extent she was very much concerned in the War; she was a member of the "Triple Alliance" an Alliance between Germany, Austria, and Italy. Italy had been a member of this alliance for 34 years. It was a defensive alliance that Italy had hoped to use to keep Russia from obtaining a foot-hold in the Balkan States. Italy wanted to have Germany as a great buffer between her and Russia.

Three months after the World War began, but seven months before Italy declared War on Austria-Hungary, Italy committed an act, which at any other time than that which was then existing in Europe, would have caused an International crisis; she landed a force of marines at Valona, or, Avolona as it is some times called. Valona is on the western side of Albania, across the Adriatic from Italy, and was under Austrian control. At the lower end of the Adriatic the Albanian and Italian shore are visible from the deck of a steamer in mid-channel. In capable hands Valona commands the Adriatic, in Austrian hands it was always a menace to Italy.

The "Triple Alliance", as before stated, a defensive alliance, which was formed on May 20, 1880 and had been renewed several times, the last renewal had been in 1912, it operated if one of the contracting parties was attacked by a fourth power. Italy did not deem that the outbreak of the World War was an attack on any of the other parties to the Alliance and she had been able to get inserted into the Alliance a clause to the effect that if England was one of the belligerents she was not bound to the Alliance, this for the reason that she knew she could not oppose the British fleet, which could attack about nine-tenths of her boundary which is coast line.

The Teutonic Powers tried in many ways to get Italy to come into the War on their side, Germany is said to have offered Italy the French provinces of Algeria, Tunis, Corsica, Savoy and Nice for her adherence to the "Triple Alliance." Austria was cede some parts of Trentino and some of the neighborhood of Trieste. These offers did not attract Italy for she knew that the Anglo-French Fleets were bound to control the Mediterranean and that Germany and Austria could give her no protection against them. Beyond this the natural sympathy of Italy was with France and England, not with Germany or Austria, in the Twentieth century as in the nineteenth the real enemy of Italy was Austria.

It will be remembred that Italy was always more or less at odds with Austria, especially since 1866 when she had lost two of her provinces to Austria: that of Trent and the country to the northeast of Venice around the head of the Adriatic to and including the City of Trieste.

These two provinces were the Alsace-Lorraine of Italy, who had resented their loss and always aspired to get them back.

What Italy demanded from Austria before the declaration of war was three valuable pieces of territory, which were; the Trentino, Trieste, and the Istrian Littoral with the Dalmatian Islands. Austria refused to give these, she was as before stated willing to give some of the Trentino and some of the neighborhood of Trieste. In possessing the Trentino Austria held the key to northern Italy. Italy also demanded Meran and Bozen; the upper valley of the Adige, where the population is German although geographically this region belongs to Italy it being south of the Alps, and strategically it would have fortified Italy and given her a "scientific Frontier."

To have ceded the Austrian Tyrol would have have been an unimportant sacrifice for Austria—a price

she could well afford to pay to secure Italy's neutrality, but to part with Trieste, Fiume and the Istrian Littoral would have been almost to sign her own death warrant, for it would have deprived her of a door to the sea, and so would have left the Empire land-locked. Austria-Hungary could not cede these places, Trieste was her biggest seaport, while Fiume was Hungary's only seaport.

Save about Trieste and the Trentino it cannot be said that Italy was seeking to redeem Italian lands and liberating Italian speaking populations who had become reluctant Austrian subjects, she was rather seeking to extend her frontiers in ways that would include races as hostile to her as Austrian Italians were to Austria. In this connection it can be said that Italy was looking to Albania for future colonial expansion.

So, being unable to make Austria-Hungary do what she wanted done, Italy, on May 23, 1915, declared war on the Austria-Hungary Empire.

A point worthy of note here is the fact that at this time Italy did not declare war on the Allies of Austria.

TOPOGRAPHY.

Italy having declared war on Austria let us now look into the theatre of operations that were to come.

The strategic situation of Italy is exceedingly disadvantageous due to the topography of the country.

Let us examine, in a general way, the Austro-Italian frontier; it has a length of about 480 miles and the map will show that it is divided into three natural parts: the re-entrant angle of Trentino; the great wall of the Dolomites consisting of the Carnic and Julian Alps; and the space on the east between the Alpine chain and the Adriatic Sea. The Trentino forms a salient the sides of which are mountain buttresses, it is drained toward the River Po by the Adige and Sarca Rivers. An enemy attempting its conquest must advance principally by the Adige valley and will soon find himself confronted by the strongly fortified city of Trent.

Any verbal description of the Alps seems almost useless unless they have been seen it is almost impossible to describe the complex system of rocks intensely folded and broken and deeply dissected by stream erosion. Among the rocky masses are great limestone formations in places totalling thousands of feet in thickness. The rock masses are raised from ten to fifteen thousand feet above sea level. In the higher parts streams cut remarkably deep canyons and left a country most difficult to traverse. The difficulties were increased a hundred-fold when the ice streams of the glacial period flowed down the valleys cutting them much deeper, steepening the valley walls, rocky precipices, leaving the side valleys hanging hundreds of feet above the floors of the main valley, sharpening the ridges to almost knife edge, carving the dome shaped peaks to needles and horns.

STRATEGIC DISADVANTAGES OF THE FRONTIER.

That portion of the International boundary lying in the Alps is located in a position, which from the standpoint of military strategy is highly unfavorable to Italy. The boundary lies close to the southern edge of the mountains near the Piedmont Plain. Austria has the advantage of possessing most of the rough country as a wall against Italian aggression, but may herself sweep down upon the Italian plains with a minimum of difficulty. The Plains portion of the boundary is easily crossed in either direction, but just east of the boundary line and parallel to its bendings is the Isonzo River. This natural line of defense is not the first obstacle to a further invasion of Austria, but also serves as a special protection for the important railway lines, just to the east, which connect the interior of Austria with her principal seaport—Trieste.

RAILROADS.

Both, Italy and Austria, had their respective sides of the boundary well connected up with railway systems, as the map will show. Both systems practically ran parallel to the boundary line. It will be seen that Italy had many connecting lines running to the boundary from her main lines, and these in turn well connected to the south with the interior of the country. The Austrian system parallels the boundary

all the way from Trieste on the south, the the Stelvio at the Swiss border on the north.

RIVERS.

On the Italian side we see many rivers all flowing south or south-east into the Adriatic, these rivers during the months of melting snow and ice in the Alps become great handicaps to military operations. On the Austrian side we have the Gail and the Drave flowing east and the Isonzo flowing south and emptying into the Adriatic near Monfalcone.

We saw in our look at the map that Austria had overwhelming natural advantages on her side of the frontier, she had the higher ground, and can be likened to the rim of a cup from which she could look down on the Italian plains, these natural defenses were broken only at two places: at the Stelvio Pass and at the Tonale Pass. In the Carnic Alps sector the advantages were with who ever was on the defense. In the third sector, that of from Pontebba to the sea, was favorable to an Italian attack, but, here also, the conditions were very difficult, large mountains blocked the way, while the middle and upper Isonzo flows through a wild mountainous country with very few good roads. South of Tolmino the mountains decrease in height but still have the effect of giant ridges and furrows, further south the Plain of Friuli narrows rapidly as it goes east, the approaches from the west are completely commanded from the Carso Plateau and the hills around Gorz (Gorizia). "Austria had been for years arming the Carso with guns and defensive works that it might well have deemed impregnable."

MILITARY STRENGTH (ITALY).

The Army of Italy was, under the laws of 1910, built upon a system of compulsory service, after the Prussian pattern. Service was universal and compulsory, and the liability for service began at the age of 20 lasted for 19 years. Recruits were divided into three classes: the first formed the first line (regulars) and the second class were also regulars but were on unlimited leave; while the third passed into the territorial militia. The second class received a few months training annually and was similar to the German Ersatz Reserves, they then passed into the Mobile militia and the territorial militia, i. e., the third class. The third class received thirty days annual training. Periods of service were: two years with the colors, six in the reserves, four years in the mobile militia, and the remaining seven years in the territorial militia.

The unit of organization was the Army Corps which consisted normally of two divisions, each division two brigades of Infantry, a regiment—5 batteries of field artillery. A war strength division was in addition to the two brigades of Infantry, 1 regiment of cavalry, 1 regiment of Bersaglieri, 1 section of carabinieri (Military Police) two or three heavy howitzers batteries, with the necessary ammunition columns, supply section, supply columns and field bakery. The peace establishment of Italy showed 12 Army Corps.

The war strength of an infantry company was 5 officers and 250 men, some battalions had 3 companies while some had 4, and a regiment may have had 3, 4 or 5 battalions those regiments that had 5 battalions were the Bersaglieri, and was caused by having a surplus of men due for service in a particular years levy. In war each infantry regiment had 103 pioneers.

The Italian rifle was the Mannlicher-Carcano magazine rifle model 1891 of .253 calibre, the magazine holds 6 rounds and is loaded with a clip and is sighted up to 1640 yards.

At the beginning of the war Italy had 39 batteries of mountain artillery of 210 mm howitzers and 149 mm guns.

The Italian uniform was a grey color. The Bersaglieri are well known for their cock-feathered hats, but are little known for their marching ability, they are all picked men of splendid physique, though not big. Their ordinary marching rate is 4 miles per hour with a 34 inch pace.

IMMEDIATE WAR STRENGTH.

The regular peace army of Italy had a strength of about 14,000 officers and 250,000 men, in addition to this number she had about 700,000 men (trained) in the reserves, with a reservoir of over 2,000,000 men

in the territorial militia, giving her in all a total military strength of over 3,000,000 men.

The Commander-in-Chief of the Italian Army was the King, Victor Emmanuel, the Chief of the General Staff and Generalissimo in the Field was General, Count Cadorna.

Italy entered the war with two assets which were: she had recently been fighting in Tripoli, where she had been at War in 1911 and 1912, and she had nearly ten months since the start of the World War in which to draw upon the experiences of the belligerents and remodel her Army in the light of these lessons. So at her declaration of War it will be seen that Italy had a good size Army, her greatest deficiency was the lack of heavy artillery. Her air service at this time was one of the best in Europe.

PLAN OF ACTION.

Italy having declared war for the sole purpose of getting Trieste and the Itsrian Littoral it naturally follows that her plan of action would be directed against these places, that is, a drive eastward and at the same time send an Army to the north into the Trentino and the Dolomites to grasp and hold the mountain passes thereby close the gateways to an attack on her flank, which could easily be done due to the great salient of the Trentino extending into Italian territory, and if the mountain passes to the north and the northeast were not at first secured the Austrians could easily get in the rear of the main Army which was to operate to the east, cut off Gorz, after having crossed the Isonzo, thereby cutting off Trieste from the interior of Austria. These forces were all to move simultaneously. The Armies that were to go to the north and to the northeast were to conduct a limited offensive or, rather it might be called a "defensive offensive." On May 24th, 1915, the Armies began their advance on the same day the Austrians more or less revealed their plan of action by blowing up two bridges in the Adige valley, this revealed to the Italians that the Austrians were going to assume the defensive.

General Cardorna who took command of the Armies in the Field on the declaration of war, had worked out his scheme; that Italy's object, as was before stated, to hold on the north and push towards the east, due to the incomplete mobilization, he had not sufficient strength to attack in both sectors. This did not imply a passive defensive on the north, the choice of the eastern sector for the main offensive demanded an active defense, this as was before stated, to reduce the threat against the Italian communications by the great wedge of the Trentino extending into Italian territory. To accomplish this it is easily seen that it was a prime necessity to overcome the passes before Austria could call any great number of her troops back from Galicia, and send them against her. Unless Italy could close the gateways, any progress she might make on the Isonzo would be useless, we can readily see the similarity of the Austro-Italian situation to that of the French-German situation in August 1914. Strategically much of the same kind of campaign was in prospect, Austrian troops in coming towards Italy by the Brenner Pass to the Adige Valley would be in the same relative position to the Italians as were the Germans who came through Belgium to the French who during the first weeks of the War sent masses of troops against the frontier at Metz—Strasbourg, and Belfort, which were in the same relative positions as Trieste-Gorz, and Fiume.

General Brusati with the 1st Army was to conduct the operations in the Trentino, General Nava with the IV Army had the Dolomite sector, while the II and III Armies under Generals Frugoni and Zuccari, respectively were to operate on the Isonzo Front.

The Austro-Hungarian command had been preparing for the final break between their country and Italy. In addition to the strong permanent works already existing on the main routs of approach "barrier lines" were constructed in the valleys and on open sectors on the front. Many of the Fortress guns had been removed and placed in well concealed positions. At the end of April 1915, the Austrian covering troops under command of General von Rohr numbered about 80,000 Infantry, 1,400 cavalry, and 54 batteries in addition to the fortress troops and guns. Two Divisions under General von Koennen-Horac were stationed in the Trentino, one division, under General von Langen watched the approaches in the Dolomites, two divisions, under Generals von Boog and Kuczera were upon the middle and lower Isonzo, respectively, or rather they were east of the river in the mountains on the Carso Plateau and about Gorz (Gorizia). When Italy denounced the alliance with Austria, on May 3 1915, Vienna was already convinced that war was cer-

tain. The attempts that she made to continue the discussion had only been to gain time and military preparations on the Frontier were hastened. It was the first intention of the Austrian command to wait for the Italians at Laibach (about 50 miles east of the boundary) and attack them as they came out of the mountains, but this plan was not approved by the German command. Falkenhayn declined to give the ten divisions that the Austrians required for this plan, Falkenhayn doubted whether General Cadorna would allow himself to be led into such a trap, he also feared the difficulty of regaining territory once abandoned, and he realized the great natural strength of the Carso and Isonzo lines. It was decided to conduct an obstinate defence. The command of the Austrian-Hungarian Forces on the Italian Front was given to the Archduke Eugene who had commanded the Balkan Armies. General Dankl had the Trentino forces, General von Rohr the Carinthia or Dolomite Forces, and General Boroevich von Bojna had the Isonzo-Carso Forces. When war was declared the Isonzo front was slightly held by three divisions under General Ludwig von Goiginger. These were re-enforced in the latter part of May by five divisions from the Serbian front.

The denunciation of the alliance with Austria nearly three weeks before War was declared gave Austria time in which to prepare for the initial moves of the Italian army. This made General Cadorna revise his immediate objectives but not his general plan of attack. The main body of the Italian Army was not ready for attack, it was not fully ready for attack when war was declared, they were however ready for an Austrian attack in their present positions.

On the eve of War the Italian dispositions were as follows: Brusati's 1st Army with 10 battalions of Alpine was to push forward in the Trentino and carry out the limited offensive already indicated. The 4th Army (General Nava) was to advance upon the Drave River and the Pusterthal and threaten the railroad northeast of Montecroce Pass.

General Nava had 5 divisions and 7 Alpine Battalions with a sixth division in reserve at Spilimbergo (about 20 miles northwest of Udine). This Army was assigned the bulk of the very limited supply of heavy artillery. A small force under General Lequio was placed in the Carnic Alps in the vicinity of Pontebba Pass. This force consisted of a division of Infantry and 16 battalions of Alpine troops, and depending upon the successes of the Armies on its left and right was to push forward and cut the railroads in the vicinity (north of Tolmino near Pontebba Pass). The 2nd and 3rd Armies were as was before stated, to attack with all speed upon the Isonzo front. They were to get under way as quickly as possible and break through the enemy's covering troops, further movements was to depend upon what they found and the news from other fronts.

While initial speed was the prime element of General Cadorna's plan he was handicapped by the fact that mobilization was not complete, another two weeks was required to complete it. This of course worked to the advantage of the Austrian defenders who lost no time in perfecting their defenses.

General Frugoni's 2nd Army was to consist of 3 Army Corps (8 divisions) and General Zuccari's 3rd Army was to consist of 3 Army Corps (6 divisions). On May 24th, only 3 Army Corps and 2 cavalry division were ready for attack, whereas 6 Army Corps were supposed to have been ready for the initial attack. Meantime there had been a difference of opinion between General Cadorna and General Zuccari as a result of which General Zuccari had been relieved, and command of the 3rd Army given to the Duke of Aosta on the night of the declaration of war.

In addition to the division already mentioned there was to have been a general reserve of 10 Infantry Divisions and 1 Cavalry Division. These were being mobilized when war was declared. 5 Infantry divisions were to be in reserve in rear of the Trentino sector, the other 5 and the cavalry division was to be in reserve between the Tagliamento and the eastern frontier. These troops were not ready until almost three weeks after the declaration of War.

THE WAR OPENS.

The first shot of the war were fired by Austrian guns upon the Carnic sector, a few hours before midnight on May 23rd and early in the morning of the 24th the Italian advance began with what men they had then ready. The opening moves of the campaign—all important as they were in relation to future op

erations which depended upon them failed to obtain the results looked for; The 1st Army was prompt to carry out the limited objectives assigned to it. The 4th Army was very slow, its heavy guns were not ready when hostilities began, and General Nava waited upon their arrival, preoccupied by the strong positions that faced him and the permanent fortifications that lay beyond. It would appear that he was influenced by the positions themselves, and assumed the existence of an opposition which in fact was not there. Initiative was lacking.

General Lequio's force (in the Carnic Alps) was quick to move and found the enemy equally quick. This sector was all important to the Austrians for both offensive and defensive actions, it was essential to prevent a break through to Tarvis and Villich (which are about forty miles north of Tolmino.) If they could hold the frontier line it preserved for them the choice of attacking down the valleys that converge on the Theliamento, which had long figured in the plans of the General Staff.

The forces met in the passes and in the mountains that flanked them, and though the Italians had the best of the fighting which followed and took several important positions from the enemy, it was soon evident that the way was blocked here against all but an overwhelming attack.

Meanwhile the 2nd and 3rd Armies were on the move, General Frugoni with 2 Corps (5 divisions) and 14 battalions of Alpine attacked along the line of the Isonzo, from Saga to opposite Gorz. The Duke of Aosta with a single Corps and 2 cavalry divisions was to force a passage of the lower Isonzo and push towards the Carsa plateau, his other divisions following as rapidly as their preparations for movement were completed. The 2nd and 3rd Armies were in theory organized for quick movement. Their artillery except for 12 batteries of 149 mm guns consisted entirely of field guns, the proportion of guns to men and shells was very low, speed and initiative were essential to the success of the opening moves and at various points these were lacking.

The Austrians had withdrawn beyond the line of the Isonzo except at the two bridge-heads; opposite Gorz and Tolmino which were held in force, and south of Gorz the line of defense chosen was the Carso Plateau, only a few covering troops being disposed along the lower part of the river.

For the 2nd Italian Army the first obstacle was the river and the two bridge-heads, and the main initial attack was to come from this Army—but the 1st Cavalry Division which was attached to the 2nd Army—was to dash for the bridges and secure the crossing for the Infantry. The cavalry was slow and bridges were destroyed just as they reached them. This failure might not have mattered had it not been for a sudden flood which filled the wide bed of the river and covered all the fields, and the pontoon trains were far in the rear. It was not until June 4th, when the river was falling, that it was possible to get troops across its force. The 2nd Army had come in contact with the enemy along its whole front. The ridges in this vicinity were taken without much resistance, but the Austrians had so fortified the bridge-heads of Gorz and Tolmino, that Gorz has been called the Verdun of the Austrian front. The defense of the hills in this vicinity was very easy, almost ideal, as at all points were easily flanked by direct fire from the next hill. This was unexpected opposition and the right wing and center of the 2nd Army was soon brought to a standstill. Attacks by small detachments were repulsed and a pause followed. Every day lessened the chance of breaking through the enemy line, strong only at certain points.

Meanwhile the 3rd Army had advanced against the Carso, but their advance had only carried them to Mon Falcone which was reached on June 6th. By blowing out the Sagrado-Monfalcone canal and closing the dam across the river the Austrians had used the flood waters of the river to flood a great stretch of low-lying country below the Carso. By June 11th the dam near Sagrado was destroyed by the Italians and the flooded area ceased to be fed by the waters of the river.

The country in front of the 2nd Army was extremely difficult with a few roads and most of them led to places that the Austrians were holding in force. On the left wing of the Army the 4th Corps under General di Robilant crossed the river north of Tolmino and pushed up into the mountains east of the river hoping to turn the Tolmino position. Appalling weather conditions made movement in the mountains impossible during the critical weeks, and when the chance of surprise had gone the barrier of the Julian Alps was more

than a match for the forces that the Italians could bring against them, guns shells and machine guns were lacking.

The Austrians were getting troops to the Italian front and by the middle of June Borievich von Bojna had 8 divisions to put against the 2nd and 3rd Armies, Rohr's Carinthian Army had been re-enforced by 2 divisions and a mountain brigade from the Russian front. Dankl's Trentino Army which was not organized into divisions, but in groups assigned to various defensive sectors, had been increased to 96 battalions.

The Austrians were greatly inferior in numbers, they had on the front about 20 divisions against Cadorna's 35, but they held positions that were naturally ideal for defense, and these were well fortified.

The 2nd Army had succeeded in getting men across the river and by June 27th, after heavy fighting, had pushed the Austrians up the south slope of Mont San Michele and established a bridge-head at Plava (south of Tolmino) which was necessary for a general attack upon the whole front from Tolmino to the sea. At the end of June and in the 1st part of July these attacks were more or less local in nature and had not reached the methodical organized offensive on the scale that was now clearly necessary.

General Cadorna had counted on surprising the enemy, when he heard of the denunciation of the Triple Alliance he pressed for a declaration of War at once, which would have allowed him to move and reach the positions he had selected for his first objectives. Practically the same force was ready then as was ready when Italy finally did declare War. He would have gained 15 of 20 days and would have been ahead of the bad weather on the Isonzo and in the mountains. Hesitation on the part of some of his junior Generals added materially to the failure of his first moves.

The Italian attacks had heretofore been conducted at "long range", that is the point of departure for the Infantry was at a considerable distance from the enemy trenches. In many cases the attacking Infantry was stopped long before it reached the enemy wire; too often when the wire was reached it was found intact for the destructive power of the Italian artillery was insufficient to clear the way for the Infantry. Gradually it became evident that the hopes for a War of movement had to be given up and the slow processes of trench warfare might bring success.

On July 18th the Italian 3rd Army attacked in a most determined manner and after 3 weeks of hard fighting the attack came to an end, with the Austrians who had attempted to drive the Italians back across the river, firmly established on the slope of the hills. Similar attacks by the 2nd Army made little impression on the Austrian lines.

In the Trentino the Italian operations were not even threatening enough to compel Austria to divert any great number of troops from Galicia to this sector. The Italian troops were taken into the Alpine passes where the nature of the country make military operations impossible. In these mountains the fine Italian Army remained for months without accomplishing anything.

After two months of preparation a fresh attempt was made to break through on the Julian front. By this attack General Cadorna hoped to turn Gorz (Gorizia) from the north and south and as a secondary operation, after crossing the middle Isonzo to threaten Tolmino from the south while the bridge-head and town were attacked from the west and north. The Italians had a great numerical superiority in men, the 2nd Army now had 15 divisions, the 3rd Army 7, while a reserve of 5 divisions lay in the Plains in the rear. When the attack started the Austrians had about half this number, but within three weeks they had the equivalent of 15 divisions on the front. The terrain on the Austrian right was such that it could be held by greatly inferior forces especially in view of the Italian weakness in artillery.

General Cadorna had put upon the Julian front every piece of artillery he could collect, he reduced the guns in other fronts to the barest minimum, he dismantled some of the forts and was able to form 30 batteries of middle calibre guns of old pattern. Altogether he was able to give the 2nd and 3rd Armies some 300 guns of medium and heavy caliber some of these were obsolete. The supply of shells was very limited—25 to 30 shells per gun per day. A million shells had been collected by the date fixed for the attack, which was October 21st.

The attack went badly from the start for several reasons: The means were insufficient for the width of the front attacked. The artillery was not adapted for modern requirements, and the staffs as a whole

—Army—Corps and Divisional did not fully realize the necessity for minute preparation and strict attention to details, and a tendency that was quite noticeable, especially in the 2nd Army, was that to use a small detachment for a given thing, if it failed to send another, and if the second failed still another.

The attempt to cross the river near Tolmino never promised success, the preparations were insufficient, the crossings were badly chosen. Although some successes were obtained north and west of Tolmino the attack in this direction was not pushed owing to the failures further south after various attempts both these actions were broken off and the battle was concentrated on Gorz and the Carso Plateau further south.

The 3rd Army in the south was having similar successes they were taking a trench here and there but were never able to break through the Austrian lines. The attacks were renewed again and again, the troops displayed remarkable courage, they were met by resistance no less determined, the losses on both sides were very heavy. Early in December the fight died down. The Italians were worn out and replacements were not available. During the 6 weeks fighting the Italians had lost about 140,000 men, and had little to show in the way of a tangible prize. The greatest loss was that of trained officers and under-officers who could not be replaced.

General Cadorna could not claim a victory but he had reduced the Austrian forces to the last extremity. The Austrians were just about beaten, but the Italians had not the "punch to knock them out."

In the 7 months fighting the Italians had lost, in the field close upon 280,000 men; 66,000 killed, 190,000 wounded and 22,000 prisoners, this was in addition to the losses from sickness which were very heavy due to an out-break of Cholera which prisoners from the eastern theater of War had brought with them.

SUMMARY.

These difficult and unprofitable operations absorbed nearly all the strength of the military forces of Italy and this sums up the military history of Italy in 1915. Not only did Italy fail to get any military results of importance, her entry, that of a fresh powerful nation into War, was not of any great help to the Russians against the great Austro-German offensive which had developed in May 1915.

CRITICISM.

On the Austrian side we have little to criticise, they had their plans of action formed and this plan, that of taking up the defense until pressure in Galicia was relieved, was the only one they could carry out at this time. With greatly inferior numbers they were able to hold the Italian Army in all sectors, and make the Italian spend themselves against their well chosen positions.

On the side of Italy we have much to criticise: 1st. criticism can be directed at the scope of her National preparedness: she failed to have the experiences of the other belligerents as a complete object lesson, as it should have been to her. She should have seen, before her entrance into the War that her artillery was almost totally insufficient for modern requirements, and should have early organized her industries for a more rapid and complete production of heavy artillery and shells.

2nd. criticism can be directed at Italy's Foreign Office in that it denounced the Triple Alliance nearly three weeks before War was declared, in so doing she told her enemy, who lived right next door, that she was going to declare War, and gave the enemy three weeks in which to get ready, in other words she lost her possible element of surprise, which due to the proximity of the enemy was very essential.

3rd. criticism is one of tactics: When first brought to a stop on the Isonzo it appears that there was no co-ordination of action between the 2nd and 3rd Army; first the 3rd Army would attack on the Carso Plateau, then the 2nd Army would attack Gorz, and when it failed would attack in the vicinity of Tolmino. By these actions of Italian Army was "sounding" as it were for a weak place in the walls instead of selecting one point at which penetration of the Austrian line would have been the most disadvantageous for the Austrians when the penetration had been accomplished—then bringing all possible strength to this point and carry it through.

4th. criticism, the 2nd Army violated one of the prime axioms of War that is: All troops that are necessary to execute a definite task must be assigned to it from the beginning. This violation was notice-

able by the 2nd Army sending small detachments, 2 or 3 of them, to accomplish a given task where if the first detachment had been strong enough it would have most likely accomplished the task at its first attempt.

5th. To sum up all criticisms then can be stated as: Italy, due to her own neglect of being prepared, attempted to overrun natural defenses, well equipped with artillery by sheer force of numbers alone; she put men against material, which cannot be successfully done, and lots of unnecessary losses are had thereby.

LESSONS TO BE LEARNED.

The lessons to be learned are very general but are no less important because of so being:

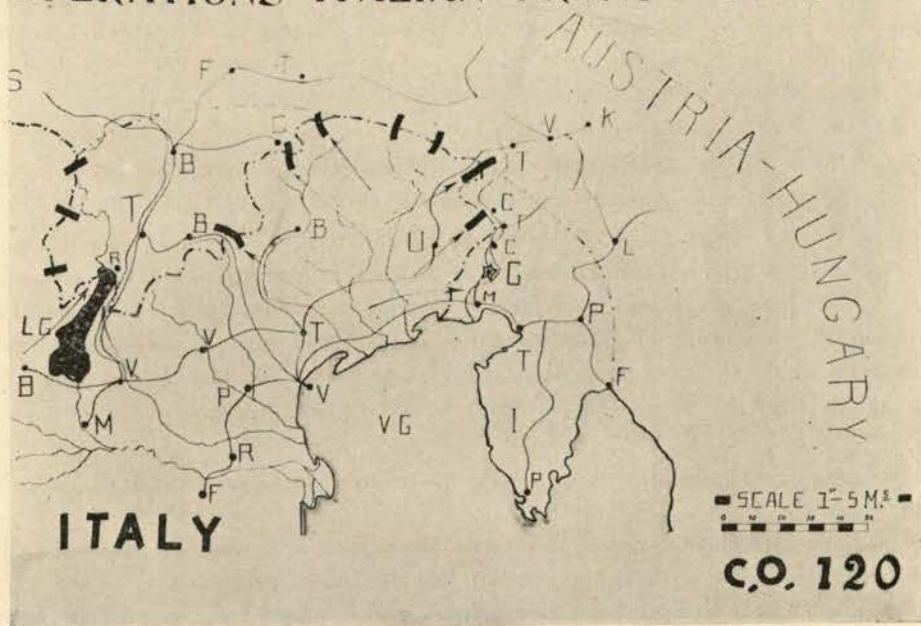
First, is that of having the closest possible co-operations between the Department of State and the Department of War so, that the first indications of a break with another nation the armed forces can be so disposed, and the industries so organized that immediately upon the declaration of war everything for the successful termination of the war is in running order.

Second lesson is one that is very close to us: That is the necessity of having implements of War ready when War comes—not afterwards. It seems to be an unfortunate characteristic of a democratic country that certain special necessities of war cannot be gotten in times of peace, due usually to insufficient appropriations—such countries have to wait until war is on them and then appropriations flood out to make up for what should have been years before.

Third lesson is one that we all realize: That is the necessity of having trained staffs—Divisional—Corps—Army Staffs, who have had experience in peace of clothing, supplying and maneuvering the troops of their unit.

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OPERATIONS ITALIAN FRONT 1915



ITALY

AUSTRIA-HUNGARY

SCALE 1:50,000

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OPERATIONS ON THE ITALIAN FRONT DURING THE YEAR 1915

—By—

Lt. Col. Frank B. Hawkins, Infantry

LINES OF ATTACK OPEN TO EACH BELLIGERENT.

The frontier of about five hundred miles between Austria and Italy, naturally divided itself into three sectors for military operations, the first being the salient Trentino, the second the barrier formed by the Dolomite and Carnic Alps and the third, the Isonzo country backed up on the north by the Julian Alps and on the east by the Bainsizza and Carso plateaus. The Trentino embraces the salient as far as Rolle Pass in the east; the Dolomite and Carnic sector extending from Rolle Pass on the west to Pontebba on the east, while the Isonzo sectors lies between Pontebba on the north and the Adriatic sea on the south.

On the west, the Trentino is protected by the immense mass of the Alps which is broken only by the Stelvio and Tonale passes. Its only important avenues of entry from the south are through the Giudicaria valley, the valley formed by the Sarca river which feeds lake Garda and by the Lagarina valley formed by the Adige river. In the east, the salient is defended by the Venetian Alps, but may be entered by Rolle Pass and by the Saguma valley which is formed by the Brenta river. All of these valleys are restricted in width, converge upon the fortified towns of Trent and Rovereto, hence are easily defended from the north and entered with difficulty from the south.

On the other hand it was an easy matter for Austria to descend upon Italy, having the mountain walls at her back and the Italian plains so near her front.

In the middle sector which includes the Dolomite and Carnic Alps, the advantages lay entirely with the defender. While the Italians had more depth of mountains at their back, the Austrians had excellent lateral communications in the Pustertal and Gailtal valleys.

The eastern sector was the least unfavorable from the standpoint of an Italian attack, but nevertheless was formidable. The Friulian plains are narrowed in front of Gorizia by the Julian Alps on the north and Adriatic on the south, to about fifteen miles which gave little opportunity for operations on a large scale. Mention has been made for the strong defensive character of the terrain east of the river, with the Julian Alps on the north, and the Bainsizza, Turnovane and Carso plateaus on the east in the order named from north to south.

Those plateaus range from one thousand to several thousand feet high and rise abruptly near the east bank of the river.

In its upper reaches, the Isonzo takes its course through a canyon like trough, while in the south it spreads out to considerable width with the lower land in the plains protected by dykes. West of the Isonzo, a width of several miles of marsh land extends along the Adriatic, which renders military operations difficult.

The Isonzo studded with its fortified peaks, is one of the strongest river lines in Europe.

OPERATIONS IN 1916.

Operations on this front in 1916 are divided into three distinct phases, as follows: first, the Austrian offensive in Trentino; second, the Italian counter attack in that sector and third, the Italian offensive on the Isonzo. Early in 1916, the Austrian forces on the Italian front numbered about 1,000,000 men of whom 600,000 combatants were in the line.

AUSTRIAN OFFENSIVE IN THE TRENTINO.

When operations had quieted down on the Russian front in the latter part of 1915, the Austrian-Hungarian general staff proposed to General Von Falkenhayn of the German High Command, that the Austrian army break through the Trentino for the purpose of cutting General Cadorna's communications and attacking his flank. Von Falkenhayn disapproved of the plan on the ground that it would not be decisive and that he could not replace the Austrian troops taken from the Russian front for this purpose.

Notwithstanding this disapproval, the Austrians went ahead with their preparations. During the

winter of 1915 and spring of 1916, they secretly collected 400,000 men and 2,000 guns in the Trentino. For this purpose they had stripped their eastern front to a dangerous degree. They choose fourteen picked divisions as a striking force. Their natural objective was the plains of Venetia, through which two railroads ran from west to east along the Po river, these railroads being General Cadorna's lines of communication for his armies on the Isonzo front. The Austrians chose for the attack, the sector between the Lagarina and Saguna valleys.

In May 1916, the Italian front line was a series of advanced posts which extended from a peak, Zugno Horta on the left just south of Rovereto, eastward up the Tarragnola valley, to Mount Pasubio. It then bent northeastward inside the Austrian frontier, facing the enemy lines on Folgaria Plateau. From the peak Soglio d'Aspio it ran northeast to Cima Manderilios from which point it ran across the Brenta valley to Monte Callo, northwest of Borgo. It then passed northeast to the Calamento valley. The weakness of these advanced posts being recognized, the Italians had chosen a second line as the true line of defense, as follows: from Zugna ridge to Mount Pasubio, along the hills north of the Posina valley to the upper Astico, across the higher part of the Setti Comuni plateau and reaching the Saguna valley at the Maso river.

The flanks of this line was strong but the center was weak.

Three wagon roads ran through this sector to the Venetian plains. The towns of Schio, Arsiero and Aisheo were connected with Vicenza by rail, hence their importance. In order to make a successful breakthrough to the Venetian plains, it was necessary to reduce Mount Pasubio, capture the ridge south of the Posina river and to control the southern plateau of Setti Comuni.

The Austrian attack commenced on May 14th and continued more or less without let-up, until June 15th. The flanks held, but the center was driven from position to position. On the 20th, Cadorna who had assumed personal command, withdrew his center south of the Posina valley and to the east of the Assa river. The left at Coni Zugna and Mount Pasubio were pressed to the limit. It was essential that the two latter points held. The Italian right was withdrawn to a prepared position east of the Maso river. At this time, the Italian 5th Army was hurried up to Vicenza as the outcome looked doubtful. In the meantime the fighting was very severe on the left at Mount Pasubio and Buole Pass, at which latter place 7,000 Austrians were killed. By the 20th, the Italians had evacuated Arsiero and Asiago and the Austrians had advanced to within four miles of the Saguna valley and eighteen miles from Vicenza. The battle ground lay in two sections—the left along the ridge running from Mount Pasubio to the south of the Posina river and the right across the Setti Comuni table land.

In the western sector, the Austrians attempted to reach the plains by way of Sohio, while in the eastern sector they attempted to turn the Italian right at the Saguna valley. The ridge south of the Posina was the scene of violent fighting on June 12th and 13th. The brigade which was mainly responsible for holding this ridge lost 70 per cent of its personnel. The battle continued until the 15th on which date the Austrians were definitely checked. On the 3rd of June however, General Cadorna was convinced that his position was safe. When the attack was stopped on June 15th the Italians had been forced to the line running from Coni Zugna in west to Mount Pasubio, along the ridge south of the Posina river, to a point south-east of Arsiero, thence along the rim of the Asiago plateau to the Saguna valley and northward along the high plateau of the Setti Comuni to the Brenta river at its confluence with the Maso.

THE COUNTER OFFENSIVE.

A counter offensive was begun by General Cadorna on July 16th but was not pushed with vigor in view of the fact that he merely wanted to secure favorable defensive positions in the Trentino and then bend his efforts towards another offensive on the Isonzo.

Some stiff fighting occurred between the 20th and 27th of June but more or less minor in nature, in which the Austrians were driven back or permitted to retire to a very strong position as follows: on the flanks, they held Zugna Torta on the west, and Borgo on the east, while their position in the center included the strong points of Mounts Maggio, Torano, Camomolon and Spitz Tonzza.

Withdrawal of all Austrian troops that were not considered absolutely necessary in the Trentino was greatly accelerated, by a thunderbolt from the clear sky, in form of news that Brussilov had begun his offensive in the east on June 3rd. The Austrians had miscalculated the time of this offensive and were taken by surprise.

The Trentino offensive proved to be very costly to Austria. She had gained practically no ground, had not accomplished her mission, but on the other hand had lost 100,000 men and almost collapsed on her eastern front as result of Brussilov's offensive.

During the winter of 1915 and spring of 1916, fighting in the Alps was characterized by remarkable feats of personal bravery and engineering particularly on the part of the Italian Alpine and Tyrolese of Austria.

On one occasion, two thousand Alpini on snow shoes, ascended one of the Adamello peaks which is 10,000 feet high, dragged a battery of 6 inch guns to the glacier line where they surprised the defenders and secured a very important position on the Austrian flank in the Giudicaria valley.

At Mount Cristallo which is 5,000 feet high and dominates an important basin, the Italians by use of drills, iron pegs and rings, made a ladder for ascent of the almost vertical slope. Unknown to the Austrians, they collected a force in the clefts suddenly rushed and captured the garrison.

In the Alps of Trentino and the Julian Alps, continuous lines were impossible. Only the peaks dominating strategic points were occupied by groups. The only trenches used were those blasted in rock or cut in the ice. Heavy artillery was emplaced on peaks thousands of feet high, by being dragged up vertical precipices by man power using wire cables. Both Austrians and Italians were adepts at collecting immense masses of rocks overlooking routes of approach and releasing them with telling effects at the proper time. Avalanches were the foe of both sides. On Mount Nero in the Julian Alps, the Italians were surprised on a spring day by seeing a battalion of 600 Austrians in their front in strange attitude. Investigation disclosed that they had been buried by an avalanche and were now uncovered by the spring thaw.

Ammunitions, food and other supplies were hoisted to these mountain troops by means of the teleferic railway, which consisted of strong steel cables crossing canyons and connecting peaks.

OFFENSIVE IN THE ISONZO FRONT.

Troops which had been loaned to the Trentino to meet the Austrian offensive in that sector in May, were rapidly transferred back to the Isonzo front in the latter part of June and early in July.

According to my best information at hand, the Italians now had somewhat less than thirty divisions on this front, to about seventeen divisions on the Austrian side. The Austrians were taken by surprise, since it was thought that such a crushing blow had been delivered in the Trentino that an Italian offensive on the Isonzo for several months was out of the question.

The lines occupied were close to each other and in general, that held by the Italians was from north of Tolmino, to west of Mount Sabastino and Podgora, thence just west of Gorizia and in the south at the base of Carso.

General Cadorna's force consisted of the 2nd Army commanded by General Frugoni, which held the northern sector. The 3rd Army commanded by the Duke of Aosta held the southern sector. The Austrian forces was commanded by General Borevich.

General Cadorna's objective was Trieste, but Gorizia was the key to the situation. As noted heretofore, this city lies in a pocket in the plain, guarded in its immediate front by a nose of the Podgora plateau upon which are located Mount Sabatino, Oslavia and Podgora. East of the river the ground rises abruptly and forms the Bainsizza and Turnovane plateaus about 2,000 feet high, upon which the fortified Mounts Kuk, Santo, St. Gabriele and St. Daniele constitute sentinels for the city.

Gorizia is guarded even more strongly on the south by the Carsa plateau, upon which are located Ft. St. Michele, St. Hermada, the Iron Gates and Dornberg.

The Carso is a dry, wind swept, cavernous plateau of lime-stone formation, every acre of which is a fortress. The western part is bisected by the dry Vallone valley which in itself is added strength for the

defender.

In order to capture Gorizia, it was necessary to reduce either Mt. Sabatino with its supporting forts on the north, or Ft. St. Michele on the south.

Cadorna's plan was to make a feint against Monfalcone in the south and when Austrian reserves were concentrated at that point, to attack Mt. Sabatino and St. Michele.

He began his bombardment on the 1st of August, along the entire Austrian front. The feint against Monfalcone was executed on the 4th and was successful in drawing re-inforcements to that point. On August 6th, the bombardment was doubled and the right wing of the 2nd Army attacked Mt. Sabatino, Oslavia and Podgora, while the 3rd Army attacked Mt. St. Michele and the Carso.

The Italians had tunneled up the mountain to within a short distance of Sabatino, which was quickly taken by surprise; likewise Oslavia and Podgora fell which advanced the Italian line to the river. The fighting in this sector was very severe. In the meantime, the 3rd Army launched its attack against St. Michele and the Carso. The fighting in this sector was also very severe. On the 8th of August Ft. St. Michele fell, which opened the way to Gorizia. On the 9th, the main army crossed the river and occupied the city.

Since the beginning of the offensive, the Austrians had sustained about 92,000 casualties while those of the Italians were much larger.

With the fall of Gorizia, the offensive now entered upon its second phase, which had Trieste as its objective.

In order to clear the path for Trieste it was necessary to capture the entire Carso plateau. The attack was resumed on the 10th of August and by the 12th the entire western butt of the Carso west of the Vallone was clear of Austrians. The attack continued until August 15th with some further gain, but on that date General Cadorna found it necessary to reorganize before operations could be resumed.

Mounts Kuk, St. Gabriele and St. Daniele were still commanding obstructions north of Gorizia, while Dornberg, the Iron Gates and in particular, Mt. Hermada were the Austrian buttresses in the south.

General Cadorna planned to attack to the north and south simultaneously, but lack of artillery and ammunitions prevented. He chose to attack towards the south.

On the 14th of September, 10th of October and 30th of October separate attacks were made on the Carso with result that the Italians captured many prisoners, advanced their lines eastward to Fajti Hrib but took no vital positions. Mt. Hermada in the south was the stumbling block. Bad weather conditions now stopped operations on both sides.

The Austrians lost 100,000 men killed and 40,000 taken prisoner during the operations on the Isonzo from August to November. The Italian losses were much greater.

The end of 1916 found the belligerents facing each other on the approximate lines as follows:

The Italian line extended from north of Tolmino along the high ground west of the Isonzo, included Plava, Mt. Sabatino and Gorizia, from which city it extended to Fajti Hrib, thence southwest to Porto Rosoga on the Gulf of Trieste.

The Austrians occupied the line from Tolmino on the north—western rim of Bainsizza plateau—Mts. Kuk, Santo and Marco—Iron Gates—St. Hermada.

The year had seen much hard fighting and losses were heavy. Italy's casualties were 120,000 dead, 285,000 wounded and 78,000 taken prisoner, total 483,000.

Austria had sustained a loss of 240,000 casualties.

COMMENTS.

Italy's motives for entering the war have been frequently criticised. However, her advent into the war held about thirty-five divisions of the Central Powers' troops at her border, and on one occasion, 1,000,000 men.

Many of Italy's offensives, for example her first one against the Isonzo, were characterized by slow-

ness and lack of aggressiveness.

She lacked preparation. As late as 1916, she was in dire need of proper artillery, munitions and air service to enable her to take advantage of openings offered.

Coordination of action with her allies was lacking.

Austria also lacked unity of action with her German Ally, as exemplified by her failure to profit by the advice of the German High Command to refrain from making her Trentino offensive in 1916, which almost resulted in her total collapse.

Austria failed utterly to estimate the situation in forecasting the action of the Russian armies on the occasion of her Trentino offensive.

She crowded 400,000 men most of whom were needed elsewhere, into the narrow Trentino salient, when she could not use more than half of that number. As result, her losses were excessive.

But for pressure on part of the German High Command, she would have abandoned the defensive and met the Italians in the open country in direction of Laibach. Austria's position relative to Italy in the war, was one example of where avoidance of the offensive was the correct step.

LESSONS.

1. The time honored rule that unity of command between Allies is essential. is again verified by failures on the part of both Austria and Italy.

2. Italy's example in the war brings home the lesson that peace time preparation cannot be neglected if quick and adequate results are to be expected.

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OPERATIONS ON THE ITALIAN FRONT DURING 1917.

—By—

Lieut. Mark G. Brislawn, Infantry
CADORNA'S 1917 OFFENSIVES.

At the Allied Conferences in Rome in January, Italy asked for re-enforcements of troops and artillery from the Western Front. General Cadorna pointed out that with a minimum of eight British and French divisions and a force of heavy artillery he could launch a decisive campaign against Austria, find the weak spot in her defenses, drive through and cripple her armies to such an extent as to make her unable to recover. With Austria out of the war it would then take but a short while of concentrated efforts on the part of the Allies to subdue Germany. Representatives of France and Great Britain were sceptical as to the efficacy of the proposed plan; they were still inclined to view the Italian Front as something distinctly apart from the Western Front; they regarded, and rightly so, Germany as the opponent who must be closely watched and therefore deemed it inadvisable to spare troops to send to Italy at this time. It was believed that Cadorna could hold his own during the coming year as he had during the past. The defection of Russia was not foreseen at this time. The request for artillery however was not denied and in April, eleven batteries of British six inch howitzers and thirty-five French heavy guns arrived in Italy. These additions were indeed welcome but did not nearly suffice to make up the shortage of the Italian Army in artillery. General Nivelle visited the Italian Front in the early spring and concluded arrangements with Cadorna to launch their contemplated offensives on the same date in their respective fronts.

While Italy was negotiating with her allies for re-enforcements, Austria was making the same request of Germany with the same results. German divisions could not be spared from the Western Front to aid in a contemplated Austrian offensive in the Tyrol.

A period of comparative quiet on the Austro-Italian Front obtained during the first four months of 1917. During this time Cadorna laid plans for his spring offensive. High level roads were constructed from Sabatino to Caporetto and heavy guns emplaced in rear of the crest of the Jeza-Zagradan range north of Gorizia. He planned to make vigorous assaults on the whole Isonzo line from Tolmino to the Adriatic and by successive reductions of such strong points as the Kuk-Vodice range, Mt. San Gabriele, Mt. Santo and lastly Mt. Hermada, to clear the way to Trieste and by taking possession of that city deal a heavy blow at Austria's military operations. Trieste was not only a base of supplies but through it ran lines of communication to Pola, the great Austrian Naval base on the Adriatic. Its reduction would mean the severance of Austria's communication with her navy.

ITALIAN SPRING OFFENSIVE.

From May 12 to 14 heavy artillery action reduced the Austrian first and second line trenches between Globna and Salcano. The Infantry attacked on the latter date and stormed and took the heights east of the river having advanced over two bridges, one at Piave and one at Zagora. By noon of the 15th the heights of Kuk-Vodice range had been secured and the Italian first lines lay along the western slopes of Mt. Santo. Fighting continued until the 22nd, the Austrian counter in this sector gaining him nothing. The second phase of this offensive was launched on the 23rd of May by the Duke of Aosta's Third Army. Its immediate objective was the reduction of the strong point Mt. Hermada on the extreme left of the Austrian line. The Infantry, going forward at about 4:00 p. m. after ten hours of artillery preparation, was able to take the enemy first and second lines from Konstanjevica to the Adriatic. The enemy had been caught napping for he believed the main attack to have been delivered farther north. This action of the Third Army continued until May 30, over a most difficult terrain in most places so rocky that it was impossible to entrench and the Austrian counter-attacks had to be met in the open. As a result some of the ground taken was lost to the fierce Austrian counter which lasted from June 1 to 6 and extended from the southern crest of Vodice to Flondar.

This spring offensive of Cadorna's had netted him a considerable gain of ground. It had brought him up facing the last real barrier before Trieste, Hermada in the south and the western edge of Bainsizza

Plateau in the north, but the price had been a costly one, 132,000 killed or wounded and 25,000 taken prisoner out of the thirty-one divisions engaged. Of the seventeen Austrian divisions, 25,000 had been made prisoner and 95,000 killed or wounded. The Italian first lines had been advanced from one and a half to two and a half miles on a twenty mile front, but the Austrian counter had retaken a depth of one mile on a three mile front north and west of Mt. Hermada. During the latter stages of the action at least four fresh divisions from the Russian Front were recognized to have taken their places with the Austrian Isonzo Armies. This was a disquieting factor to Cadorna who now began to foresee the downfall of Russia with the sequent transfer of hugh bodies of troops from Austria's eastern to her western theater of operations.

Coincident with the offensive on the eastern line, a smaller offensive had been staged in the Trentino north of the Asiago Plateau where twelve Italian divisions had attacked on a front of nine miles supported by 1500 guns and trench mortars. This attack failed of its general objective being successful only in the neighborhood of Mount Ortigara which was captured only to find it too costly to hold and was later given up. In these attacks more than 25,000 were killed or wounded and some 2,000 prisoners lost to the enemy.

In July at an informal meeting of military representatives of the Allied Powers, Cadorna again asked that French and British troops be sent to the Italian Front. Troops however were not available for Haig had his Flanders offensive started and Petain contemplated attacks at Verdun and Chemin des Dames. A further loan of additional British and French artillery was secured at this time.

POLITICAL CONDITIONS AFFECTING THE ITALIAN ARMY.

The situation in Italy in the summer of 1917, both in the army and out of it, was not at all reassuring to the Commander-in-Chief of her forces. The Prime Minister Boselli was a weak old man of eighty years. His ministry showed little strength in dealing with industrial difficulties which grew into riots in Milan and Turin. There was pacifist talk at home and peace propoganda was being spread amongst the troops. On August 1, Pope Benedict XV issued his ill-timed "Peace Note" which in its strict impartiality placed both groups of contending powers on the same level and held out a certain hope that Germany and Austria were ready to consider terms of peace and "Certain territorial questions" in a "Conciliatory spirit." There was also a phrase in the Note about "Useless laughter" which soon spread to the troops. Altogether it may be summed up by saying that, however well meant the Pope's efforts they were most unfortunate for they gave the backboneless element the idea that in refusing to support the war they had the backing of the Holy See. In order to restore Italy's flagging interest in the war Cadorna felt that he must strike soon and drive home a great victory. He decided he upon mid-August as the date for a general offensive on the Isonzo. For this offensive he determined upon the following plan: to engage the entire Austrian front from Tolmino to the Adriatic by a heavy artillery action, throw in the infantry to discover the weak points of the enemy line and lastly follow up with the reserves at the discovered weak points to exploit and consolidate his successes. He hoped in this way to gain such a foothold in the less well protected parts of the Austrian lines as would enable him to take in flank such strong positions as Lom Plateau, Mt. San Gabriele and the Hermada which had so far proved invulnerable to frontal attacks.

CADORNA'S MID-SUMMER OFFENSIVE.

The attack began in earnest on the 18th of August and was directed at first against the Austrian positions on the bank of the Isonzo between Globna and Lom. Here the Second army threw over fourteen bridges during the night of Aug. 18-19 and the following day advanced well up onto the Bainsizza plateau northeast of Monte Kuk, but was unable to take Austrian positions on the Lom Plateau. General Badoglio with the 27th Corps was detailed to reduce Austrian lines on the Lom but failed, but other troops east of Vodice drove the Austrians back into the Concha di Gargaro. These gains allowed the Second Army to extend itself in a wide salient on the Bainsizza Plateau with the Austrians forced back at points into the Val Chiapovano. Difficulties of poor transportation facilities, stifling heat and lack of water made this fighting on top of Bainsizza particularly strenuous for the advancing Second Army. Stiff rear-guard action by the opposing forces was not the least of their hindrances.

Meanwhile the Third Army had attacked on the Carso and had retaken the ground lost to the Austrian counter-attack in June on the slopes of Hermada and had broken through the Austrian main posi-

tions between Konstanjevica and the Brestovica valley. Here a halt was forced as the heavy guns of their artillery supports were needed farther north to aid an attack on Mt. San Gabriele which now, because of the retreat of Austrian lines on either side of it stood out as a promontory in the opposing line and checked the Italian advance. Thus ended the first phase of this offensive with the Italians in possession of considerable new ground and holding such positions that they could observe the enemy's lines in rear of Gabriele and Mt. San Daniele.

The second phase of the offensive was concerned almost entirely with an attempt on the part of the Second Army to reduce Gabriele. Standing as it does some several hundred feet above the surrounding terrain, being near eight hundred yards wide and some two thousand long, its summit steep and sharp, it had literally been turned into a rockwall fortress honeycombed with trenches and tunnels and sheltering hundreds of machine gun emplacements. Its reduction would necessitate a general withdrawal of the Austrian lines in this sector. Cadorna was determined to have it and sent into the attack three columns on September 4. The Italians gained the summit but were unable to dislodge the enemy and there for ten days waged a terrific battle for the possession of a few thousand square yards of the mountain top. Thirty one fresh Austrian battalions were thrown into the fight and with this re-enforcement to face, the Italians were unable to actually drive the opposing forces back eastward of the ridge. By the 15th of the month it had become evident that a stalemate was reached with either army holding half the summit.

GENERAL RESULTS OF CADORNA'S SPRING AND SUMMER OFFENSIVES.

He had gained ground but not decisions. He had pushed his troops to the limit. His sacrifices in men had been enormous, reaching a grand total of more than 300,000 casualties. His positions on the Bainsizza Plateau did not lend themselves readily to further offensive actions, the center being too far in advance of the flanks. He had been forced to abandon a contemplated offensive against Hermada because of his failure to take Gabriele. Austrian positions at Lom and Tolmino were a menace but he had been unable to reduce them. He was still too weak in artillery to contemplate further offensives. New recruitments had been received to fill the gaps in the Second Army and there was some doubt of their mettle. Malaria and intestinal disease had rendered many thousand ineffective. In view of these considerations he abandoned ideas of offensive action and on the 18th day of September ordered the commanders of the Second and Third Armies to "Concentrate all their activities in preparation for defense." Notifications of this decision was sent to British and French Commanders-in-Chief who immediately ordered withdrawal of their respective artillery units for use elsewhere. It did not appear at first that this action was prompted by what the British and French mistakenly thought to be Cadorna's unwillingness to proceed with the prearranged plan of coincident offensives. When it shortly became clear that a drawn out Italian offensive was impossible, or at least impracticable, because of unfavorable conditions, five of the sixteen British batteries were allowed to remain. This misunderstanding but served to emphasize the need of a permanent inter-allied war council which however was not established until after disaster had overtaken the Italian armies in the field.

Aside from the tactical and strategical difficulties in which Cadorna found himself involved because of his widely extended front on the Isonzo, there were other factors contributing to the weakness of the army and the state over which he had no control. The troops having been pushed to the utmost limit in the arduous endeavors of the summer campaigns were restive and discontent with the knowledge that their best efforts and alarming casualties had gained them no decisive victories. War-weariness was everywhere present and disgruntled soldiers became a fertile field for anti-war propaganda. The nation behind them appalled at the vast losses was at the mercy of treacherous Socialistic and Pacific propaganda and unable to aid in recuperation of the forces at the front. It was a similar, but perhaps more exaggerated condition of affairs which had brought about the collapse of the Russian Monarchy. From that catastrophe Italy might have taken warning but she did not and while she dallied with dangerous philosophies, the Austrian armies strengthened by divisions drawn from Germany and the now almost idle Russian Front, hurled themselves at Caporetto.

CAPORETTO TO THE PIAVE.

Germany in the fall of 1917 feared the collapse of Austria-Hungary as an ally. Military reverses at the hands of the Italians coupled with a widely diverging racial population which had few if any common sympathies, created many factors of instability in the Austrian state. It was believed by the German General Staff that a successful offensive against Italy would bolster up the weakening morale of the Dual Monarchy and unite its various races against their common enemy. While Jugo-Slav troops fought with doubtful enthusiasm against their Slav brothers the Russians, they showed better spirit against Italy whose former political interests in the Balkan States they well remembered. The Austrian forces seemed unable to stand longer against the attacks on the Isonzo and aid was asked of Germany. The command of the Austrian armies were turned over to the German Great General Staff in the early autumn. In considering the advisability of various points for an attack, it was decided that sufficient German divisions could not be spared to effect a break-through in the Tyrol and the obviously weak Plezzo-Tolmino sector was chosen as the point of departure.

On the upper Isonzo, the Italian front turned from its general south-north course and from the summit of Monte Nero about due north of Tolmino it ran in a northwesterly direction past Plezzo to gain the main ridge of the Carnic Alps. The German plan was to break this line near Caporetto, cross the Isonzo, strike through the Caporetto Passes, gain the headwaters of the Natisone and Judrio rivers, push down to the Friulian Plains, defeating the Italian Second Army enroute and be able, having reached the plains, to take the Third Italian Army in the flank and rear. The difficulties offered to this plan by the nature of the terrain were by no means inconsiderable but the German command set about its preparations most methodically. Mountain artillery and pack transport were brought up in quantities and alpine troops skilled in mountain warfare were chosen to participate in the attack. Seven German and nine Austrian divisions were organized into the new Austrian Fourteenth Army and placed under command of von Below. Von Ludendorff assumed charge of the operations and exercised a general supervision over the training of this army in the new tactics then being developed by Hutier against the Russians. This new kind of offensive consisted mainly of an enormous concentration of troops concealed from enemy observation at some decided point on a hostile front, these troops to be well supplied with machine guns, mortars and light howitzers carried well to their front. After a very brief bombardment consisting mainly of gas and high explosives followed by a smoke screen, intended to confuse the defenders, this concentration of troops was to be thrown rapidly forward, thus regaining in a measure surprise effect which had been almost entirely lost by the customary long fire preparation. It was the aim of these new tactics to destroy by a series of stupendous actions, first the armies of Italy and then in turn those of France and Great Britain. The Italian Headquarters must have been fully informed of the coming offensive and reasonably sure of its location, but they seem to have been dilatory about adopting plans to meet it.

In addition to their new tactics the Germans brought with them to assist the Austrians yet one further powerful aid, namely, propoganda. Quietly but extensively a huge campaign of Anarchism and Socialism was fostered throughout Italy by German agents and German money. Newspapers forged in the Italian language, but printed in Germany, were scattered throughout the Peninsula and even found their way to the troops at the front. In these there were articles stating that Austria was in revolt, that bread-riots in Italy had necessitated the calling in of British troops who were murdering the women and children. Thousands of postal cards were sent to soldiers telling them that their wives were in illicit relation with officers of the Allies. Austrian and German soldiers posing as lovers of peace and friends of Italy gained access to the Italian lines about Caporetto. Their glib and voluble lies which predicted a common fight against capitalism and militarism seem to have found a ready acceptance amongst the more ignorant and more disgruntled soldiers of Italy. The illiteracy of the Italian Army undoubtedly contributed to its ready acceptance of Teuton lies. As late as 1910, 31 per cent of army conscript recruits could neither read nor write.

DISPOSITION OF OPPOSING FORCES BEFORE CAPORETTO.

The real weakness of the Italian line lay in the possession by the enemy of the Tolmino bridgehead

and the high hills of the Lom Plateau which made flanking fire for the Austrians possible and made the bridgehead and excellent point from which to launch an attack. Flank attacks was also possible from the neighborhood of Plezzo. Other factors contributing to the instability of the Italian line were; a conspicuous failure to organize in depth in rear of the Monte Nero salient; the presence in that salient of certain battalions of troops recently organized from amongst the striking munitions factory workers in Turin and sent to the front as a disciplinary measure; and the extremely thin lines of the Second Army which in places did not exceed two battalions per kilometer of front. On Monte Rombon the Second Army linked up with Tassoni's Corps of the Fourth Army. Immediately south of Rombon, through Plezza and to a point some two miles north of Tolmina was Cavaciocchi's command, the 4th Corps, while on his right lay Badoglio with the 27th Corps holding the lines opposite Tolmino, but with three of his divisions on left bank of Isonzo south of the Lom Plateau. Supporting the 4th and 27th was the newly constituted 7th Corps under General Bungiovanni. On Badoglio's right were two corps, the 24th and 2nd, under Caviglia and Albricci respectively with the 14th Corps in immediate reserve, reaching as far to the south as Sella di Sol near north end of Gabriele. Further south the Third Army held forts to the Adriatic.

The reserves of the Second Army, consisting of the 28th Corps and other units were north of Cormons while three divisions directly under Cadorna were east of Cividale at the foot of the valleys that run down southwestward from the summit of the Jeza Zagrada ridge. A general reserve of the 25th Corps, four divisions, and the 30th Corps, two divisions, was near Palmanova waiting to be sent north or east as the action demanded. Cadorna's orders of September 18 to prepare for defense had not pleased Capello, commander of the Second Army. He had wished to continue the attack. His preparations for defense seem to have been somewhat neglected. In his defense however, it must be admitted, that he had been suffering from ill health for several weeks and actually left for Padua under orders from his physician on the 20th of October only to be hastily recalled two days later when two deserting Roumanian officers from the Austrian forces in the region of Tolmino came within the Italian lines and confirmed the rumors of an imminent Austrian attack.

Facing the various corps of the Second Army as outlined above was the Austro-German Fourteenth Army under Otto von Below, which linked on its right with Krobotin's Tenth Army and on its left with Boroevitch's Army Group which held the line to the Adriatic. This Fourteenth Army held the Austrian front from a point opposite Plezza on the north, to the high hills of the Lom Plateau on the south. It was divided into four groups as follows: Krauss with four divisions on the north, next Stein with three divisions, then Berer with two divisions on his left the Austrian von Scotti with three divisions. At a point some few miles east of Tolmino four divisions were in reserve directly under Below. Numerical superiority and advantage of position were with the Austro-German forces in this sector.

THE ATTACK AT CAPORETTO.

Artillery bombardment began at 2:00 A. M. on the 24th October. It was terrific intensity, was greatly aided by weather conditions of rain, snow and wind and consisted mainly of gas and high explosive. Toward four o'clock an effective smoke screen was put down on the Italian first line and under this cover, the artillery preparation having died down, the infantry of the four Austro-German groups advanced to the attack. The relatively short fire of preparation had gained for the attackers some element of surprise and the smoke and gas served to render the defenders somewhat demoralized. It was now that the strength of every man in the line was needed to repel the onslaught of greatly superior numbers until such time as supports and reserves might be rushed up to their assistance, but war-weariness, propagandism, trench-dependency and fraternization with the enemy had sapped the fighting stamina of certain units on Monte Nero and back they fell or more shameless yet ran out with "White Flags" to greet the "Teuton Comrades" only to be ruthlessly shot down by supposed friends. Thus was "Treason grimly punished."

The number of regiments effected by propaganda was small, perhaps not more than three or four on Monte Neor, but their defection was such as to allow the complete success of Stein's attack which by evening of the first day of the battle had driven that part of the Italian line holding Monte Nero as far to the rear as the Stol ridge east of the Isonzo, thus making a great reentrant angle in the general Italian line

in this sector with its flanks, late in the day, still clinging to Saga and the river crossing south of Santa Lusia. To aid Krauss whose progress was being held up by unaffected Italian troops at Saga and to flank those troops in front of Stein, General Lequis, commanding the 12th Silesian Division was sent in, in the late forenoon to proceed in two columns, one on either side the river, northwestward from Tolmino to Caporetto. Both his columns were completely successful. They found but the weakest of resistences and that only in isolated instances although they passed directly over the ground where Bungiavanni should have had his 7th Corps supported for the 4th and 27th Corps. It seems that the bulk of Bungiavanni's troops were high up on the west bank of the Isonzo quite unconcious of the course of the battle. General Lequis' columns took a part of the fleeing 4th Corps in reverse and added further confusion to their hasty retreat. It appears that Cavaciocchi's requests to Bungiavanni for aid were never received or else disregarded, for the 7th Corps failed in its mission as a support. The attack from Saga having turned down the Isonzo and that from Tolmino up the river valley both were successful and by evening of the 24th the Italians were at all points pushed west of the Isonzo.

Badoglio with his 27th Corps fared little better than Cavaciocchi with his 4th. He also failed to secure the necessary support from Bungiavanni and found himself driven back by the fierce attacks of Berrer's and Scotti's groups. The lack of co-operation between these three corps commanders cost the Italian army heavily that day. Lateral as well as front to rear communication seems to have been neglected although it is possible that the presence of Austrians, German and Bulgars in the Italian ranks and in Italian uniforms may have accounted for the seeming impossibility of wire communication after the first few hours of the action. Another factor contributing to the failure of the 4th and 27th Corps was the lack of Italian artillery fire of counter-preparation. Cadorna had given explicit order that such fire should be coincident with the Austrian bombardment, but apparently due to a misconstruction of this order in the headquarters of the two corps mentioned it was withheld for several hours and in some cases not delivered at all. This seeming lack of support disheartened the infantry. It appears also that three of Badoglio's seven divisions were placed contrary to Cadorna's intentions, if not actually contrary to his orders, south and east of Isonzo at a point southwest of the Lom Plateau, whereas at least two of these three divisions should have been north and west of the Isonzo at a point about opposite Santa Lucia in order to thicken the line opposing the Tolmino bridgehead. The 19th Division constituting Badoglio's left broke quickly under the impetus of Berrer's attack.

By nightfall of the 24th it was evident to the commander of the Second Army that the only hope left lay in an attempt to block the advance of the Austro-German troops in the narrow approaches to the Friulian Plains by way of the Natisone and tributary stream valleys, for already the enemy was pushing close to the top of the ridge west of Caporetto. The 53rd and other divisions of the Second Army reserves were sent in to aid this task. It had also become obvious that positions on the Bainsizza would no longer be tenable and orders were issued on the night of the 24th-25th directing Caviglia with his 24th Corps to prepare for immediate retreat across the Isonzo. Cadorna, fearing a flanking movement by the right of the attacking forces, ordered the Carnia Force to occupy Mt. Maggiore and at the same time he directed that plans and orders be drawn in readiness for issue should it become necessary to retreat to the Tagliamento river. On the 25th Cadorna's headquarters commenced to move westward from Udine. Dawn of the same day saw Austrian troops storming over Mt. Matajur, no less than eight miles back of the original Italian front. Globocac had likewise fallen. Orders were issued the Third Army to prepare for a general withdrawal. Action on the 25th presented itself as a hopeless task to the still-willing-to-fight Italian forces who were attempting to stem the tide of Teuton advance down the Caporetto Passes. Propaganda infected troops, peasants fleeing before the advance, and non-combatant units, were streaming down the passes to the plain, while the troops designated to advance to help support those yet fighting for the passes at the summit were attempting to force their way upward to the points where they were needed. With the consequent blocking of roads in the narrow valleys no progress could be made and by evening it had become evident that the defense of the Caporetta Passes would not stay the progress of the enemy. Capello therefore advised a general retreat while some troops remained capable of a fairly stiff rear guard action. Cadorna was of the opinion that the Carnia forces from Mount Maggiore could check the attack, but it appears that the Car-

nia force never actually occupied that position, it being held until morning of the 26th by some units of the Second Army when it fell before superior numbers.

THE ITALIANS IN RETREAT.

The 27th October saw the entire Italian line in retreat to the Tagliamento. The remaining days of October were critical ones. Destruction of the Second and Third Armies seemed inevitable if their pursuers were able to overtake them east of the Tagliamento river. Fortunately some units of the Second Army were still putting up a stubborn rear guard offensive. Then too it is evident that Ludendorff in planning his attack had not suspected the ease with which his forces would break through at Caporetto and there had been a failure to provide sufficient transport for a rapid pursuit. He had also failed to provide sufficient troops to exploit his success. November 1st saw the Austrians everywhere on the east bank of the Tagliamento. They claimed 200,000 prisoners and 1800 guns captured which was probably not an over-estimate as one entire division of the Third Army and forty-six of its heavy batteries had to be abandoned in addition to the tremendous losses suffered by the Second Army.

The Tagliamento afforded the hard-pressed Italians nothing but a breathing spell. It is not believed that Cadorna contemplated more than a temporary halt for reorganization for further retreat on its western banks. On the 3rd November crossings affected at Pinzano and west of Tarcento by Below's Bosnians forced Cadorna to put into execution his already drawn orders for a retreat to the Piave. Again it fell to the lot of the weakened Second Army to beat off flank attacks of the Austrian Fourteenth Army. After its demoralization at Caporetto it is to its everlasting credit that it was able to recuperate sufficiently to make of the retreat anything but a rout. Not only was Below's Army threatening to break through the left of the Second Italian Army and cut off the retreat of the Third but it was also endangering the retreat of the Fourth Army from the Carnic Alps. Orders to this army had directed its withdrawal to the middle Piave, but Di Robilant, not wishing to abandon his material, had been somewhat slow in affecting his retirement with the result that part of his force under Tassoni was cut off by the Fourteenth and Tenth Austrian Armies. Otherwise its retreat was skillfully conducted and brought with it practically all supplies and ordnance. In connection with the successful retreat of the Third Army, it is interesting to note one of those isolated instances of the proper use of Cavalry during the World War. The Novara Lancers and the Genoa Dragoons threw themselves repeatedly into the face of Boroevitch's advance, sacrificing themselves to a man, but valiantly helping to oppose sufficient obstacle to the pursuit to enable the Third Army to complete its retreat to the west bank of the Piave by the 10th of November. Another factor aiding the safe retreat of the Third Army was the lack of organization of pursuit methods in Boroevitch's armies. A general retreat of the Italian line had not been foreseen. As a consequence the Austrian left wing was not prepared to dash across the Isonzo and far into Italy in pursuit of a fleeing enemy.

The retreat, though on the whole a wonderful accomplishment, was attended by several circumstances which came near proving it a failure. The Tagliamento was swollen with the flood of recent rains and in addition was very insufficiently bridged. There were but two main highways leading westward and onto these crowded not only the retreating armies but also thousands of villagers, peasants and city folks from the threatened area. The resulting congestion produced hopeless confusion at times and retarded the march considerably. There were present also thousands of demoralized soldiers who, throwing away their arms, abandoned themselves to ignoble flight.

THE ITALIAN STAND AT THE PIAVE.

The world was skeptical of the ability of Cadorna's armies to stand on their new line, but he had reasoned well as events proved. With the right of the Third Army resting on the Adriatic twenty miles east of Venice, the new front continued north along the Piave to the heights of Montello where it turned west to the Venetian Alps and included such points as Monte Lessini, Monte Pressolan, thence across the River Brenta to the Asiago Plateau where it continued to the heights of Cimzone, Maggio and Pasubio and linked up with that part of the old line which had not been forced back during the great retreat. Pe-

cori Giraldi's First Army held the left of this new line on the Asiago Plateau and was faced by the Austrian Eleventh Army under Scheuchenteul. Di Robilant with the Fourth Army extending from the Brenta to the Montello faced the Austrian Tenth Army and a part of the Fourteenth under Below. From Montello to the sea the Third Army faced a part of Below's army and all of Boreovitch's Army Group. The Second Italian Army with the exception of the 8th Corps which was attached to the left of the Third Army, was being reorganized and recuperated in the back areas.

The obvious weakness of this line of November 12 lay in the fact that once its northern defenses were breached the whole line of the Piave must fall. However these northern defenses had been partially prepared more than a year before when retreat to the Piave seemed imminent at the time of the great Austrian drive in the Trentino in June 1916. They were now rushed to completion. In the Monte Grappa group which seemed most likely of attack elaborate preparation took place, roads were built, gun positions prepared and teleferica lines constructed to otherwise inaccessible points. On the Montello, natural positions lent themselves to gun emplacements with concealment and camouflage of sinkholes and green scrub. Several hundred feet above the surrounding terrain, the Montello dominated the ground surface for several thousand yards across the Piave. Southward the river itself formed a barrier of considerable difficulty to the attack. Its slow course across the level plain had given it numerous channels, open expanses of sand-bar flats, some marshes, and had made necessary the diking of its banks in many places.

FIRST BATTLE OF THE PIAVE.

From November 12 until the close of the year continuous attempts were made by the Austrian forces to batter through the Piave Line. Boreovitch's forces secured a bridge crossing at Zenson bend eighteen miles from the sea on the 12th and on the next day made four unsuccessful attempts to cross at Quero, Fener, St. Dona and Intestadura while several Hungarian battalions crossed the canalized stream at Grisolera and forced their way to the Vecchia-Piave. On the 16th Boreovitch again attacked and this time won a bridgehead at Fogare and on the 18th took Quero. He now held two bridgeheads on the lower Piave but did not hold sufficient ground east of the river to develop advantage of his bridgeheads. Thus failed the Austrian attempts to force a crossing of the Piave and in early 1918, the Third Army dislodged him from his precarious foothold on the western bank. Murderous machine gun and rifle fire delivered from behind the western dikes of the Piave and securing the full advantage of grazing effect because of the level expanse of water and terrain in front served in great part to keep the Austrian divisions east of the river. Thousands of lives were thrown away in a futile attempt to gain the western bank. The defense was somewhat embarrassed by the intense cultivation of the areas across the river which, because of the presence of various kinds of growing or harvested crops, permitted the infiltration of skirmishers and the consequent building up of strong assault lines which would then rush the river defenses. On these advances by groups however, infantry machine gun and rifle fire played with telling effect.

Attempts to break the Piave Line were not confined to the river areas alone. In the mountains to the north attacks continued until Christmas day. To understand the situation there it will be necessary to be familiar with the nature of the terrain (between the Piave river and the Asiago Plateau) on which the Italian line was sited. Here the wall of the Alps rises a sheer five thousand feet from the plains of Bassano cut only by the trench of the river Brenta. Running back toward the higher levels on top of the five thousand foot rise is a narrow floor or tier some several thousand meters in width. Then the sheer face of the Alps rises again a thousand feet or more and terminates in the second floor or tier forming the Asiago Plateau upon which we find the Italian lines well entrenched on November 12. If the enemy could force his way to the first or lower tier he could command the plains and would be able to turn the Piave. On November 13 Monte Longaro fell and fighting took place at Monte Sisemol. On November 14 that part of the Italian line between the Brenta and the Piave stood with its left on the second tier at Cismon but on the right had been forced back to the first tier because of the loss of Mt. Tomatico. On the next day however Cismon fell and on the 16th the Austrians carried Monte Prassolan which enabled them by the 18th to force the defenders back to the last tier and the very edge of the plain at Monte Tomba. Hard fighting in the region of Mt. Grappa continued until November 30 with the Italians slowly giving ground. On the 4th December a furious attack was launched west of the Brenta on the Asiago Plateau which drove the

First Army in that region off the second tier of hills back to the first. 15,000 prisoners were taken by the Austrians as many units of Alpini valiantly holding out were eventually surrounded and captured in position. In this action the Austrians made an effective use of gas as they had at Caporetto and as result took thousands of prisoners who had been rendered helpless because of the poor quality of the Italian gas-mask. It was shortly thereafter replaced by the British type of mask. On December 12th Krobotin's Tenth Army with a great massing of artillery, struck at the Italian line from the Brenta to the Piave. In a furious battle lasting three days the Austrians were able to take the summit of Caprile Pass and attacking again on the 18th advanced their lines well up the slopes of Monte Tomba and Monte Asolone from which positions they flanked Mt. Grappa. The situation for the Italians was now serious in the extreme. They had been pushed to the last tier of the Alps. The enemy from Monte Asolone looked down upon the plains in rear of the Italian line along the river. On the 22nd of December Di Robilant ordered a counter-attack and on that date a part of the positions on Monte Asolone were recovered. This recovery marked the beginning of similar successes for the Italians and before December 30 with the aid of several British battalions they had retaken part of Monte Tomba. Local successes continued well into the new year and by February 1 it became apparent that the defense was once again well established approximately on the line of November 12. It should be noted that on December 4 British and French forces took over the Montello Sector and extended their left toward Monte Tomba. There were three divisions of each. These had been in Italy now nearly a month but this was their first actual appearance on the fighting front. In their positions assigned them both contingents were unmolested or at least were not subjected to an attack in force and until Christmas day saw very little if any action. After December 25 they assisted in action in the Mt. Grappa region and later the British right was extended to aid the Third Italian Army. The presence of British and French troops in Italy had had a stimulating effect on the Italian morale but they were by no means responsible for the check to the Austro-German drive at the Piave. Italian troops alone and unaided had accomplished the great retreat and to them also must go the credit for standing unbeaten on their chosen line of defense.

RESULTS OF CAPORETTO AND EFFECT UPON THE NATIONS.

Italy's losses at Caporetto and during the retreat totalled nearly eight hundred thousand, 10,000 dead, 30,000 wounded, 250,000 prisoners, 350,000 missing or in desertion and 150,000 sick. In war material no comprehensive estimate of the losses sustained is possible. Austrian troops overran 2,000 square miles of fertile Italian soil and garnered millions of pounds of foodstuffs. Of wheat alone more than 30,000 tons were taken.

Despite her enormous losses, Italy did receive compensation in the form of a non-material but none-the-less precious reward. With the invader upon Italian soil, the spirit of Italy revived. Party differences were forgotten, socialistic propoganda was discarded, trafficking with the enemy ceased and defeatism turned to patriotism. King Victor Emmanuel III and Gabriele D' Annunzio became the leaders in a great patriotic movement which had as its object the reuniting of all Italy. Their efforts were astonishingly successful.

The retreat from Caporetto had barely started when the Boselli Ministry fell. Signor Orlando was called upon to form a new cabinet and his government succeeded in making war the business, not the plaything of the nation.

To the Allies Caporetto drove home the lesson they had been so long in learning, namely that unity of command was essential. A fruitful conference was held at Rapallo, near Genoa, beginning November 6 and there were laid the foundation of future unity amongst the Allies. The Conference was attended by the Primiers of England, France and Italy and by distinguished military representatives of all three. It was followed almost immediately by the Allied Military Council which sat at Versailles. It determined the aid which France and Great Britain were to give Italy. It appointed General Cadorna to a seat in the Council at Versailles and relieved him of command of the Italian Armies. General Diaz succeeded to the command of Italy's land forces on November 9.

Caporetto narrowly missed being decisive and so failed of the hope once held for it by the Teutonic Allies. It did not put Italy out of the war. Hindenburg reports himself as somewhat disappointed in the results. It did give Austria a temporarily renewed interest in the war, but with the complexity of her racial groups there were some to whom the victory was not acceptable. The close of the year 1917 saw much internal conflict in the Dual Monarchy. The Czechs were in the ascendancy. They had little or no enthusiasm for continued efforts against Italy. The government was weak and without control of the economic and industrial resources of the country. Vienna was starving while Budapest had plenty. The harvest was a partial failure. If the victory seemed to Austria somewhat hollow after all, it had at least proved to the German High Command the worth of its new tactics and it had reduced Italy to the point where she became a drain upon the resources of the Allies.

ANALYSIS AND CRITICISMS.

Italy's war aims were justifiable but not her methods. In all battles there is a point beyond which the expenditure of men and material is not justified by the results to be gained. Cadorna's two offensives on the Isonzo in 1917 were actions in which the losses in men and morale far outweighed any advantage which accrued from the positions taken. He was urged upon his course by several considerations other than the tactical situation. The Allies who fought upon the Western Front urged him to push forward with big offensives. Italy in his rear looked with longing eyes at Trieste and had sentimental ideas concerning the redemption of eastern Italian Irredenta by the sword. True, there were some possibilities of success and the reduction of Trieste and the consequent breaking of Austrian lines of communication seemed like a big prize to hold in view, but granting that these things had been accomplished, a vital blow would not yet have been struck at the Central Powers. Even Austria need not have suffered so much by the loss of Trieste as might have Italy in the taking of it. Far better for Italy would it have been and certainly to the advantage of the Allies, had she renounced the offensive on the Isonzo with the taking of Gorizia and, having there strongly consolidated her positions for defense, sent her surplus troops out of Italy to aid on some more promising front. Italy's chief contribution to the allied cause lay in the fact that she kept thirty-six Austrian divisions away from other theaters of operation. This she could have accomplished at the expense of far less effort and loss of life. Lack of unity amongst the Allies permitted this misdirected effort in major tactics.

We have seen Italy somewhat mislead in her grand strategy, let us analyze the particular situation which led to Caporetto. There were three main causes of that debacle. They were, the improper lines of defense upon which the Italian Second Army stood; the demoralization of certain units by propaganda; the new German tactics. The first of these three was the greatest. Its ramifications are varied and need amplification. There were differences between Cadorna and Capello with respect to the advisability of taking up the defensive with the result that the bulk of the Second Army was still aligned for attack when the blow fell. The Monte Nero salient should have been abandoned and the line withdrawn to the Globocac-Mt. Matajur ridge-Starasella Pass line. Failing such a sweeping withdrawal as that it would have been possible to select a stronger line west of the Isonzo even than the old one. The line determined upon should have been organized in depth and subordinate commanders instructed in the technique of, and necessity for, an elastic defense. When the attack was expected the front lines should have been thinly held with supports and reserves so disposed as to be readily available. They could then have been quickly thrown into the action to meet the huge concentration of the enemy which was in itself a new and rather unexpected disposition in the attack. This concentration however must have been known, or at least it certainly should have been known, to the Italian High Command. If we assume that Cadorna was not aware of the impending attack and therefore failed in his preparations to meet it, we thereby accuse him of gross and utter negligence. If, on the other hand, we assume, as it is most certainly for more probable and seems to be substantiated by the evidence in the case, that he was well informed of the coming offensive, but thought that he had taken the necessary precautions to meet it, his actions may have been pardonable. The first assumption would imply a woefully incompetent intelligence service; the second, a mistaken judgement; the latter is the more easily forgiven.

The action at Caporetto having commenced, other mistakes occurred. The roads on both banks of

the Isonzo between Tolmino and Caporetto should have been held by the reserves of the 4th Corps whereas these seem to have been committed to the action from the start. The 7th Corps did not render assistance to the 4th and 27th, yet it had been detailed as their support. There seems to have been utter lack of communication and co-operation between the commanders of the three corps mentioned. This was inexcusable in view of the fact that they held the most exposed front of the entire Isonzo sector. Communication within the various units must also have been sadly neglected for the artillery of the 4th and 27th corps failed to support the infantry.

With respect to the second cause of the disaster, it is believed that there has been at times too much emphasis placed upon propaganda as the cause of Caporetto. It was contributory no doubt. However it had affected at most but a few regiments and was not sufficient of itself to defeat the eight corps of the Second Army. It is doubtful if any equal number of men, with a high order of morale unaffected by enemy propaganda, could have successfully stood in the same ground with the same defenses against the Austro-German attack. However there exists no excuse for the placing in an exposed position on Monte Nero of troops organized from discontented munitions factory workers of Turin. There exists no excuse for the supineness with which the Italian State viewed the wide distribution of inflammatory literature nor for the same laxity on the part of officers which allowed its dissemination among the troops. Cadorna seems to have been aware of its dangerous possibilities but there is no evidence to show that he had co-operative action from his subordinate officers.

The first two factors which helped produce Caporetto were in great part avoidable had proper action been taken. It was the business of Cadorna and Capello to have remedied the first mistake, that of an improperly sited defense line. It was largely the business of the Italian State with the help of Cadorna and subordinate officers to have suppressed propaganda. Regimental and immediate troop commanders who did not foresee the possible evil of fraternization with the enemy and take immediate and drastic steps to suppress it, cannot be too largely criticized. Over the third factor, namely, the new German tactics, neither the Italian State nor Cadorna had any direct control, but had they remedied the first two, they could have largely defeated the third.

Though we find fault with Cadorna and his armies at Caporetto, we must commend them for their subsequent action. The retreat was an astonishing accomplishment. Italy scored the greatest of victories over self and enemy when she turned and stood at the Piave. The decision to retreat no further appeared questionable at the time, but the spirit of the rejuvenated Italian Armies and people proved it correct.

A consideration of the Austro-German strategy as directed against the Italians in 1917 leads to the belief that a mistake was made in not staging a "Caporetto" in the Trentino rather than on the Isonzo. A successful drive in the former region would have meant the destruction of Italy's fighting power by the isolation of her Isonzo armies and a paralyzation of her industrial life by the occupation of her manufacturing centers. Lines of communications were open leading from Germany and from Austria for the concentration of troops and supplies. The exposed front was not so weak as that on the Isonzo, but with a few more divisions to launch the attack and with more carefully laid plans in the event of a break-through, Italy must have been part put out of the war. The nearness of troops relieved from the collapsed Russian front, the relatively greater ease with which they could be brought to the Caporetto sector and the patent weakness of the Italian line from Tolmino to Plezzo were undoubtedly the factors which determined the siting of the offensive in that quarter. The location of the attack having been determined upon, the action was carried out with bold skill and pressed with vigor. The coincidental use of pernicious propaganda however causes us to lose some of our respect for the comprehensive conceptions of strategy and tactics involved. A failure to foresee the ease with which the break-through was accomplished permitted a certain lack of organization in pursuit methods. As a result the victory was not decisive. Having reached the Piave, further progress became a question either of crossing the river in force or breaking through from the mountains on the north. Here Austria made a mistake in not definitely concentrating her forces for an attack with every atom of strength from the Brenta to the Piave and on the Asiago Plateau. Attempts to cross the river on the plain were exceedingly costly and even had they succeeded would have resulted only

in a general retirement of the Italian line to another river defense. On the other hand, the driving in of the Italian left would have enabled the taking of the river line in flank as it attempted to retreat. A comparatively weak line could have held the east bank of the river for the Italians were at the moment in no mood to recross. Part of Boroevitch's forces then might well have been transferred to aid the Tenth and Eleventh Armies in their attempt to pierce the Italian left. So close were the Austro-German forces to the southern edge of the mountains that the help of but a few more divisions would have enabled them to reach the plains and wreck the hopes of another Italian retreat.

LESSONS:

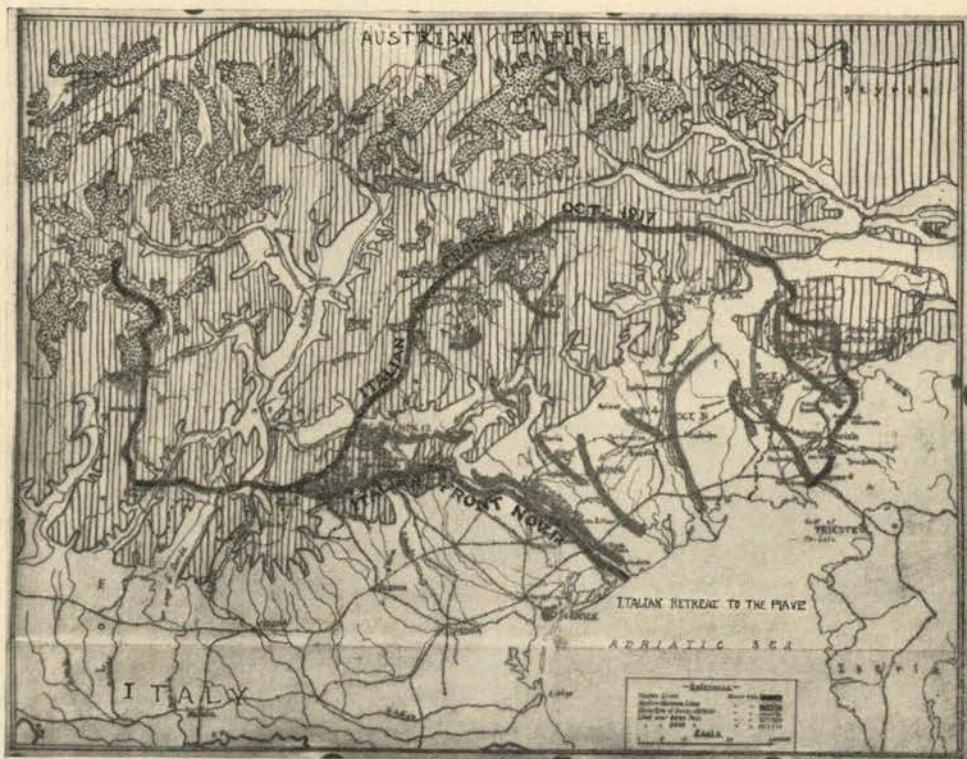
In the Attack:

1. Avoid fighting an action against commanding terrain when ever possible.
2. If action is imperative employ flanking methods.
3. A frontal attack against well defended positions on superior terrain has little chance of success.
4. Avoid engagements which are not conducive to the general issue.
5. The mere taking of ground has in itself little value unless it materially interferes with the plans of the enemy.
6. Carefully select the weak point in the enemy line and direct at it the most vigorous thrust possible.
7. Make careful pre-arrangements for the following up of a victory and the exploitation of a success.

On the Defense:

1. Select a naturally strong line, one that is fortified by nature if possible.
2. Organize in depth thereby insuring elastic defense.
3. Avoid salients unless they have good interior lines of communication and are topographically defensible.
4. Insure communication, front to rear and laterally between adjacent units and thereby assist in the co-ordination of the defensive plan.
5. Provide a duplication or even a triplication of communication services so that in the event of the failure of one, another may instantly be ready to take its place.
6. Study the enemy's probable plans and intentions.
7. Keep intelligence units at a high degree of efficiency. Enemy observation by aeroplane and other wise must be continuous.
8. Keep supports and reserves properly placed so that they may be readily shifted to a point of danger.

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THE MESOPOTAMIAN CAMPAIGN

August 1, 1914, to May 1, 1916.

—BY—

Lt. Col. George C. Shaw, Infantry.

The Mesopotamian Campaign was one of the secondary operations of the Great War. It was caused by the entry of Turkey into the war on the side of Germany, and by the efforts of Germany to stir up trouble for Great Britain in her overseas territories and on her Indian frontiers, making necessary for Great Britain to use military forces in these regions and preventing their dispatch to the principal theatre of operations in France.

This campaign was carried on between Turkey, assisted by German officers, on the one side, and Great Britain and her Indian Allies on the other; and lasted from October, 1914, to April, 1917. The troops employed on the British side grew from a small division of about 15,000 men in 1914 to an Army of 100,000 in 1917.

PREPARATION FOR WAR IN MESOPOTAMIA BEFORE NOVEMBER 5, 1914.

Previous to the actual declaration of war on Nov. 5, 1914, both Turkey and Great Britain had taken steps regarding Mesopotamia and the Persian Gulf. The Turkish authorities at Basra had made preparations to block the Shatt-al-Arab at Basra.

The scheme for the Turkish offensive provided for sending a force from Bagdad to Basra to seize the Persian oil fields and the British pipe line, and thus deprive the British Navy of fuel oil. One division was considered sufficient, as no serious opposition was looked for.

The Indian Government had become satisfied, from the hostile attitude of the Turks, that its interests in the Persian Gulf, especially the oil concession and pipe line, would be immediately seized by the Turks in case of hostilities, and that the Turkish Government, instigated by Berlin, would be likely to send troops to this region for that purpose.

The pipe line from the Naphthun oil fields of Southeast Persia was laid from the oil fields south, along the Karun River to the Persian Gulf, through Ahwaz, and was about 150 miles long. The British had maintained friendly relations with the Arab tribes through whose territory the pipe line ran and had paid them well to protect the line, but in spite of this unfriendly natives broke the line and fired it in several places.

In October, 1914, before war was actually declared on Turkey, the Indian Government made plans for the protection of this area and sent a brigade of troops of all arms to the head of the Persian Gulf to be ready in case of actual hostilities. So, when war was declared, these troops were on the ground in force and ready for action.

This expedition was sent secretly from Bombay, about 2000 miles distant, to occupy Abadan Island, at the head of the Persian Gulf.

The object, or mission, of this expedition, as set forth in orders, was:

To demonstrate at the head of the Persian Gulf, with the object of protecting the oil works and if possible to occupy Basra.

To protect the Anglo-Persian oil installation on the Karun River, and to prevent the cutting off of the supply of fuel oil for the British Navy.

To occupy the greater part of the Basra vilayet so as to secure possession of the Shatt-al-Arab and maintain control of the districts around the head of the Persian Gulf.

To impress the Arabs and others in this and other regions, thereby influencing inhabitants of territories between Turkey and India.

THE BEGINNING OF THE CAMPAIGN IN MESOPOTAMIA.

November 5, 1914, to December 31, 1914.

The Battle at Sahil.

Great Britain declared war on Turkey on November 5, 1914, and on November 7, 1914, the British-Indian Expeditionary Force moved up the Persian Gulf to the mouth of the Shatt-al-Arab and shelled and took the small Turkish fort at Fao. The troops then landed some miles farther up on the right bank of the river, at Sanijeh, opposite Abadan Island with its oil refineries, and waited for the rest of the force in an entrenched camp. The Turks hurried troops down from Basra and entrenched at Sahil, a few miles above the British position.

On November 11, 1914, there was some small fighting with the Turks, and on Nov. 15 General Barrett, commanding the 6th Division, arrived with another brigade and some gunboats.

On November 17, the British-Indian Force advanced against the Turkish position at Sahil. The Turks, numbering about 5000 men, under Colonel Subeh Bey, Governor of Basra, were entrenched on the Shatt-al-Arab with their left on the river and their right, with Artillery, on some palm groves. The British-Indian Force had two brigades with Artillery, assisted by gunboats.

The gunboats attacked on the Turkish left and infiltrated the Turkish trenches. The Infantry at the same time made a frontal attack across the open ground, and the Turks fled. Their loss was estimated at 1500; the British loss was 353. The Turks retreated toward Basra, and the British followed by river and bank.

CAPTURE OF BASRA.

The Turks had sunk three ships in the channel and placed a battery to command the place. The gunboats silenced the battery and worked past the obstruction, reaching Basra on the morning of November 22. The Turks retreated up the river, and troops from the transports took possession of the town. The column marching overland came in later. Basra became the base of the Mesopotamian expedition.

The rest of November was spent in making the base secure. The Turks had retreated 50 miles up the Tigris to Kurna, the junction of the old channel of the Euphrates and the Tigris.

The British position was secure, but it was certain that the Turks were gathering and would make further trouble.

Enroute to Basra the British picked up a number of river crafts that evaded the Turks. These were added to the British Transport and were very valuable.

CAPTURE OF KURNA.

On December 2, 1914, it was found that the Turks had re-assembled at Kurna, 50 miles up the Tigris, and a small detachment of troops with gunboats was sent up the river on December 4 to deal with them. Kurna, on the left or west bank, was found to be held in force, with a strong force across the Tigris at Mezara. The position was too strong for the British force which withdrew some miles down the river, entrenched, and sent for re-enforcements. On December 7 the force again advanced on the enemy entrenched at Mezara and, aided by the gunboats, drove the Turks across the river to Kurna.

On December 8 the British established a ferry above Kurna and crossed the river above the place, cutting the Turkish line of retreat. On December 6 the Turks surrendered without further resistance. 1200 prisoners and 9 guns fell into the hands of the British. The British Force had now complete control of the delta of the Tigris and Euphrates.

Kurna was a most important point from a military standpoint, on account of its situation at the junction of the Tigris and Euphrates and at the head of deep water navigation. Toward the end of December the 17th Infantry Brigade arrived at Kurna, completing the 6th Division.

The British had moved swiftly, and had secured their position at the head of the gulf and on the Tigris as far as 120 miles from the sea. The base had to be organized, and the Turks took this opportunity to mass troops close to the British lines.

THE BRITISH SITUATION AT THE BEGINNING OF 1915.

By the end of 1914 the British had firmly established themselves at the mouth of the Tigris and were

in a position to prevent the Turks' advancing to the Persian Gulf and thus threatening India. At the beginning of 1915 they were located as follows:

At Basra they had established a base of considerable strength.

At Kurna and Mezara, 50 miles up the Shatt-al-Arab, they had established entrenched camps that would be able to resist any pressure from up the river.

On the right flank the British held Ahwaz and the pipe line to the oil fields.

On the Persian Gulf, on the Turkish side they held Koweit and the entrenched camp at Shaiba near Basra on the line of advance from Nasiriyeh to Basra.

The British, however, were menaced in several directions. Although Basra with its sea communications was secure, the Turks soon began to be unpleasant. Turks from Bagdad, intended to re-enforce Kurna and Basra, were switched off to the east against the Karun River pipe line. They were so strong that the oil fields were threatened and the garrison at Ahwaz had to withdraw from the pipe line at that point.

On the left flank the Turks were in strong force at Nasiriyeh, about 70 miles west of Basra, on the Euphrates, at the junction of the Shatt-el-Hai and the Euphrates. In front of the center, only 6 miles north of Kurna, the Turks had established a strong position astride the Tigris at Bahren.

It will therefore be seen that at the beginning of 1915 the Expedition, while secure in its base, was threatened on both flanks. The main force of the enemy was at Nasiriyeh, preparing to advance on Basra. A minimum force was in front of the British at Kurna, to observe and hold the British on the Tigris. A column of Arabs was directed from Amara toward Ahwaz to threaten the pipe line, Mohammerah at the junction of the Karun and Shatt-al-Arab, and the navigation on the lower Shatt-al-Arab.

In February a mixed troop of British and Indian troops went up the Karun River to meet the advance of the Turks in that direction but were forced to retire with a loss of a field gun.

Re-enforcements began to come in from the new 12th Division, and in April, 1915, Sir John Nixon was appointed to command the Corps formed by the 6th and 12th Divisions and a Brigade of Cavalry. The 12th Division had no Field Artillery.

THE BATTLE OF SHĀIBA.

Sir John Nixon arrived at Basra on April 9, 1915, and assumed command of the Mesopotamian Corps, consisting of the 6th and 12th Divisions (12th without Artillery) and a Naval Force. He was greeted with an attack by the Turks along his entire line. On the right the Turks attacked the pipe line near Arwaz; in the center they shelled Kurna at long range from their position at Bahren on the Tigris above Kurna.

April 12 to 14, their main body attacked the British-Indian forces under General Melliss in the entrenched camp at Shaiba, about 6 miles west of Basra. This battle is also known as the battle of Barjisiyah, from the Turkish village where the Turks made their last stand.

The British force, about 10,000 men, consisted of two brigades and part of another. The Turks, under Suleiman Askeri, consisted of Turkish regulars from the Bagdad Corps, Arabs and Kurds, in all about 20,000 men with 15 to 20 mountain guns.

The British position was protected on the east by the river, and the Turks attacked from the south and west at dawn, April 12, 1915. Their first attack was held up and they dug in, renewing the attack in the afternoon. They were beaten back but kept up a sharp fire all night. The next day the Turks were found entrenched to the north, but were driven off with loss. In the afternoon of April 13 they were found to be entrenched about 4 miles south of the British lines in a strong position at Barjisiyah. On the morning of April 14 the British forces moved against this position in strength, and after sharp fighting the Turks fled toward Nasiriyeh.

Floods hampered the pursuit. The Turkish loss was about 3000 killed and wounded. 12 boats were captured on the river. The British loss was about 1000 killed and wounded. After the fight the Turkish commander killed himself. It was a very hotly contested battle, and the British called it "a regular soldier's battle."

The result of the battle was the downfall of the Turkish offensive, and Sir John Nixon immediately assumed the offensive.

THE ADVANCE TO AMARA. PREPARATION:

The battle of Shaiba broke the Turkish circle around Basra, and Sir John Nixon in turn assumed the offensive.

The attack on his left had been repulsed and the enemy driven back toward Nasiriyeh, but the forces in front and on his right still remained. On April 23, 1915, General Sir Charles V. F. Townshend arrived and took command of the 6th Division. He was informed by General Nixon that it was planned to attack the Turks above Kurna, push them back up the river and occupy the important town of Amara (Amarah) about 90 miles up the Tigris from Kurna.

The advance to Amara was considered to be within the original instruction "to occupy Basra Province". Amara was an important place of 12,000 inhabitants, about 200 miles up the Tigris from the sea, and was the seat of the provincial administration for the Basra province or vilayet. It was the next largest town to Bagdad in the Mesopotamian region. From Amara roads ran east across the desert to Ahwaz and Moammerah.

It was planned that when Townshend and the 6th Division started up the Tigris with Amara as an objective, General Sir George Goringe with the 12th Division should attack the Turks on the pipe line near Ahwaz and drive them toward Townshend at Amara, where it was hoped to cut off their retreat.

General Townshend immediately made plans for the operation toward Bahren.

The enemy's position in front of Kurna at Bahren was a strong one. The river was at flood. The enemy occupied a half moon of fortified hills, now island, astride the Tigris. They could be approached only by water and from the front on account of the flood. In front of the Turkish position lay a great marsh of tall reeds, now flooded. The main channel of the Tigris was mined. The Turkish force consisted of a small division of 6 battalions with 10 guns, 600 Arab riflemen, and 1200 Marsh Arabs armed with rifles and concealed in the marshes and reeds. In addition the Turks had the gunboat Marmarice. The position was of great strength and could be taken only by a frontal attack, so it was planned to attack by water. The gunboats, with part of the troops in transports, were to advance up the Tigris River.

An entire brigade was placed in small, flat-bottomed boats, 10 men to a boat, to pole their way through the marsh. Part of these small boats had light armor. The machine guns and mountain guns were mounted on rafts, and the heavier guns placed on gun platforms in lighters for towing.

The month of May was spent in getting this equipment ready and training the soldiers in handling the small boats and other crafts, and in reconnoitering the enemy's position both by boat and from a high tower at Kurna. Townshend's force consisted of:

16th and 17th Infantry Brigades;

Divisional Troops, including Sappers and Miners; Heavy Artillery (Ten 4-5 inch guns); Signal

Corps; Bridge train;

3 Naval gunboats;

4 Armed launches;

2 Naval horse boats with 4.7 guns;

3 Transports for troops; about 400 small boats with troops.

Townshend's Artillery, exclusive of the guns carried by the Naval flotilla, consisted of:

One (1) battery Royal Field Artillery;

One (1) battery Mountain guns (6 guns);

2 4-inch guns;

2 4.7 guns;

3 5-inch guns;

1 18-pound gun;

4 5-inch howitzers.

His total strength was about 10,000 men and 24 guns, exclusive of Naval guns.

The Naval gunboats carried 4 or 6 4-inch guns, and 3 or 6 pounders, in all 14-4 inch, 4-3 pounders; 4-6 pounders. The launches carried 3 pounders, and one, the Shaitan, 1-12 pounder.

The machine guns and mountain guns were on specially prepared rafts. All other Artillery was carried on barges.

THE ADVANCE TO AMARA: THE BATTLE OF KURNA OR BAHREN.

The advance of General Townshend from Kurna on the Bahren position began on the morning of May 31, 1915.

The heavy guns at Kurna began a bombardment of the enemy center. The Naval flotilla led the way up the Tigris, preceded by two tugs as mine sweepers. The 16th Infantry Brigade, with all heavy artillery, followed on transports. On the left the 17th Infantry Brigade in small boats, with machine guns on rafts, poled their way through the marshes on the right bank of the Tigris. On the right a battalion of Infantry with mountain guns on rafts proceeded up the left (east) bank of the Tigris to make an enveloping movement.

The attack proceeded steadily, the Artillery of the flotilla knocking the various Turkish forts to pieces and they surrendered as they were reached. At one fort the British troops left their small boats and took the place by assault.

No mines exploded, and when the switchboard controlling the mine field was captured it was found that the mines were defective and could not be exploded.

By afternoon, May 31, the British force had approached within 3 miles of Bahren, and remained at night below that position ready to advance on the main position at Bahren the next day.

June 1, 1915, the advance on Bahren was resumed. The 17th Brigade in boats on the left, in the marsh, with the ships and Artillery firing on the Bahren position. The enemy's guns did not reply, and soon British airplanes from Kurna threw down messages that the enemy had abandoned Bahren and was fleeing to the north.

The 17th Brigade occupied Bahren, which was a long sand ridge parallel to the river, as the last of the Turks got away at the north end.

As soon as Bahren was occupied, the pursuit of the Turks began. The 16th Brigade was put ashore. The 17th Brigade, with part of the artillery, was put on transports, and the Naval flotilla took up the pursuit.

THE ADVANCE TO AMARA: THE PURSUIT OF TURKS FROM BAHREN AND CAPTURE OF AMARA.

Immediately following the capture of Bahren, on the afternoon of June 1, General Townshend, with the Naval flotilla, took up the pursuit of the Turks, continuing it until darkness made navigation impossible. Late in the afternoon the Turkish gunboat "Marmarice" was shelled at long range, but not stopped. At Ezra's tomb, where the stop for the night was made, 200 Turkish officers and men and several lighters of ammunition were captured.

At 2 a. m., June 2, when the moon rose, the pursuit continued. Soon the "Marmarice" came within range, was shelled, run ashore, and set on fire. Her crew abandoned her and took to the shore. The Arabs looted two lighters of ammunition she had been towing and murdered her crew.

The pursuit continued with lighter boats. The Turkish steamer "Mosul" was found ashore flying a white flag, and a number of Turkish officers and men aboard her surrendered rather than trust themselves to the Arabs.

In the afternoon of June 2, the town of Kila Salih was reached. A few Cavalry and Infantry were near the place, but scattered at a shot from one of the boats. The town displayed white flags, and the Sheikh, or head man, came out and was ordered to collect food for 15,000 men. General Townshend hoped that he would send this news to Amara, and that it might perhaps induce the Turks to withdraw from that place.

The boats pushed on until dark and then tied up to the bank. Early June 3, they started for Amara.

At Abu Sidrah, a short distance from the town, they stopped for the leading brigade in ships to come up. General Townshend had only 4 small armed launches or tug boats, 3-4.7 guns in horse boats, and about 25 soldiers and sailers, the soldiers acting as Marines. The Naval commander was anxious to go on and trust to luck. Finally Townshend decided to go ahead, with the "Shattan" armed launch, some distance ahead as an advance guard.

Early in the afternoon General Townshend's boat was alongside the Cusotm House at Amara, and Halim Bey, the commander of the Turkish troops at Kurna, Aziz Bey, the Governor of Amara, and 30 to 40 officers came on board to surrender.

Townshend was informed that an entire battalion of Turkish troops, formed from the fire brigade of Constantinople, was ready to surrender; so an officer, a sailor, and a soldier acting as a marine, were sent to receive the surrender of the battalion, about 800 men. These three received the surrender of the battalion, and marched the 800 men to the river and aboard a big iron lighter there under the guns of the gunboats. The entire British force then at Amara was about 25 soldiers and sailors.

The "Shaitan", now above the town, was heard firing. It was found that she was firing at the advance guard of Dagistani's force, retreating from Ahwaz in front of Gorrings advance. When the "Shaitan" fired at them, they fled across the desert followed by the main body. They did not know that the British were in Amara. Had Townshend been two hours later in arriving at Amara, he would have met organized resistance from Dagistani's force.

On June 4th the Arabs began to loot the town. The British had no troops to land, but fired the looters with machine guns.

In the forenoon the leading troops came up, and by June 6 all the British-Indian troops were united at Amara. General Nixon and his staff also arrived.

As a result of this expedition the lower Tigris was occupied, about 17 guns and 1000 men captured, and a Turkish gunboat destroyed.

General Townshend now wished to unite his entire Division at Amara, but General Nixon planned to attack Nasiriyeh on the Euphrates where the Turks had concentrated after the defeat at Shaiba, and proposed to send General Gorrings with the 12th Division and the 18th Brigade of General Townshend's Division up the Euphrates for that purpose. After Nasiriyeh was taken, to return this Brigade to the 6th Division, and advance from Amara to Kut at the junction of the Tigris and Shatt-el-Hai, which connects the Tigris with the Euphrates at Nesiriyeh (Ur of the Chaldees).

The attack on Kut was planned for about September.

Situation on the Tigris, June 1915 to September 1915.

At the beginning of June, 1915, the Turkish forces on the Tigris were reported to be as follows:

At Bagdad:

- 1 Regular Battalion.
- 2 Reserve Battalions.
- No guns.

At Kut:

- 1 Regular Battalion.
- 4 Arab Battalions.
- 2 new Arab Battalions (Inferior).
- 12 Guns (from Shaiba).

Between Kut and Amara:

- Remnant of Halim Bey's force from Kurna.
- Remnant of Dagistani's force from Arabistan.
- 2 Fire brigade battalions from Amara.
- (All disorganized and short of artillery).

Turkish re-enforcements from Antolia would not arrive for several weeks, if at all. It was the opinion at British Headquarters that Nurredin Bey, the new commander at Bagdad, could not make an effective

attack on Amara.

Townshend now had two bridges at Amara, with wireless and airplanes, supported by heavy artillery and Naval guns. He planned to make the place secure in case of isolation, and planned to accumulate six months' supplies, and 1000 rounds of ammunition per rifle and 500 rounds per gun. There was danger of an attack from Bagdad in case Nasiriyeh on the Euphrates was attacked, and Townshend took necessary steps to make the place secure.

All his plans, however, were not approved by General Nixon, who also took some troops of the 6th Division to help the 12th Division in its coming attack on Nasiriyeh.

The position at Amara was reasonably secure, though the communications between Amara and Basra were cut from time to time. As long as Amara was held, the pipe line at Ahwaz was secure, as Amara held the road from Bagdad to Ahwaz.

Soon after the capture of Amara, General Townshend was taken sick and was sent to India, remaining there until the middle of August when he rejoined his Division at Amara.

While in India, in conversation with the Viceroy, Lord Hardinge, and the Commander in Chief, General Sir Beauchamp Duff, regarding Mesopotamian affairs, the advance to Kut was decided upon, but there appeared to be no settled policy regarding the attempt to capture Bagdad. General Townshend expressed the opinion that General Nixon did not have enough troops to make certain of taking Bagdad, and considered that a full Army corps (30,000 men) would be necessary to take Bagdad and hold it. General Townshend was assured by General Duff that no attempt would be made to go beyond Kut unless Townshend was given an adequate force.

THE CAPTURE OF NASIRIYEH.

As has been previously stated, Sir John Nixon planned to take Nasiriyeh on the Euphrates after the capture of Amara. The main body of the Turks had retreated to this place after the battle of Shaiba in April, 1915, and menaced the British left flank.

The place was of great importance, as it was at the junction of the Euphrates and the Shatt-el-Hai, the river or old canal connecting the Tigris at Kut with the Euphrates at Nasiriyeh. Troops from Bagdad were brought by the Tigris to Kut, and thence by the Hai to Nasiriyeh.

In July, 1915, General Gorringe with the 12th Division, troops from the 6th Division, and the Naval flotilla were sent to attack the place. They went up the old channel of the Euphrates and through shallow Hamar Lake, a most arduous task, for the country was one great marsh with many old channels and lagoons through which the troops forced their way, now in boats and again by wading, dragging their boats from lagoon to lagoon.

The heat was intense. Swarms of flies and the natural obstacles encountered made the trip one of the worst ever undertaken by British troops. The entrance to the main river was found to be barricaded and mined, but the enemy was driven out and back upon his main position. This position was astride the river, and consisted of strong entrenchments with wire.

On July the 24th, it was assaulted and the enemy driven out, retreating toward Kut. The British took 17 guns and about 1000 prisoners and a large quantity of war material.

The possession of Ahwaz, Amara and Nasiriyeh now made the position of the British at Basra secure.

The Divisions, however, were worn out from the hard work and the heat. Many were sick, and the Medical Department was deficient in equipment, the two divisions having only enough medical equipment for one.

THE CAPTURE OF KUT.

The advance to Kut had been decided upon by Sir John Nixon when Amara was occupied in June, 1915, and the plan was approved by the British and Indian Governments. General Townshend rejoined his division late in August, 1915, and was directed to proceed with the operation.

Kut was about 120 miles by land and 150 by water up the Tigris from Amara, about half the way to Bagdad, and was an important strategical point. It was about 300 miles from the base at Basra. Kut was at the junction of the Tigris and Shatt-el-Hia, which ran from the Tigris at this point to the Euphrates

at Nasiriyeh, and formed a means of communication between Bagdad and the lower Euphrates without passing Kunra or Basra. Its possession by the enemy always menaced the British left flank, and its possession by the British made secure the position at Nasiriyeh. Once installed at Kut, the British would block all Turkish movements down the Tigris and the Hia.

General Townshend arrived at Basra from India on August 21, 1915, and immediately began to organize his forces for the advance. The latest British information showed that the Turks under Nurredin Bey had between 10,000 and 12,000 men, with about 20 guns, at Kut, well entrenched astride the Trigris about 8 miles below the town at Es Sinn. There were possible re-enforcements due to arrive in September from Erzeroum and Van, amounting to about 6,000 men. The Turks had three steamers at Kut, and covering detachments further down the river.

The position at Es Sinn was reported to be very strong. On the left bank of the river, heavy lines of trenches ran from the river to the great marshes about a mile from the river. On the right bank, there were reported to be three lines of trenches. The river was obstructed. Well in the rear of the position was a bridge of boats connecting the two banks of the river.

General Townshend had available for the expedition about 11,000 combatants and 30 guns. His force consisted of:

6th Division, less the 18th Brigade.

One-half 30th Infantry Brigade, 12th Division.

1 Field Artillery Brigade.

Some Heavy Artillery: 4.7-4 inch, 5 inch, and Howitzers on barges.

Division Troops: Sappers and miners; Pioneers; Airplanes (2); Wireless sets (2); Bridge train; Signal corps.

3 Armed launches;

11 Steamers (1 hospital);

25 Barges;

6 Arab dhows with engineering material.

His ammunition supply amounted to 600 rounds per gun or field guns; 300 per gun for heavy guns; and 300 per gun for rifles.

It was calculated that 40 days' food and forage would be on hand when the advance was made.

There was difficulty in getting sufficient transportation, particularly land transport, and only a brigade at a time could be carried on the transports. All supplies had to be transported on barges on the river, and therefore the troops were tied to the river on account of lack of land transport.

In case the Turks left the river, the British had no way to pursue them for any distance.

It was planned to fight some of the 4 and 5 inch guns on land, and bullocks were purchased to haul these guns.

There was difficulty in obtaining troops for lines of communications, which would lengthen every day, and General Townshend was compelled to use troops from his first line for this purpose.

However, the force was organized, and by September 1, was ready to begin the advance from Amara.

General Townshend's plan was to defeat the Turks at Kut and, if he succeeded in turning their defeat into a riot, to follow them into Bagdad by land and water, and by a quick dash rescue the English women who were held prisoners there.

On September 1, General Townshend began to move his force forward to Ali Gharbi, about 50 miles from Amara, and concentrated there by September 10. On September 11 he began to concentrate at Sheikh Saad, about 40 miles further on and about 25 miles from Kut, and by September 15 the expedition was concentrated there. Small bodies of Turks were encountered from time to time, but they fell back on the main body without serious resistance.

On September 15 the command marched to Abu Rummanah on the right bank of the river, 8 miles from the enemy's position, where it had to halt to get up part of the field artillery, the howitzer battery and the remaining supplies. All ships had to be sent back for the purpose, there not being sufficient transport to bring everything on one trip of the transports. This delayed the further advance until September

25, and allowed the enemy to strengthen his position.

Air reconnaissance of the Turkish position established the fact that the main body of the Turks was on the left bank, very strongly entrenched from the river to the marshes to the northwest. On the right bank was a smaller force in a line about two miles and a half long. The entrenchments were of modern type, and extended about 12 miles on both sides of the river. The position on the left bank was well wired. On the left bank the Turkish position ran from the Tigris to the Suwada Marsh, about a mile, very strongly entrenched; then the Suwada Marsh formed a gap of 2000 yards, and the enemy trenches then continued to the northwest to the Ataba Marsh.

From information received, it was believed that Nurreddin Bey expected Townshend to make the usual British attack: that is, with two separate columns, one on each side of the river, each delivering a frontal attack. General Townshend, however, had a quite different plan of attack. His force was divided into two columns. "Column A", the main body or principal Mass, with the Cavalry; "Column B", a strong containing force with the Heavy Artillery in support.

The plan of attack covered 2 days' fighting. The first day "Column A" was to attack the enemy line on the right bank of the river at Es Sinn, while "Column B" was to make what was to appear to be a vigorous attack on the main enemy line on the left bank between the Tigris and the Suwada Marsh. At night "Column A" was to be withdrawn from the right bank and, crossing the Tigris by a boat bridge, move around to the enemy's extreme left and rear. The second morning "Column B" was to open the attack on the enemy's main position, when the Principal Mass, "Column A", would fall on the left flank, smash it and roll it up.

On September 24, General Nixon and staff arrived to witness the fight.

On the night of September 26, the troops advanced to their preliminary positions on both sides of the river. The Heavy Artillery established themselves on the left bank about 4500 yards from the enemy position. The battle began on the morning of September 26. "Column A" demonstrated on the right bank against the Es Sinn position, and at night the advance guard dug itself in as if to attack in the morning. "Column B", on a front of about 1000 yards, attacked the Turkish line Tigris-Suwada Marsh, and all the Turkish guns opened on it as it advanced, supported by the Heavy Artillery. By night the column had moved within 800 yards of the enemy position.

At night an Indian officer and three Indian soldiers deserted from "Column A" and informed the Turks of the turning movement. They were not believed, their story being thought a ruse to get the Turks to shift their General Reserves from the right bank of the river to the left.

At dark on the night of September 27 the shifting of "Column A" from the right to the left bank of the river began. It was carried on successfully, and by morning of the 28th it was in its position on the left flank of the Turks. At daybreak, September 28, the final attack began.

"Column B", with the Heavy Artillery and the gunboats, opened fire on the Tigris-Suwada Marsh line. "Column A", however, delayed its attack and finally attacked the Turkish left flank with but 2 of its 6 battalions of Infantry. So "Column A" progressed slowly, and by the time the Cavalry and the remainder of the forces were engaged it was late in the afternoon, and the Turks were able to bring their general reserve from the right to the left bank and throw them into the fight on the left.

The attack was then pushed all along the line and on the river. The Turkish left was driven back, but its line near the river held. The flotilla tried to break through the river obstructions, but failed. The British dug in at night, ready to resume in the morning of September 29, but the enemy withdrew from the trenches and retreated toward Ctesiphon and Bagdad with most of their guns. The British captured 17 guns, and about 1300 prisoners. The Turks had about 1700 killed and wounded, and the British about 1300.

General Townshend planned to pursue at once and to lead the pursuit in person. He left General Delamain in command at Kut and loaded a brigade of Infantry and a battery of Field Artillery on transports, but low water in the river prevented the movement long enough to allow the Turks to get away. The Cavalry (Indian) failed to follow up the pursuit, and the enemy was not molested. British Cavalry would have been on the heels of the Turks, and might have turned the retreat into a riot. As it was, the Turks

retreated in good order from Kut. The failure of the Cavalry to pursue, and the delay in getting the river movement started, settled the question of following on the heels of the Turks into Bagdad. The Turks took up their position in the prepared position at Ctesiphon, about 18 miles from Bagdad.

General Townshend with his brigade on transports finally arrived at Azizieh, about 60 miles up the river from Kut, on October 3, 1915, and made his headquarters there, discontinuing the pursuit. At Azizieh, reports of air reconnaissance showed the enemy strongly entrenched at Ctesiphon astride the river, with 6 miles of trench on the left bank.

General Townshend landed his 18th Brigade and Field Artillery at Azizieh and on instructions from General Nixon began to concentrate his division there preparatory to an advance on Bagdad. He advised against the movement unless it could be made with two divisions supported by a third, as a careful study of the Turkish position at Ctesiphon, the Turkish force, and the probable Turkish re-enforcements due to arrive at any time, had convinced him that his present force was inadequate for the purpose.

All Townshend's objection to a further advance were overruled and he was directed to prepare plans for the advance on Bagdad.

THE ADVANCE TOWARD BAGDAD AND THE BATTLE OF CTESIPHON.

On October 3, 1915, the British force was concentrating at Azizieh, 60 miles above Kut, for further advance.

The Original object of the expedition had been accomplished. From a military standpoint little was to be gained by taking Bagdad. All military experts, except perhaps Sir John Nixon, were certain that even if Bagdad could be taken with the present force it could not be held without a large increase in strength.

General Townshend, General Duff, the Commander in Chief in India, and the General Staff of the War Office at home opposed the movement, but political considerations caused the movement to be ordered, with the understanding that re-enforcements would be sent, the authorities at home and in India being convinced by Sir John Nixon that he had a sufficient force to take the city.

So General Townshend had nothing to do but to go ahead or resign.

General Townshend immediately began to prepare for the advance. He established a base at Azizieh and concentrated his troops and supplies in that vicinity. Four squadrons of Cavalry and a horse battery were added to his force. His Naval flotilla had practically ceased to exist. His force was increased to a certain extent, but his line of communication was lengthened and his transport was not increased. River transportation became more difficult, and land transportation was deficient.

Reconnaissance of the enemy position showed him strongly entrenched at Ctesiphon on the left bank of the river, and General Townshend planned to turn his left flank. A few miles in the rear of the Ctesiphon position was the Diala River with another prepared position.

The Turks had an advance detachment at Zour, within 14 miles of the British at Azizieh.

General Delamain joined General Townshend at Azizieh on October 9. He informed General Townshend that the Indian troops were shaken and unreliable, and he doubted if they would assault trenches again. Then, too, the Mohammedans were opposed to fighting at Ctesiphon as one of their great prophets, Saliman Pak, was buried there, and from religious motives they were averse to fighting at his tomb. Then they were getting far from the sea and began to wonder if they would ever see it again.

Many Indians deserted to the enemy, and one battalion to be sent back to Basra on that account.

The British force now numbered about 14,000 combatants, but only about 8,000 Infantry upon whom Townshend relied to win the battle. His British battalions were at half strength, and they were the backbone of the expedition. They were only one-fourth of the force. Efforts to get British soldiers sent to the front from detail at Headquarters at Basra produced little result. There was considerable friction between General Townshend and General Nixon's Staff.

By October 11, it had been ascertained that Nurredin's force at Ctesiphon was about equal to Townshend's. He had a strong force at Zour, 14 miles from Azizieh, and a Cavalry detachment with 4 guns at

El Kutanie, much nearer Azizieh.

On the night of October 27, a large force moved against this Turkish force and surprised it early the next morning. It did not destroy it, however, owing to the failure of the Cavalry to get in its rear.

By the end of the first week in November, General Townshend was ready to advance. His entire force, combatants and camp followers, was about 17,000. Of these, less than 14,000 were combatants, and only 8,500 Infantry, with 40 guns.

He had:

- 1 new river gunboat,
- 3 armed launches,
- 6 transport steamers,
- 2 hospital boats,
- 7 supply barges, with natives and forage for about 15 days.

Of land transport he had:

- 1000 mules,
- 620 camels,
- 660 carts,
- 240 donkeys.

The Naval boats carried some guns, at least 1.4 inch gun and some smaller guns.

For the advance and attack, General Townshend divided his force into three columns of Infantry and a flying column of Cavalry with Horse Artillery.

Column A—General Delamain:

- 16th Infantry Brigade,
- ½ 30th Infantry Brigade,
- 1 Battery Field Artillery.

Column B—General Hamilton:

- 18th Infantry Brigade,
- 1 Battery Field Artillery.

Column C—General Hoghton:

- 17th Infantry Brigade.

Flying Column—General Melliss:

- Cavalry Brigade,
- 1 Battery Horse Artillery,
- Battalion Infantry in carts,
- Maxim Battery,
- 1 Pack wireless outfit.

The columns were to move in three parallel columns, permitting rapid development for attack and easy manœuvres.

Basra tried to hurry Townshend, but he refused to be hurried by political reasons.

On November 11 the advance began. A small force was left at Azizieh in a fortified post, with a 15 pounder and 2.4 inch guns for which there was no transport. The Cavalry was pushed forward toward Zeur. On November 13 Sir John Nixon and staff arrived.

The object of the advance was to seek the bulk of the hostile force in the field, destroy it and then occupy Bagdad. The latest reports were that the enemy force was about 11,000 combatants and 30 guns. Everything indicated that the fight would be on the left bank.

On November 15 the division marched on El Kutanie and joined the advance guard. The Turkish force was now estimated at 11,000 combatants and 36 guns. Native reports indicated large re-enforcements, but these reports were not confirmed. Later they were found to be true.

November 18, near Zeur, 4000 to 5000 Turks were reported to be advancing on each bank. At night Column C crossed to the right bank, and on November 19 advanced on Zeur, which the enemy evacuated

on the approach of the Cavalry. The enemy movement was evidently a ruse to delay the advance of the British.

The plan of battle was now discussed with the General Officers. In general it was much the same as at Kut—to attack on the left bank and to throw the main force on the left flank of the enemy. General Hoghton, with Column C assisted by the Heavy Artillery, was to attack the enemy trenches near the river, making a frontal attack with the appearance of a main attack. General Hamilton with Column B was to make a turning attack; as soon as Column C was engaged, to attack the enemy's left rear and menace his retreat. General Melliss, with Mounted Troops and Horse Artillery, on the flank of turning column (Column B), to strike the enemy still further to the left and rear. Column A, the Principal Mass, as soon as the turning movement was felt by the enemy, to attack straight at a predetermined vital point. All guns then to concentrate on the vital point as soon as the main force advanced.

General Townshend hoped by the turning movement to throw the enemy into the Tigris, or to drive him in a disastrous flight to the Diala.

The force halted at Laj, a short day's march from Ctesiphon and within sight of the famous Arch of Ctesiphon, and made preparations for battle. The supply ships with a guard were left at Laj. On November 21, operation orders were issued, and also secret orders in case of a repulse to fall back on Laj, with Column A as a rear guard.

On the night of November 21-22, all troops took up position for the attack. Column C moved out at 2 p. m. November 21, by daylight, to make the enemy think it was the main force. At night the others moved into position with staff officers to guide them, and all was in position by daylight, November 22.

The Turkish entrenchments and redoubts extended for 6 miles on the left bank of the Tigris, and were absolutely invisible to troops, but the airplanes had mapped them accurately. There were two lines of trenches at right angles to the river, 3500 yards apart. All that could be seen was the Arch of Ctesiphon and the group of tombs, including the famous one of Saliman Pak.

The attack began at daylight November 22. The advance of Hoghton's column was slow, and finally Hamilton, on the enemy's left, began the attack. Now the Turkish right opened on Hoghton, and the battle became general. Hamilton's attack caused large bodies of Turks to fall back from the first line to the second. The main force (Delamain) was now ordered to advance on the vital point and Hoghton was ordered to make a vigorous offensive.

The retreat of the enemy's left brought them to the second position where they were covered by the fire of heavy guns from across the river, and Hoghton's advance was enfiladed by this fire. The gunboats were stopped by the fire of heavy guns, and could not get into position to help General Hoghton.

General Hamilton had now reached the second line, but was held there.

General Melliss and the mounted force had been checked by the Turkish Reserve, but had begun to work around the extremity of the second line when they were attacked by large bodies of Infantry which proved to be Khalil's Army Corps from the Caucasus, sent down from Bagdad by boat and thus never reported by the airplanes.

By 11 a. m. Hamilton had effected a lodgment in the second line, but was held there and counter-attacked by the Turks who had rallied on the arrival of Khalil. The Turks now took the offensive in an attempt to throw the British out of the second position, and the British troops there were bombarded constantly. In this, the Turks' heavy guns on the right bank took a large part.

The British wounded now came back in large numbers accompanied by unwounded in violation of orders, showing officers loss. There was no reserve to throw in. The plain was dotted by hundreds of men, walking slowly back to the vital point. A retirement was taking place. General Townshend and staff and General Nixon and his staff helped to lead and drive the men back in ranks.

It was determined to hold the Turkish first position; to stay there all night in the hope that the Turks, who had lost enormously, would retreat in the night. The staff officers rallied large numbers of men, but the units were mixed. A large percentage of officers had fallen.

The troops fell back slowly, followed by the Turks who recaptured their guns. Hoghton was sent forward to take the pressure off Delamain, and the main force fell back to the vital point. This was between

5:30 and 6 p. m. It was determined to stand on the captured first line, to organize, and renew the attack the next morning. Without molestation Townshend was allowed to unite his force in one block at the vital point. Then it was found that he had lost 4,500 of his 8,500 Infantry, and was in no condition to resume the offensive.

The British force remained in the captured enemy first line trenches the night of November 22. On the morning of November 23, it was found that the enemy had retreated behind the Diala and were digging in, but the British were in no condition to take the offensive.

During November 23 the British force, except Hoghton's force, was concentrated in a strong position near the mounds or high wall of Ctesiphon. Hoghton was left to protect the wounded who had not all been taken to the new position. On the night of November 23 the Turks attacked both detachments in force, but were driven off. On the morning of November 24 no enemy was in sight, and Hoghton's brigade was united with the main force.

THE RETREAT FROM CTESIPHON TO KUT.

The British force remained at Ctesiphon on November 24, and planned to retire to Laj on the morning of November 26, but a movement of the Turks made it necessary to retreat on the night of November 25, and Laj was reached early on the morning of November 26.

It was at first planned to remain at Laj, but movement of large bodies of Turks caused General Townshend to decide to fall back on Azizieh in one march of 22 miles, so the entire force left Laj on the afternoon of November 27, with the enemy in sight, and marched through the night to Azizieh.

It was now determined to fall back to Kut and concentrate there. All the wounded were evacuated to Kut; all stores that could not be sent to Kut were destroyed on November 29, and at daylight November 30 the retreat to Kut began.

The Division marched in the early morning of November 30, 1915, the ships having started earlier. This day's march was to be but 10 miles, to Umm-al-Tubal, on account of the low water which retarded the ships. If the Army left them, the Turks would overtake them and destroy them with Artillery. Had the troops not been held up by the ships, they could have marched from 20 to 25 miles.

The march to Umm-al-Tubal was made without trouble, but at night the troops were fired upon, and they prepared for an attack the next morning. The Cavalry column which had been sent forward to Kut was recalled. At daylight 12,000 Turks were within 2500 yards and advancing. The British at once attacked and stopped the offensive, forcing the Turks to fall back. Then the British stopped the attack, and once more took up the retreat.

Meanwhile the ships were in trouble. The armed tug "Comet" was aground and burning. The new monitor "Firefly" had a shell in her boiler, and was lost. She carried a 4.7 gun, and was a serious loss. The Turks took possession of her, and later put her in service.

The British took up the retreat at 7:30 a. m. The enemy continued to shell at long range, but only followed with Cavalry. The British did not lose a gun or prisoners, of whom they had 1500, taken at Ctesiphon. The retreat continued all day and into the night, when the British reached Shadie, 36 miles from Umm-al-Tubal.

The troops had no food; they were very weary; they had fought a battle and marched 36 miles. The Arabs hung on their rear and murdered all who fell behind the rear guard.

At Shadie it was learned that part of the bridge train had been lost, a barge of sick and wounded from Azizieh had been captured by the Turks, and that both the "Comet" and the "Firefly" had been abandoned.

On December 2 the retreat was resumed. The troops were very tired. The Arabs hung on the flanks and rear of the column. Men fell out by the score, but none were left behind the rear guard for the Arabs to kill.

The column arrived at Shumran, 6 miles from Kut, at night December 2 and remained there all night, having made 40 miles that day. The Turks reached Shadie that day.

The next day, December 3, the entire column marched into Kut.

THE SEIGE AND SURRENDER OF KUT.

On December 3 General Townshend had concentrated all his forces at Kut. For strategical reasons

he determined to hold the place, although he knew he would be besieged within a few days. With Kut in the hands of the enemy, Turkish troops could be thrown down the Hia to threaten Nasiriyeh and Basra. So he decided to hold the place.

His troops were in bad shape and could not go further by land. It was impossible to move all supplies. He wired his decision to Basra and it was approved by General Nixon who believed that Kut could be relieved within two months. There were ample supplies at Kut for that Period. So the British immediately took steps to prepare the place for defense. All sick and wounded were evacuated by steamer to Basra; the mounted troops were sent down the river overland; part of the native inhabitants were turned out of the town, but, owing to pressure from the British political agent, all Arab property owners of Kut and their families, some 6,000 in number, were allowed to remain.

All ships except the gunboat "Samara" were sent down the river and all airplanes also, for if Kut was invested they would not be able to get off the ground.

On December 6, after the Cavalry had left, the strength of the command (combatants) was 8,893, of which 7,411 was Infantry, with 32 guns. There were 800 rounds of ammunition for each rifle, and a good supply for the guns.

The guns were: 19-18 pounders, 2-13 pounders, 2-4 inch guns, 4-5 inch guns, 4-5 inch Howitzers.

There were 60 days' supplies for both British and Indian troops, and about 30 days' grain for the animals. The town of Kut had enough food for its inhabitants.

Kut lay in a loop on the left bank of the Tigris where the river runs about due east. The opening of the loop was to the north. In its widest part, the loop was about a mile across. Most of the houses were in the southwest part of the loop. To the southwest of the town the Shatt-el-Hai, the river connecting the Tigris with the Euphrates at Nasiriyed, left the Tigris. A caravan road ran north across the Pushi-i Kuh hills to the Persian frontier. Opposite the town to the west was the Wool Press village and the liquorice factory which eventually became part of the defences of the town.

Immediate steps were taken to organize the defense of the town. Three lines of trenches were run across the loop, the first or main line across the neck of the loop being joined at the northeast to an old mud fort. The place was organized into sectors for defense, all connected by phones with a general reserve and divisional artillery.

The Wool Press village and liquorice factory on the right bank, west of the town, were garrisoned by a battalion and connected with the town by a ferry. A boat bridge was thrown across the river northeast of the town and troops placed there to construct a bridgehead, as it was the intention of General Townshend to make an active defense and to throw troops across the river to attack the enemy when ever occasion offered.

The defences were pushed as fast as the troops in their weakened condition could do the work. The Cavalry left at 11 a. m., December 6, menaced by 1000 Arabs who hung on their rear.

As soon as the Cavalry moved out, the Turks began the investment of the place. They occupied the banks of the river opposite the Kut peninsula and threw a force across the neck as close to the northern front as the British fire would allow; and, in spite of the British fire, in a few days they threw a network of trenches across the neck effectually closing it. A division moved up on the east side of Kut to attack the bridge, and in a few days the Turks had guns all around. On December 8 Nurredin Bey, the Turkish commander, demanded the surrender of the place, but General Townshend refused to comply with his demand. On December 9 the place was shelled from all sides and the detachment on the right bank at the bridge-head was driven across the river. Fearing that the enemy would force its way over the bridge, it was destroyed on the night of December 9.

On December 10, 11 and 12, the enemy bombarded the place heavily. The British loss was 88 killed and wounded. The Turkish strength was estimated at 12,000 with 33 guns. By December 23, the enemy was within 50 yards of the northwest front. The Turkish artillery concentrated on the mud fort, and part of it fell in, but it was repaired with sand bags and made stronger than even.

On December 24 a heavy fire was opened on the wool Press village and liquorice factory, but no assault was made. On Christmas Day there was a heavy assault on the Fort and hand to hand fighting, but

the attack was repulsed.

The Turks failed because they gave warning by a preliminary bombardment. 9 battalions were to make the assault; only 2 got up as the others were kept too far back and were cut off by an artillery barrage. Field Marshall Von der Goltz arrived in front of Kut, and his arrival was a signal for the assault. The total British losses of December 25 were 382.

The Christmas Day assault was the last assault on Kut. Thereafter the Turkish commander endeavored to prevent the garrison from leaving the place, and annoyed the garrison with constant bombardment.

Soon after the seige started, the Turks built strong lines of works to prevent the Relief Force from reaching Kut.

The Turkish commander built his first line of defense at Sheikh Saad, about 25 miles down the river from Kut, where he entrenched on both sides of the river. About 5 miles above this position, he had a second position where the river Wadi, coming from the north, joins the Tigris. A short distance above this position the great Suwaicha swamps flank the left bank of the Tigris, about a mile from the river. Here a series of strong positions had been prepared on both sides of the river, their outer flanks resting on marshes and their inner flanks on the river. The first position was the El-Hannah position, then the Felahiyeh position, then the lines of Sanni-i-yat and Nakhailat positions, and lastly, on the right side of the Tigris, 7 miles from Kut, the very strong Es Sinn position. Each of these positions was a series of lines, that of Sanni-i-yat having 7 miles of trenches. The Es Sinn position extended from the Tigris to the Shatt-el-Hai.

These works were not entirely completed when the Relief Force began its advance, but before one position could be carried, another would be prepared.

All of these works had been constructed by direction of Von der Goltz and his German Staff.

At the end of the year the Turks became a constant annoyance to the garrison. Their snipers shot women and children getting water from the river. Bundles of seditious literature, advising Indian soldiers to kill their officers and join the Turks, were thrown into the trenches of the Indian troops. Several Indian soldiers mutilated themselves to escape service, and on January 1, 1916 an Indian soldier tried to kill an officer and was tried and shot.

Enemy airplanes bombed the camp and the Turks shelled it constantly. Large bodies of the enemy with guns were seen daily moving down the river, but out of reach of the guns of Kut, and by January 5 General Townshend estimated that they had about 20,000 men with 32 guns.

Meanwhile steps were being taken to relieve Kut. Sir John Nixon was relieved by General Sir Percy Lake, the Chief of Staff of the Indian Army. General Sir Fulton Aylmer took command of the Tigris Corps which was to be the relieving force.

About the end of December, 1915, the first news of the Relief Expedition began to reach Kut. General Aylmer wired that he had 2 divisions with Cavalry, and asked for information as to what force might be expected to co-operate with him from Kut.

On January 4, the Relief Expedition came in contact with the Turks at Ali-el-Gharbi, about half-way between Kut and Amara. Moving forward on both sides of the river, Aylmer fought the Turks on January 6, 7 and 8, and on January 9 they fell back to their position on the Wadi. At this time Von der Goltz, who was present with the Turkish forces, relieved Nurredin Bey of command and replaced him by Khalil Pasha.

On January 13 Aylmer again attacked, this time on the left bank, while his monitors shelled the Turks on the right bank. The progress was slow as the Turks resisted fiercely. Aylmer already had 6,000 killed and wounded.

The winter rains begun and made progress slow. The enemy fell back slowly to the Umm-el-Hannah position and hung on there. On January 18 the rain stopped, but everything was flooded. In Kut all the front line trenches and part of the second line were flooded.

On January 21 Aylmer attacked again, but failed to dislodge the Turks and had to entrench in front of the enemy's position. His losses were heavy, and he had to ask for an armistice to bury his dead. It became evident that Aylmer with his force could not relieve Kut, and he entrenched himself in his position at El Hannah, some 20 miles from Kut, and waited for re-enforcements.

As soon as Townshend realized that Aylmer had failed, he put his force on half ration and commandeered all food in the town. A strict search was made, and much food was found in possession of the Arabs.

Originally the food supply for the Army in Kut had been based on a siege of two months. There was plenty for that time, and no account was taken of any in the hands of the Arabs. So when it was seen that relief would not come in two months (by February 1) steps were at once taken to put all troops and civilians on half rations, and it was calculated that they could hold out for two months longer, and still longer if the horses and mules were eaten.

The country was now a sea of mud, and it was impossible to move the men or guns. In Kut the men in the trenches were in water up to their knees, and the hospital was filled with sick.

Plans were made for a sortie from Kut with all able-bodied men but it was finally given up as too risky, as the Turks constantly strengthened their trenches across the Tigris from Kut, and if the sortie was discovered it would fail with heavy loss. Efforts were made to induce the Russian troops in Persia to make a demonstration toward Bagdad or Kut in order to cause the Turks to withdraw part of their forces at Kut, but nothing came of it.

At the end of January General Townshend had decided to hang on in Kut. It was found that there was food enough for 84 days, reduced rations, and it was believed that relief would come by that time.

However, news that the British had withdrawn from Gallipoli on January 9, and this would allow the Turks to bring troops from that area to the Bagdad section, and make it necessary for the British to send a very strong force to be able to cope with the Turks.

The troops were informed by General Townshend of the exact situation and of his determination to hold on. He appealed to them to help him hold Kut for the Empire. This appeal had good effect on the troops, and all were determined to hold on until the last cartridge and last bit of food was gone.

The total troops numbered 10,513; total to feed, including camp followers, 13,421, not including town Arabs. There had been 2,240 casualties since December 1. Early in February scurvy broke out among the troops due to lack of fresh vegetables. Seeds were planted in the gardens, and weeds of all kinds were cooked and eaten. Much trouble was experienced in getting the Indians (Mohammedans) to eat horse flesh, and it was only after the Indian religious authorities had given permission that any number of Indian troops would eat it.

The Turks had now completely invested Kut with trenches and wire, and there was little chance of the garrison breaking out.

The first week in February word came from Aylmer that he expected enough re-enforcements by February 15 to make another attempt at the relief of the place.

The annual floods, caused by melting snow in the mountains were due about March 1, and all in Kut went to work to build dikes to keep the water out. The Turks kept up a steady fire on the working parties, but the work went forward. Later in February more horses were killed and eaten to save grain.

There was firing every night, especially on the Wool Press village and the liquorice factory across the Tigris from the town, and German airplanes dropped bombs daily. On February 22 Aylmer attacked the El Hannah position, but the Turks did not retreat and the bombardment of the El Hannah positions continued.

At this time the Turks bombarded the liquorice factory, but did not attempt to assault. On February 29 Kut was bombarded with 21 guns and airplanes dropped bombs. The improvised anti-aircraft guns were of no use. The hospital, though plainly marked and flying Red Cross flags, was frequently bombed.

News came that the Russians were advancing through Persia and were at Kermanshah, and hopes were entertained of relief from that quarter, but it amounted to nothing.

About March 1, Aylmer planned an attack on the Es Sinn position, the objective being the Dujailah redoubt. This position was only about 7 miles from Kut on the line of works connecting the Tigris and the Hai. Townshend planned to co-operate with this force as soon as Aylmer's force reached the Dujailah redoubt.

This attack was planned for March 4, but bad weather caused it to be postponed until March 8, and the delay enabled the Turks to strengthen their line from the Dujailah redoubt to the Hai river. The British-Indian forces marched directly across the desert some 15 miles from their position to strike the Turks on their right flank near the Hai River, on the right bank of the Tigris. The march was made on the night of March 7-8, and it was planned to surprise the Turks and strike them at daylight March 8. They were late in arriving in the position for attack, and the Turks were ready for them when they arrived. The attack continued through March 8 and 9, but the British-Indian force was unable to break through and had to fall back to the starting point at Wadi, much to the disappointment of the garrison at Kut, which was ready to lend assistance as soon as the relieving force was near enough to Kut for such an effort to be of value. The British loss in this attack was 3,476 killed and wounded.

Townshend was convinced that the failure of Aylmer to break through would delay his relief for a considerable time, and immediately took steps to make his food last another month, or until April 15. He ordered 1000 animals killed to save grain, and further reduced the rations of the garrison.

On March 10, the Turkish commander, Khalil Pasha, proposed that the garrison surrender, stating that the Turks knew that the garrison was short of food and had much sickness; that it had done its whole duty, and it had no chance of being relieved it should surrender. General Townshend refused to consider the proposition.

The repulse of General Aylmer's force on March 8 and 9 had a bad effect on the troops in Kut, and desertions among the Indians increased. The Arabs in the town believed that Kut was lost, and Townshend knew that unless relief came by April 15 he would have to surrender on account of lack of food.

On March 12 General Aylmer was relieved from command of the Relief Force and replaced by General Gorringe, who had captured Nasiriyeh in July 1915. Aylmer had had hard luck; the weather was against him all the time.

The Spring floods now began, and on March 15-16 flooded the front line trenches in Kut and caused them to be vacated. The Turks also were driven out of their first line trenches and as they fell back the British killed a large number. The Turks began to bombard Kut again both day and night, and the German airplanes bombed the place daily, On one occasion they bombed the hospital, killing and wounding 32 sick and wounded men.

The latter part of March was very hard on the garrison. There was the continued bombardment; an increase in cases of scurvy and other diseases; and a constant struggle against the flooded Tigris. Every man had to work to strengthen the embankments, and the Indian troops were very weak.

On March 29 the ration was again reduced, to 10 ounces of grain. The Indian troops were weak and depressed. Many would not eat horse flesh. About 600 men were sick with scurvy, and there were no vegetables to give them. The men gathered grass and herbs and cooked them as spinach, but got some of the wrong kind which gave them dysentery. General Hoghton died from this cause.

About April 4 General Gorringe was ready to make an attempt to break through on the left bank. By underground work he had pushed to within 100 yards of the El Hannah position on the left bank of the Tigris. Early in the morning of April 5, Gorringe made his attack on the El Hannah position and carried the five lines of that position. The British now pushed forward on both banks and by night captured the Falahiyeh position, 6000 yards up the river from the El Hannah position. They were now up to the Sanna-i-yat position and there they attacked on April 6, but the Tigris broke its banks and flooded all the country, and the troops found it impossible to advance through the flood and mud.

But they hung on to what they had, and on April 9 again attacked the Sanna-i-yat, but were stopped. The news of this repulse caused the ration in Kut to be reduced to 5 ounces of meat. This with horse meat would last until April 21.

On April 12, Gorringe attacked on the right bank, and on April 17 carried the strong Beit Eissa position opposite to and slightly up river from the Sanna-i-yat position, and 4 miles down river from Es Sinn. The Turks counter-attacked on the Beit Eissa position but lost heavily, including many German officers who led the attack, and the British held the work.

On April 16 British airplanes began an attempt to drop food into Kut. With the troops and town

people there were close to 18,000 people to be fed, and 5000 lbs. of food was required per day on a 6-ounce ration. The first day the planes dropped about 3500 lbs., the second day 1500 lbs., and the attempt was a failure. If the weather was good there was engine trouble or German planes; if the weather was bad they could not operate.

Another attempt was made to get the Indians to eat horse meat, and a threat to replace all non-meat eating officers and N. C. O.'s who became too weak to do duty with strong meat eaters induced over 7,000 Indians to eat meat, but about 1,500 refused. By April 14 the town Arabs were out of grain and were eating donkeys and ponies of the town. As soon as it was seen that the airplanes could not bring food in sufficient quantities, the ration was cut to 4 ounces of meat per day, on April 17.

Re-enforcements reached the Relief Force about April 17, and on that date they had over 29,000 Infantry and 1,500 Cavalry and 133 guns.

On April 20 Gorringe attacked on the right bank but could make no progress. Then on April 22 he again attacked the Sanna-i-yat position. This was very strong. A very narrow front running from the Tigris to an impassable swamp so narrow that only a brigade in line could attack, and on flanking movement was possible. The British took two lines of trenches, but the Turks threw them out so the attack was stopped.

Gorringe wired Townshend that he had been repulsed but would make another effort. But he had lost one-third of his Army and could not attack again.

Townshend saw that nothing but a miracle could relieve them. His men were so weak that they fainted on guard duty; could do no fatigue, and men were dying at the rate of 15 per day from scurvy and starvation. The town Arabs could not be forced out, as the Turks would kill them or force them back.

The last attempt to relieve Kut was made on the night of April 24-25, 1916. As a last attempt, when everything else failed, it was determined to try to put food in Kut by steamer, so on the night of April 24-25 the steamer "Julnat", with a Navy crew and 270 tons of food, started to make the attempt. She got as far as Magasis Ferry where she ran into a great chain stretched across the river which ran her ashore, where she was shelled and set on fire. Both her officers were killed, and her crew killed or made prisoners. This was the last attempt to relieve the garrison.

The rations would last only until April 29. There was no chance of Gorringe's getting through with his present force, and on April 25 the Commander in Chief in Mesopotamia, by direction of the Indian Government, ordered General Townshend to enter into negotiations with the Turks for the surrender of Kut.

The place had resisted 147 days, from December 3, 1915. There was no food left. The Relief Force could not get in. There was nothing to do but surrender. So, on April 26, General Townshend was compelled to open negotiations with Khalil Pasha for the surrender of the town and to ask for terms. Khalil replied that the town had made a wonderful defense and was entitled to great honor therefore, but demanded unconditional surrender. General Townshend was to be sent to Constantinople as an honored guest of the nation. His officers and men were to be sent to Asia Minor to the seacoast, where they could regain their health, all to be transported by rail and animal transportation and not to be made to march on account of their weakened condition.

There was nothing to do but to accept the conditions, and on April 28 all guns, ammunition and signal equipment (wireless etc.) were destroyed. On April 29, 1916, the British flag was hauled down and burned to prevent its falling into the hands of the enemy, and the white flag hoisted over Kut. A Turkish battalion marched in, and Kut was once more in Turkish hands.

Khalil Pasha came to Kut to see General Townshend, but refused to accept Townshend's sabre and pistols.

On April 29, General Townshend was taken to Bagdad, accompanied by one of his officers. Then he continued on to Constantinople where he was kept a prisoner until October, 1918, being treated with much honor by the Turkish Government. In 1918, while still a prisoner, he was instrumental in bringing about an armistice between the Turkish Government and Great Britain, being released for this purpose.

His senior officers were taken to Asia Minor and held prisoners until October, 1918. They appear to have been well treated. The junior officers and enlisted men, both British and Indian, received brutal

treatment through the Germans with the Turkish Army. In their terribly weakened condition they had to march from Bagdad to Asia Minor. Many died on the march and in the prison camp, and very few ever returned to England or India.

THE TACTICS OF THE MESOPOTAMIA CAMPAIGN.

A careful study of the Mesopotamian campaign convinces one that the tactics employed in the various engagements, large and small, were sound, and that the plans of the various engagements were well thought out. From October, 1914, to November, 1915, the British-Indian forces were successful in all engagements, and generally against superior numbers.

There appears to have been a tendency in early engagements to frontal attacks, but this may have been necessary on account of the condition of the country, as at Kurna, May 31, 1915.

The failure to gain as decisive a victory at Kut in September, 1915, was not due to faulty tactics on the part of General Townshend, but due rather to the failure of a subordinate officer to carry out the turning movement as planned by the Commanding General.

The defeat at Ctesiphon, for so it must be considered, was due solely to lack of sufficient troops to overcome the Turkish re-enforcements. The attack there was well planned and well executed. Although the original Turkish force was not less than the British and strongly entrenched, it is certain that it would have been beaten had not strong re-enforcements arrived just when they did.

The failure to have sufficient troops to win this fight was no fault of General Townshend. He had advised against making the attempt against Bagdad unless he was given double the force he actually had, fearing just what finally happened—the arrival of Turkish re-enforcements. His tactics in this fight were sound, and he would have won with anything like equal numbers against him.

His retreat from Ctesiphon to Kut was an excellent piece of work, and his rear guard action at Umm-el-Tubal, and his subsequent withdrawal from this action, was well planned and very well executed.

The defense of Kut from December, 1915, to May, 1916, was skillfully planned and executed. It is enough to say that the Turks in vastly superior numbers failed to break the defense at any point, and the garrison only surrendered to starvation.

The retention of the Arab population in Kut might be considered an error, and was so considered by General Townshend before the end of the siege. However, political pressure played a part here, as elsewhere.

The failure of the relief expeditions can hardly be ascribed to faulty tactics.

At times there may have been a tendency to frontal attacks when flank attacks or turning movements might have been employed, but here again there may have been cause for frontal attacks which are not well known. It is known, however, that the great waterless deserts rendered wide turning movements impossible without adequate land transportation, which could not be obtained.

Then, again, the terrible weather made the river the only road for many days, and made frontal attacks the only attacks which could be used. Then, too, the necessity for making every possible effort to relieve Kut often led the fighting force into tactical situations not of the best, in the hope that the relief force might break through.

The disastrous ending of the Mesopotamian campaign in May, 1916, was due solely to the failure of Sir John Nixon and his staff in Mesopotamia, the Indian Government, and the British Cabinet to grasp the necessity for a large force to carry out the work they forced upon General Townshend. This failure to supply him with sufficient troops, transportation and medical supplies, after they had been warned and advised by General Townshend and the military leaders in India and London, was a blunder, and a crime against the brave soldiers who fought from the Persian Gulf almost to Bagdad.

The soldiers and sailors who fought in this campaign uphold in every way the honor of their country. Their temporary failure at Bagdad and Kut was due to their country's neglect and failure to properly support them.

THE LESSONS OF THE CAMPAIGN.

The principal lessons of this campaign are:

1. That in a secondary campaign, a purely offensive operation should never be attempted.

The policy should be a defensive one, for any pure offensive will draw support from the main theatre of operations and may endanger the main campaign.

The original plan in Mesopotamia was defensive—to secure the head of the Persian Gulf and the oil fields in nearby Persia. This was accomplished when Amara was taken, or certainly when Kut was captured in September, 1915. It was not necessary to advance beyond Kut to maintain the position in Mesopotamia, and the advance on Bagdad was an offensive operation in violation of all sound military principles. It was clearly a political move, made for effect, against judgement of able military leaders, and its purpose would have been gained by the success of the operations in the main theatre of war without the tremendous cost of lives and money. If England won in Europe, she would have won in Mesopotamia; but winning in Mesopotamia did not mean the winning of the war in Europe.

2. Long lines of communication must be manned by lines of communication troops, and not by troops from the first line, the fighting force.

Practically no provision was made for separate line of communication troops for the long line up the Tigris, but the Army in the field was required to furnish them, thus daily decreasing the fighting force.

3. That the strength of the Infantry decides the battle.

This was most true in this campaign, and was many times commented upon by General Townshend.

When it came to the final assault, it was the Infantry upon whom he depended and who were called upon to drive the Turks from their almost impregnable trenches.

4. That any increase of the actual fighting force calls for a proportional increase of all auxiliary and supply departments.

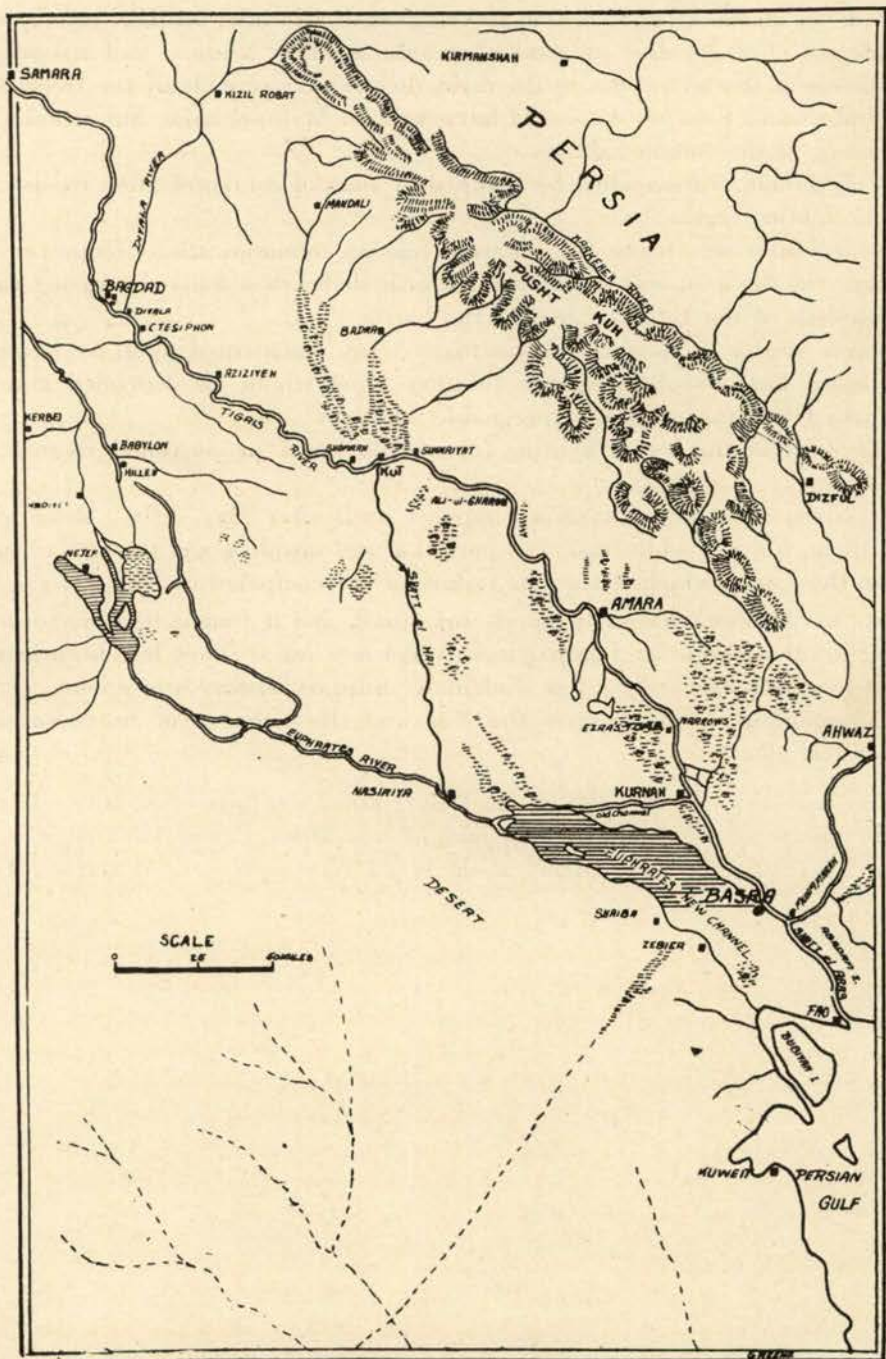
This was not realized in the Mesopotamia campaign until after May, 1916. Re-enforcements of fighting troops were sent them, but not additional transportation and supplies, and the lack of such transportation and supplies added to the causes which led to the failure of the campaign in May, 1916.

Later, the Army in Mesopotamia was properly organized, and it fought itself victoriously into Bagdad.

The lessons in the Mesopotamian Campaign were not new ones. They had been learned in many previous wars but always forgotten except by a few students of military history and science.

The story of Mesopotamia is the story of the Nile and the Crimea; of brave soldiers sacrificed for political ends and political glory.

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THE MESOPOTAMIA CAMPAIGN FROM THE FALL OF KUT-
EL-AMARA TO THE END OF THE WAR.

—BY—

Capt. J. A. Stewart, Infantry

GENERAL SITUATION AFTER THE FALL OF KUT.

To say that the surrender of Townshend and his entire force was a blow to the British Army, and therefore, to the Allied Cause as a whole, would be putting it very lightly. It was a disaster, realized and keenly felt. The military reasons for this are quite plain and there were political reasons just as evident and just as strong. It had, however, in one way, a wholesome effect. It opened the eyes of the English to the real situation and made them see that the only answer to the challenge which Turkey had thrown down to the world, was to completely crush and destroy her as a world power and furthermore, that this could not be done by following the timid, hesitating policy which had been in vogue up to this time. Consequently, there was a decided change, with the result that within a few months after hostilities were resumed, December 1916, the whole military aspect in Mesopotamia looked decidedly brighter. That is, as far as the Allies were concerned.

Turkey herself was safe for the time being, but by no means secure. Her victories were due to the mistakes of her enemies, rather than to the brilliant feats of her own armies in the field. She had suffered heavy casualties and was further weakened by every form of internal distraction and misgovernment at home. Moreover, with her fighting forces scattered as they were, she was facing the possibility of the Russians in the Caucasus uniting with the British in Mesopotamia and Egypt in which case, she was chancing a decisive defeat in the field that would put her out of action for good. At that time, half of her divisions were detained in the Caucasus, the 13th Corps was in Persia to watch Baratov and his division of Russians, the 18th Corps was opposing the British in Mesopotamia, there were five divisions in Syria, six in Galicia and small detachments at Gallipoli and on the Struma.

The 18th Corps, commanded by Khalil Pasha, comprised of three regular divisions and some tribal contingents of no great fighting value. This force had, after their victory over the English, shown no inclination to advance from the scene of triumph but had, on the other hand, abandoned the Es Sinn position and had withdrawn to an entrenched camp extending almost all around Kut. On the left bank of the Tigris they still held on to the Sinna-i-yat positions. Evidently they believed that there was nothing more to be feared from the English and were content to simply hold what they had.

On the contrary, the British Army was actually getting ready to resume offensive operations. This could not be done immediately, due to the weakened condition of the army and the inadequacy of its war materials of all kinds. However during the seven months' cessation of hostilities that necessarily followed, General Sir Percy Lake, the Army Commander, concentrated all his efforts and wonderful powers of organization on building up, reorganizing and perfecting his lines of communications and properly equipping, reorganizing and re-enforcing his army, with the view of taking the field on the advent of cool weather. In this he was aided by the fact, as stated before, that the people at home were now thoroughly alive to the situation. On August 13, 1916, he was succeeded by General Sir Stanley Maude, who from that time to the latter days of November, labored unceasingly to perfect and complete the plans and work so well laid out and begun by General Lake. By the beginning of December, he had things in such a shape that he felt justified in embarking upon offensive operations of a far-reaching kind. Accordingly, on December 13, 1916, the British Army struck its first blow for the recovery of Kut.

CAMPAIGN FROM DECEMBER 13, 1916 TO THE FALL OF
BAGDAD, MARCH 11, 1917.

The Turks, as we have seen, had, after their victory at Kut, abandoned the old Es Sinn position and withdrawn to an entrenched camp surrounding Kut. This camp extended from a point in the vicinity of Magsis on the Tigris, across the Khadairi Bend to a point about three or four miles below the junction of the Shatt-el-Hai and the Tigris, thence across Dahra Bend to a point opposite the southern end of Shumran Bend. The inner defenses on this bank divided into three sections—the works in the Khadairi Bend,

astride the Hai and those in Dhara Bend. Each might be held independently of the others or any two independently of the third. On the left bank of the Tigris they still held the Sanna-i-yat positions and a series of reserve trenches extending all the way back to Kut. The whole defense system was very elaborate, well planned and well constructed. In fact, by the time the British were able to resume operations, the defenses of Kut had reached such a state of perfection that they were considered impregnable by both Germans and Turks.

At the opening of the campaign, the British Army, with its headquarters at Basra and advance headquarters and base at Kurna, was concentrated above Siekh Saad. It was divided into two army corps. The first under General A. S. Cobbe was on the right, astride the Tigris River. On the left bank his outpost was within 120 yards of the Sanna-i-yat position, while the right bank he more or less flanked, as far back as Magsis, the Turkish positions on the left bank. The second corps, under General W. R. Marshall, was on the left concentrated before the old Es Sinn positions. Its outposts on the right flank were within two miles of the Khadairi Bend and on the left, within five miles of the Hai positions. The reserves were at Nasiriyeh and a small flotilla of gun boats at Falahiyyeh.

The Turks' plan of action was briefly as follows: to hold the British on the Tigris while a vigorous campaign, which would threaten India, was being developed in Persia. If this campaign succeeded, they were to attempt to raise it against the Allies, and then throw all their weight against the British in Mesopotamia. At the same time, it was quite evident, that they intended to work down the Euphrates and threaten the British left.

General Maude was evidently aware of the enemy's intentions, because he decided not to disseminate his troops to meet this move but, instead, to take the offensive himself—beat them to it—in other words—and strike up the valley of the Tigris, Bagdad being his ultimate objective. Kut being his immediate objective, he planned to clear the right bank of the Tigris to well above that city, and then, when these dispositions had taken effect, to force the Sanna-i-yat positions with his right.

Accordingly on the 12th and 13th of December 1916, General Cobbe heavily shelled the positions at Sanna-i-yat to make the Turks believe that the attack was coming there. On the 13th, General Marshall, after a night's march, attacked the Hai position. The attack was a complete surprise and the British, crossing the Hai at Atah and Basrugiyeh, drove in the Turkish outposts. Then, pivoting on the right flank, they turned north and advanced on both flanks of the Hai as far as Kalah. The next two days they pushed steadily forward and, by the 18th, had extended their grip on the enemy's defenses by breaching the outer defenses just east of the River Hai. An attempt to bridge the Tigris four miles west of the Shumran Bend failed and had to be given up.

Heavy rains now began to fall but, in spite of this, activities were not suspended. The next couple of weeks were spent by the British in making things uncomfortable for the Turks—consolidating their own positions and making preparedness for the clearing of Khadairi Bend and the Hai salient. The first task was assigned to General Cobbe and on January 9, 1917, he launched a strong attack against the first line and was successful. Successive attacks delivered on the 10th against the second line and from the 15th to the 18th against the third line, were completely successful, and by the 19th, the Bend was entirely cleared of Turks.

Marshall was now ready for the Hai salient. On the 25th, he attacked on both flanks of the river and on the east bank was successful—breaching the first and second lines on a breadth of more than a mile—but, on the west bank, they had a more difficult task and it was not until the 26th that the whole of the enemy's second line was taken. From January 26th to February 1st, there were repeated assaults on both faces of the salient and, on the latter date, the third line on the east bank was taken. A similar gain on the west bank, however, could not be held, so the next day Marshall extended his line toward the Tigris with the intention of operating against Dahra Bend. This forced the Turks to fall back February 4th to Liquorice Factory and a line across Dahra Bend.

The third phase of the attack opened on this line February 6th, just south of the Tigris. The Turks' center and right broke and the British pushing forward reached the Tigris opposite the southern end of the Shumran Peninsula and entrenched. Marshall now turned his attention to Liquorice Factory. For two days,

it was heavily shelled and on the 9th the Infantry attacked. The Turks were unable to hold and, on the 10th, abandoned it and took up a position well inside the Bend. On the 11th, the British right flank rested on the Tigris and the Turks in the Bend were isolated. A final assault was delivered February 15th against the position as it now stood. The Turks were cut in two and their left, which was pushed back against the river, surrendered. All that now remained of the Dahra position was a section of rear trenches about two miles long, flanked on both sides by the river. This fell under a night attack and by morning of the 16th, what was left of the Turkish force had withdrawn across the river.

Khalil Pasha's line now ran from the Sanna-i-yat position to the Shumran Bend. A naturally strong position, protected throughout its entire length by the Tigris, and with but one weak point—at Shumran Bend—where the line of communications met the battle line. Maude, therefore, determined to strike his enemy there and at the same time keep him occupied at Sanna-i-yat to prevent his re-enforcing Shumran with troops from that part of the line. In accordance with this plan, Cobbe, on February 17th, assaulted the Sanna-i-yat and, while unsuccessful at first, was more fortunate 5 days later—taking the first and second lines. On the night of the 22nd a feint was made at crossing the Tigris at Kut and Magsis. The Turkish Commander, occupied on both flanks, now became concerned about his center and to strengthen it moved troops in from Shumran Bend. This was just what Maude wanted and on the night of the 23rd he made his real attempt at crossing at two points on the southern end of the Shumran Peninsular. By dawn of the 24th Marshall had a foothold on the opposite bank and before evening was well inside the Bend, pushing steadily forward. On the same day Cobbe broke through the sixth and last trench line at Sanna-i-yat, and finding all the reserve trenches abandoned, pushed on and a little later entered Kut unopposed. The gunboats ordered up from Falahiyeh anchored off the city about the same time.

Supplies being guaranteed by the arrival of the gunboats, Maude determined to waste no time but to set out immediately after the Turks, who were now retreating toward Bagdad. On the night of February 24th the enemy's rear guard at Shumran decamped and on the 25th the pursuit began. The Cavalry to the north was on his right rear and the gunboats followed him up stream on his left. The retreat, which had been fairly orderly, now became a flight and so rapid was it that the Turks had, by the 27th, reached Aziziya—fifty miles from Kut. In spite of this the Cavalry and gunboats hung on and, on the 26th, the flotilla met the Turkish boats and either sunk or captured most of them.

On the 28th, Marshall reached Aziziya, where he was forced to stop in order to reorganize and give his supplies time to catch up. During the interval, Cobbe's column closed up and on March 5th the march was resumed. Marshall reached Zeur the same day and the Cavalry pushed on to Laj, where they had a successful skirmish with the Turks' rear guard. On the 6th, the Infantry was at Ctesiphon, which they found strongly fortified but empty, and the Cavalry was within three miles of the Diala. Cobbe had reached Zeur.

On the 7th, the British advance guard reached the Diala. Here it was evident that the Turks intended to make a stand. Marshall's first attempt to cross on the night of the 8th was but partially successful. On the 10th, he made another attempt at two points a mile apart and before night was in touch with the Turks' position along the ridge Tel Muhammed, the last position defending Bagdad from the East. In the meantime, on the 8th Maude constructed a bridge across the Tigris eight miles below the junction of the Diala and Tigris, moved Cobbe and his forces across and against the Turkish positions at Shawa Khan, covering Bagdad from the West. They were easily taken on the 9th and on the 10th, Cobbe pushed his Infantry to within three miles of the railroad station. His Cavalry coming in from the West was within two miles of the same place. The next day, March 11th, his troops entered the station while the advance guards penetrated the suburbs, only to find that the Turks were retreating up the river. Marshall discovered this move early in the morning and lost no time in taking up the pursuit. Cobbe's Cavalry was also pressing their rear guards from the West. However, a severe dust storm came up and the British, unable to keep contact, gave up the chase. Maude entered the city a couple of hours later and the British flag was hoisted over the Serail—the buildings of the Turkish Provincial Administration.

The fall of Bagdad was an event of first importance. It restored the British prestige in the East and deprived the central powers of a territory that had always played a vital part in their policy. It dealt the Turks a severe blow—broke forever their foothold in Persia and damaged their resources to such an extent

that they were never able to effectively reach against the British. But its chief claim to importance was the fact that it cheered the Allies and was proof to the world of the morale of the British Army.

MESOPOTAMIA AFTER THE FALL OF BAGDAD.

In spite of the brilliant feats just accomplished, the British soldier was still unable to rest on his laurels. Three measures were instantly and coincidentally necessary. The first was to beat the Turkish force at Kermanshahan to Khanikin. This force, the 13th corps, had, in 1916, advanced up the Diali against Baratov and his small column of Russians and had riven him back to the Persian Plain. When Kut fell, they—the Turks—fell back to Hamadam and, when Bagdad was taken, they were at Kermanshahan. They were now racing for Khanikin, to prevent being cut off. The second was to harass the 18th Corps in front to prevent their cutting important dams on the Tigris and Euphrates and to drive them beyond the railhead at Samarra. The third was to make the British left secure by seizing Feluja on the Euphrates.

To accomplish this Maude, divided his forces into four columns, one to advance on each side of the river, a third was to strike westward toward Feluja, and the fourth was to advance up the Diala Valley. On the 13th of March, the column on the west bank moved north, following the Bagdad Railroad, and on the 14th came in sight of the Turkish positions covering Mushadiya. These were taken by a Cavalry flanking movement and before night Mushadiya itself was in British hands—the enemy in full retreat toward Samarra.

The advantage, however, could not be followed up until the East bank was secure. The Turks still held Bakuba and it was necessary to dislodge them before any further move north could be made. So on March 15th, the Diala Valley column moved out and on the 17th captured the villages of Bahriz and Bakuba—the Turks falling back toward Khanikin. Coincident with this move, the British left column was advancing on Feduja, which they entered on the 19th just too late to cut off the garrison which retreated toward Ramadie.

Feluja having been secured, the Diala Valley column advanced on Shahraban and on the 23rd, drove the Turks out. The situation of the 13th Corps, which had been during this time racing for Khanikin, now became desperate. Cut off from their natural line of retreat by the capture of Bahriz, they had been forced to take the northern route through Piatak Pass. Baratov was pressing their rear guard—while Maude was making desperate efforts to cut them off at Khanikin. However, in this emergency, the Turkish Commander for once revealed true qualities of leadership and strategy. Leaving a strong rear guard at Piatak Pass, he succeeded in checking the Russians and against the British, he took up a position on the Jebel Hamrin Range near Mansuriya. Here the British attacked on the 25th, but were unsuccessful and fell back on Shahraban.

In the meantime, the column on the East bank of the Tigris had reached Deltawa and Sindia. An attempt on the part of the 13th Corps to reach Deltawa from Kizil Robot was checked and they fell back on Deli Abbas. The 18th Corps, which had been sent to help the 13th, had by this time taken up a position on the Shatt-el-Adhaim and, in conjunction with the 13th, again attempted to open the road to Deltawa by a converging movement. Maude, however, as usual, beat them to it. Holding Deli Abbas with his Cavalry, he struck the 18th Corps with the Eastern Tigris Column and on the 29th of March drove them back of the Adhaim. There was now nothing left for the 13th Corps but to retreat through Kifri. Kizil Robot was evacuated April 2nd, the Turkish force falling back on their main body north of Khanikin. On the same day, the British and Baratov's advance guards joined hands.

Maude now judged it advisable to push his operations yet farther along the Tigris on both banks and, on the 9th, the eastern column resumed its march north toward Samarra. In the meantime, however, on the 7th, the Turkish counter-offensive developed. The 18th and 13th Corps had been re-enforced and the 13th instead of making for Kifri, swung south toward Deltawa, following the Nahr Kalis Canal from Deli Abbas. On this occasion, keeping their left flank close to the Canal, the Turks advanced in close column, a manœuvre designed to resist attack by Cavalry. British mounted troops were sent to stop them but, although supported by artillery, were unable to hold up the advance and fell back slowly toward Deltawa. For a moment, it looked as though the movement would succeed but, on the 10th, Maude detached a part of his supports from the eastern column on the Shatt-el-Adhaim, turned them eastward and on the morning of the 11th, caught the Turk on his right flank. This move was a complete surprise and before night the Turks

were retreating. The flight, however, lasted until the 13th, by which date the 13th Corps had been driven back on the Jebel Hamrin Range.

The thrust from Deli Abbas disposed of, Maude turned his attention to the 18th Corps. On April 18th, he bridged the Shatt-el-Adhaim, pushed his Infantry across and the Turks immediately fell back. A brigade of cavalry was launched in pursuit and the retreat rapidly became a riot. Only a small portion of the Turks made good their escape and the 18th Corps was broken up.

There was now no Turkish force of any consequence on the eastern bank of the Tigris. On the opposite bank, however, the enemy still had troops in the vicinity of Samarra, with an advance position at Istabulat. Here, the Western column attacked on the 21st. That night, the Turks began to evacuate and, at day-break of the 22nd, the whole British force was on the move in pursuit. The chase continued as far as the final position covering Samarra. At dawn on the 23rd, Samarra Station was taken and the town itself occupied on the 24th—the Turks retreating up both banks of the river toward Tekrit.

On the same day, April 24, the Turks made one last attempt at a counter stroke. The 13th Corps, which was still hanging on the British right flank, emerged from the Jebel Hamrin hills but was defeated and driven back up the Shatt-el-Adhaim. On the 30th, the British again attacked them about twenty-five miles south of Kifri and drove them north.

Bagdad was now secure and the German power in Mesopotamia broken. The five months of hot weather which followed made campaigning impracticable and, while no necessary precautions were neglected, Maude withdrew the bulk of his forces in reserve, leaving only sufficient troops to guard the positions won. The months of inaction were spent by reorganizing and making plans for the autumn campaign.

The summer, however, was not without its incidents. As weeks passed, it became probable that the advent of cool weather would bring a serious enemy offensive. Russia's weakness was already making itself felt and it was quite apparent too, that German did not mean to let Mesopotamia slip through her hands. Falkenhayn was at Aleppo with fresh German and Turkish divisions and was reported that he felt secure enough in Syria to use his strength for the recovery of Bagdad. Baratov, not being able to endure the heat, had fallen back to Kermanshahan. Maude's strategical position was, therefore, not an easy one. He was seven hundred miles from his base. On the right, he had the uncertain factor of Persia, in front, the remnant of the 18th Corps entrenched around Tekrit and drawing re-enforcements from Mosul and on the left, the Euphrates Valley with its caravan route to Aleppo, down which Falkenhayn was free to advance on the British left at Feluja. There was a small force of Turks and Arabs under Ahmed Bey at Ramadie. Luckily the Syrian Desert circumscribed the area of surprise but in spite of this, Feluja was the weak point because in the advance on Samarra, the center had been pushed far in advance. It was decided, therefore, to bring the left up.

On the 8th of July, the British left column at Feluja advanced north and occupied the high ground known as Sinn-el-Zibban, twelve miles above Feluja. On the following morning, contact had been established with the enemy's outpost and these driven in but before the operations could proceed any further, a blinding sandstorm came up, accompanied by a heat wave. These conditions continued until the 14th and the contemplated attack had to be abandoned. The column withdrew to Sinn-el-Zibban. The enterprise, however, was not given up and preparations for it went on until September.

On the east bank of the River Tigris, another small engagement took place in August. The British had withdrawn back of the Diala and the Turk emboldened by this was advancing southwest from Shaharavan. This made it necessary for the British to re-occupy the city. On the 18th, a column advanced from Bakuba and another from west of the Diala. The Turks fell back and Shaharavan was taken without opposition.

With the advent of September, came cool weather and plans matured for the attack on Ramadie. Ahmed Bey had been re-enforced and had taken up a position on Mushaid Ridge. Three miles behind this lay the Turkish main position—a semicircle around Ramadie—flanked on one side by the Euphrates and on the other by the Habbaniyeh Lake and protected in front and rear by the Habbaniyeh Canal and make his principal attack from the south, while the cavalry moving west of Aziziyeh Canal flung themselves across the Aleppo Road and cut the Turks' communications with Hit. At the same time, troops were distributed

so as to suggest an attack on the Turkish left from across the river.

September 27th the Infantry and Cavalry moved out and that night the Cavalry succeeded in turning the southern flank of Mushaid Ridge. At dawn on the 28th, the Turks seeing what had happened, evacuated the Ridge and fell back on their main positions. About 7 a. m., the Cavalry moved on a wide sweeping movement to the south and west, crossed the two Canals and, keeping well south of Ramadie, was presently astride the Aleppo Road. The British were now in position, the Infantry having in the meantime advanced in two columns from Mushaid Ridge. Both columns attacked simultaneously—the left on the southern front and the right near the town. By night, the Turks were completely hemmed in, except on the north, and their only chance to escape was to break this by a counter-attack. At 3 a. m., on the 29th, Ahmed Bey tried to get away by a strong attack delivered against the Cavalry, but was unsuccessful and withdrew back into Ramadie. At 6 a. m., the attack by the British Infantry was resumed and before noon Ahmed Bey surrendered.

Simultaneously with the operations at Ramadie, the British right column, by a bold move from the Deltawa through Bakuba, struck northeast to Mendali. This small town was used by the Turks as a jumping off place for raids on the British lines of communications. It was taken on the 29th, the small garrison fleeing into the hills. During October, Maude continued to improve this side of his position. The Turks were driven from the Diala into the Jebel Hamrin toward Kifri and Kizal Robot was occupied. With his flanks cleared, Maude was now ready to continue his advance up the Tigris.

On October 23, the 118th Corps, which had been entrenched about Yekrit, advanced toward Samarra but fell back on the appearance of the British troops. On November 2nd, Maude's advance guards came upon them in position at Daur. He attacked at once and the Turks fell back to Tekrit, followed by the British. Here Maude again attacked on November 5th and carried the first and second lines, at the same time turning the Turks' right flank with his cavalry. This forced them to evacuate their positions and retire up the river, leaving Tekrit in British hands.

Maude was now within one hundred miles of Mosul, but the river at this point is so full of rapids that the water transportation could not come up and before the advance could be continued, it was necessary to clear new advance bases at Kifri and Kirkuk. However, before he could put this move into execution or reap the reward of his brilliant campaign, he died November 18, 1917 with acute cholera and was buried outside the Old North Gate of Bagdad, with the military honors he so well deserved. The command in Mesopotamia fell into the capable hands of General Marshall.

From then on, until October 26, 1918, the British forces were occupied chiefly in consolidating their positions and redeeming the country itself. Only two minor engagements took place. One at Bagdadie March 26, 1918, in which the British using the same tactics employed at Ramadie, completely defeated the Turks—took the bulk of their forces prisoners and pursued the remainder to well above Ana. The other was the dash up the Mosul Road from Sakaltulan. This move was intended to prevent small columns of the enemy getting into Persia. The Turks, who were at Kifri, immediately fell back, followed by British cavalry. Two small engagements took place—one at Ak Su Pass, April 28, and the other at Tez Kermath on the 29th. In both, the Turks were defeated and driven back beyond the Lesser Zab. On May 27, the British entered Kirkuk.

In the meantime the British, under General Allenby, had been waging a very brilliant campaign against the Turks in Syria, and their successes were completed by the capture of Aleppo, October 26, 1918. This was the signal for Marshall to advance up the Tigris. This was done in two columns. One advanced up the Tigris and the other followed the Kifri-Kirkuk-Keupri Road. This left column forced the Turks steadily back and on the 30th of October, compelled his surrender by cutting his line of retreat with cavalry. On the other hand, the right column had taken Kirkuk on the 25th and advanced to Keupri. Mosul was now in Marshall's grasp and on November 3rd, he entered the city unopposed, the Turks having in the meantime surrendered. The Armistice was signed November 30, and the next day Turkey laid down her arms, agreeing to all terms demanded by the Allies.

This brought to an end the hopes of the Central Powers and left Germany with no crutch to lean upon, except her armies on the Western Front.

ANALYSIS & CRITICISMS.

Maude's conduct of the second phase of the Mesopotamia Campaign might well be taken as a model. His strategical schemes were as brilliant as they were simple. They were worked out with greatest care to details and just as thoroughly carried out. His leaders were well chosen and each branch of the army employed in the best way to obtain its maximum effect. The tactical work was marked by great ingenuity and resourcefulness, leadership was excellent, the courage, stamina and punch of the troops super-excellent. The costly blunders and mistakes so much in evidence on the other fronts were, in this theater of operations, conspicuous by their absence. The machine-like smoothness with which the army worked is proof of the above. Only once did plans fail to carry. That was at Ramadie and was due to an act of God, not to any failure on the part of the British Army.

On the Turkish side, we find things pretty much the opposite. The generalship and leadership were far below the standard set by the British. This was especially noticeable after the recapture of Kut. Reconnaissance and intelligence were very poor, as shown by the fact that the Turkish commanders were frequently in the dark as to what the enemy were doing, or else misinterpreted their moves. Their defensive positions were usually well chosen as far as natural defenses were concerned but there was a repeated failure to use these obstacles to best and fullest advantages. No special attention—or none at all—was given to flank protection. There was a decided lack of co-operation between the 18th and 13th Corps—moreover, after the 18th was driven out of Kut, neither seemed to have a definite plan in view, other than to fall back. The Turkish soldier, himself, was excellent when fighting behind prepared defenses, but once driven out was helpless and consequently suffered heavy casualties.

The army as a whole lacked punch and the will to annoy and to inflict as many casualties as possible on the enemy. Their failure to follow up the victory at Kut is an example. Time and again, they fell back without firing a shot, when by holding out for a while they might have at least made the British deploy and inflicted some casualties in payment for the ground lost. This, of course, was due, in some measure, to the fact that at this time the morale of the Turks was low. Internal troubles were making themselves felt and besides their hearts were never really in the fight. Aside from that, however, the Turks were simply out-generaled, out-manœvered and out-fought.

LESSONS LEARNED.

There are no new lessons to be learned from this campaign. Known and recognized truths are simply emphasized and proven. We have first—

1. The absolute need of well-organized lines of communication. The British failure in the first phase was, in a large part, due to the breaking down of their transport system—their success in the second phase, to its perfection.
2. The value of a well organized, well trained and properly equipped army. Green troops could never have stood the test in this war of manœuver.
3. Intelligence Section—Constant Reconnaissance. Maude was at all times in touch with the enemy and could, therefore, easily meet every move.
4. Generalship and Leadership. Compare the actual fighting value of the two armies.
5. Simple plans and attention to detail are essential if operations are to run smoothly.
6. Staffs must be permitted to function. Subordinate commanders allowed freedom, as far as the general plans permit.
7. Best results can only be obtained when each branch of the service is used the best way, or proper way, to obtain its maximum effect.
8. By close co-operation, the Navy can render great assistance to the Army.
9. Stationary warfare is only temporary. Open warfare is what each commander should strive for and he must keep his troops trained to meet it when it comes.
10. Natural obstacles, or well-constructed defenses, alone, will not hold a determined enemy.
11. Flank protection is of vital importance. The Turks' failure to observe this permitted Maude to frequently manœuver them out of position.
12. Mass formation, while it may be effective against cavalry, is too dangerous a method to employ in modern warfare.

13. Close co-operation between different forces is necessary. The 13th and 18th Corps failed to observe this rule and were nearly annihilated.
14. A victory must be followed up. The enemy should never be given a chance to rest or reorganize.
15. Morale of troops must be high.

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THE OPERATIONS IN PALESTINE FROM JUNE 1917 TO END OF THE WAR.

—BY—

Capt. Harry W. Caygill, Infantry.

NARRATIVE.

I. AN INTRODUCTION— THE EVENTS PRIOR TO JUNE 1917.

In February 1915 the Turks, operating from Syria, sent an expedition against the Suez Canal. This column suffered defeat at the hands of a British force composed for the most part of East Indian and Colonial troops who had been collected in Egypt for the protection of the canal.

Upon the withdrawal of the Allies from Gallipoli, additional British troops were sent to Egypt thereby strengthening to a considerable degree the defenses of Egypt and the Suez.

In August 1916 the Turks again attacked the Suez positions where they were routed by the British.

In the fall of the same year the British forces under the command of Gen. Sir Archibald Murray took the offensive and in a campaign of some three months pressed the Turks back over the Sinai Desert to the Gaza-Beersheba line. The campaign was one of untold hardship, the British being forced to construct a railroad across the desert as they advanced slowly north and to build hundred of miles of piping to furnish water from Egypt for the expeditionary force.

In March 1917 General Murray attacked the city of Gaza. The assault was a failure. In April a second blow was struck at the Turkish positions around Gaza. This attempt also resulted unfavorably for the British who suffered heavy losses and made only minor gains.

II. EVENTS FROM THE BREAKING OF THE GAZA-BEERSHEBA LINE TO THE FALL OF JERUSALEM.

I. The opposing Forces and their Positions.

In the latter part of June 1917 General Sir Edmund Allenby assumed command of the Egyptian Expeditionary Force, relieving General Murray. At this time the Turkish front was some thirty miles long, extending from Gaza to Beersheba. Gaza since the battles for its control earlier in the year, had been made a fortress of no mean strength. The surrounding sand dunes and hills had been intrenched and heavily wired. From its vicinity the Turkish lines ran in general along the main road to Beersheba. They comprised a series of strong points and redoubts, practically a continuous line except for a rugged $4\frac{1}{2}$ mile gap between the outer defenses of Beersheba and the left of the main Turkish positions.

Beersheba was in reality an isolated position, not so strongly fortified as the western section of the Turkish line and somewhat easier to approach from the south. To the east of Beersheba lay a great desert area which, with the exception of a few lines of trenches close to the town, the Turks considered sufficient protection for their left flank.

The British front extended inland from the coast twenty-two miles. At Gaza a mile separated the hostile positions. At the extreme left of the British line, however, the opposing forces were about ten miles apart, a desert lying between them.

The Turkish communications were fair. A narrow gauge railroad connected the defense system of Gaza with the north, the southern terminus being about five miles north of the city. Beersheba likewise was connected with the north by the main railroad to Damascus.

The road from Gaza to Beersheba, formerly hardly more than a poor wagon trail, had been transformed by the Turks under German direction into a good motor road which permitted lateral communication for the Turkish forces. With such a system of communications the Turks could without great difficulty reinforce any threatened point on their thirty mile front.

In the rear of the British positions, on the other hand, there were no good roads. The greatest difficulties were to be overcome in forwarding water and supplies to the front line positions. As rapidly as materials could be brought from Egypt, Allenby pushed the construction of branches of the Desert Railroad, one section being built to a point ten miles due west of Beersheba. To his right wing he allotted practically the whole of his animal transport which consisted for the most part of the 30,000 camels of the Imperial Camel Corps.

The Turkish force was situated in a comparatively fertile and well-watered land, whereas the British advance had been halted on the edge of the Sinai Desert.

Under the German General, Kress von Kressenstein, the Turkish VIII Army with six infantry divisions held the Gaza sector. Facing him was the British XXI Corps under Gen. Sir E. Bulfin, comprising three infantry divisions and a French detachment. Further to the British right was the XX Corps of two infantry and one mounted division under Gen. Sir P. Chetwode. In addition to these two corps Allenby had under his command the Desert Mounted Corps of three mounted divisions commanded by Gen. Sir H. Chauvel. For the defense of the Beersheba region the Turkish force available was the VII Army under Feozi Pasha which, when the British operations commenced, consisted of three infantry divisions and one cavalry division.

In all, the Turkish force of nine infantry and one cavalry division numbered some 180,000 men while the British strength was about 81,000 infantry and 18,700 mounted troops, together with the Camel Corps and other supporting units.

II. THE CAPTURE OF BEERSHEBA.

Shortly after his arrival in Palestine Allenby visited the front in order to determine the conditions under which the offensive might again be taken. His plan, approved by the War Cabinet, was to turn the main Turkish line on its left striking at the so-called Sheria position and thus to secure an open flank upon which to operate against the rest of the Turkish line extending to Gaza from the rear.

But for a starting point for such an attempt Beersheba must first be taken. This town in British hands, the Turks' left might be attacked from the hilly country from a north and east direction. For the attack on Beersheba and the attempt which was to follow on the Turkish left Allenby determined to employ the XX Corps in a frontal attack and the Desert Mounted Corps. The latter was to make a wide circling movement out into the desert and to close in on Beersheba from the east.

The attack on Beersheba was set for the morning of October 31st. Three days prior a bombardment of the Gaza positions was opened by the artillery, aided later by a flotilla of British and French war vessels, an effort being made to lead the Turks into believing that the right of their lines was to be assaulted.

Shortly after daybreak on the 31st, following a heavy bombardment of the Turkish lines, the advanced posts of the Beersheba defense system fell to the XX Corps. By noon the main assault was under way, and an hour later despite heavy losses due to the accuracy of the Turkish artillery fire, the main positions south of the Wadi Saba, a river south of the town, had fallen. By nightfall the Turkish defense lines north of the Wadi Saba were in British hands.

In the meanwhile the Desert Mounted Corps, after a thirty mile overnight march had closed in from the east, seized the strongly fortified Tel Es Saba, a 1,000 foot hill, after a bitter struggle, and just before dark had charged straight at the town. The resistance of the Turks was broken by this cavalry charge, and 2,000 prisoners among them some German machine gunners were taken.

III. THE ATTACK ON THE SHERIA POSITION.

To draw the Turks as far as possible away from the Sheria position Allenby on November 2nd attacked the Gaza fortifications on a 6,000 yard front making an advance at the deepest point of about 3,000 yards. In that the Turks were forced to rush one division from their reserves into the Gaza lines, the object of the attempt was considered achieved.

But the Turks were not blind to the grave situation in which the fall of Beersheba had placed their whole line. They strove at once to draw a large body of British troops into the waterless rugged country to the north of Beersheba, and despite the action of the British around Gaza, augmented their forces in this section. The British in the meanwhile had sent forces into the hills due north of Beersheba and up the Hebron road to secure their right flank for the coming attack on the Sheria position.

The British found their progress towards Hebron bitterly opposed. In fact, the Turks took the offensive for a time and made several heavy attacks. The British, nevertheless, seized some flank positions and held them though failing to make the desired gains. The most intense fighting in this sector took place in the vicinity of the Tel Khuweilfe pass which the British failed to seize but held the east end against their adversaries.

Despite the partial reverses in the region north of Beersheba, Allenby refused to permit this threat against his right flank to dissuade him from his original plan of attacking the Turkish left.

Lack of water and transportation difficulties delayed the launching of the main attack for several days. On November 6th, however, Allenby with four divisions broke through the Turkish line between the left of the VIII Army and the right of the VII. His plan had been to push the cavalry of the Desert Mounted Corps through the gap when resistance had been overcome and to have the mounted troops sweep through behind Sheria to cut off the enemy retreat from Gaza.

The Turks fought bitterly, but Allenby's attack had smashed their lines and by 5:00 p. m. they were in retreat. Seven miles of their defense fell on the 6th. But so stubborn was their fighting that it was not until the following morning that the cavalry was able to push through in the attempt to encircle the retreating Ottermans and to get in rear of Gaza.

Then it was too late. With the center of the Turkish line gone, Von Kressenstein had already determined to evacuate Gaza and did so on the night of the 6th, masking his withdrawal by rearguard action. Hence, the forces of Gen. Bulfin who had been ordered to attack the city on the morning of the 7th had to overcome only slight resistance from the outposts and the city was soon in their hands.

By November 8th the whole of the former Turkish position was in the possession of the British, the VIII Turkish Army was in retreat north along the narrow gauge railroad, and the VII Army had fallen back on the Hebron road. In this action the Turkish force had lost 15,000 in casualties, 5,000 being prisoners. Only the fact that they had fought courageously after the breaking of their line had served to stave off what might have become a disaster for them had the British cavalry been able to cut off their retreat.

IV. THE TURKISH RETREAT FROM THE GAZA LINE.

Allenby's problem now was a rapid pursuit of the partly demoralized Turkish forces. In this advance again he had to overcome supply and water difficulties. But his comparatively large cavalry force could operate with celerity on the Philistian plain and was of inestimable value to him.

The British left, moving along the coastal plain, advanced with greater speed than did the right which was in the hilly country. In spite of stubborn resistance on the part of the Turk at several points the Turkish forces were gradually swung from their former east-west position to one running in general north to south. By the 13th of November the Turkish line ran from El Kubeibeh south-east to Beit Jebrim and thence to the Hebron road.

On that date Allenby struck the Turkish lines in an effort to take what was known as Junction Station, a vital point in the enemy's communications. Success in this operation would serve to cut the Turkish forces in two. Katrah and El Mughar fell on the 13th and the following day the British had Junction Station. The Turks, their force split in two, were retreating north and east.

The pursuit was continued and by the 16th Jaffa which had been outflanked owing to the seizure of towns along the Jaffa-Jerusalem road, was evacuated by the Turks. The possession of this port solved to some extent the supply problem for Allenby.

Allenby had continued with his advance against the Turkish right despite the fact that the VII Army had made some demonstrations on his right flank. Considering the VII Army rather shaken in its fighting power after the defeat at Beersheba he deemed his right flank of sufficient strength to contain the Turkish left.

V. THE APPROACH TO JERUSALEM.

The efforts of the British were now directed towards the capture of Jerusalem. The city was of no strategical importance in itself, but is fall especially in a year when the Allied fortunes were at a low ebb due to their reverses in the other theatres of war would have a tremendous sentimental value throughout the world.

Allenby's plan was to isolate the city rather than to attack it. The task before the British was difficult in the extreme. Narrow ravines commanded by steep spurs, all of which were held by the Turks, were to be traversed before the environs of the Holy City were reached.

But one road, suitable for wagon transportation, led from the west towards the city. This highway, the Jaffa-Jerusalem road, led through a defile commanded on its eastern end by the Nebi Samwil ridge which ran parallel to the Nablus-Jerusalem road. To isolate the city and force its evacuation it was necessary to take the Nebi Samwil ridge in order to gain the road running to Nablus at some point north of the Holy City.

Allenby did not wait for the concentration of all his left flank forces but started the forward movement at once, the first units advancing towards Jerusalem on November 18th. Flank units took secondary routes while the main body moved along the Jaffa-Jerusalem defile.

By the night of the 19th Saris on the western end of the pass had been taken. The Turks, fighting stubbornly, were driven back at the point of the bayonet from hill to hill. By the night of the 20th Nebi Samwil had been taken and the British were within five miles of the Nablus road.

Violent counter-attacks were soon launched by the Turks on Nebi Samwil. Their resistance suddenly stiffened to a marked degree. It was soon evident that the advance could not be continued until the weary British units could be relieved by organizations which had not taken part recently in the heavy fighting. It was also apparent that the Turk VII Army could not be forced from its positions until the artillery could be brought up.

VI. THE FALL OF THE HOLY CITY.

For two weeks the British made no attempt to advance. The Turks, encouraged by the inactivity of their opponent's columns, upon being re-enforced from the north, made numerous attacks in force. At some points, notably near Jaffa, the British lines were driven back. But the Turkish gains were temporary.

Fine weather enabled the British to bring up their guns, replenish their water supplies, and make the necessary reliefs.

A turning movement from the south was decided upon, to be executed by the XX Corps which had not recently been seriously engaged. The British right wing was to advance north up the Hebron road and to be in position three miles south of the city by December 8th.

Hebron fell before the advance of the XX Corps, but the strenuous opposition of the Turks made the advance from the south much slower than had been hoped for. Nevertheless, on the 8th the attack on the Nablus-Jerusalem road was launched and despite heavy fighting which marked the entire day, the British reached a point $1\frac{1}{2}$ miles west of the city.

On the morning of the 9th the mounted troops from the south cut the road leading to Jericho.

The Holy City was now isolated. The Turks began a disorderly retreat and by the evening of the 9th British patrols were in the streets of Jerusalem.

III. EVENTS FROM THE CAPTURE OF JERUSALEM TO TO THE END OF THE WAR.

1. The Turkish Attempt to Retake Jerusalem.

The capture of the Holy City did not serve to ease the work of the British troops. It was soon evident that the Turks would make a determined effort to retake the city, and General Von Falkenhayn who was in command of the Turkish forces in Syria rushed re-enforcements towards the city.

The Turks were now divided into two distinct bodies, the eastern group in close contact with the invaders around Jerusalem, and the western units in the hills overlooking Jaffa. A gap lay between the two bodies, but so rugged was the country that the gap was almost impassable for troops. The only lateral communications between the two forces was some thirty miles to the north of their positions. However, individually, the two groups had good communication with their base and could be supplied and re-enforced without any great difficulty.

A greater degree of safety was deemed necessary for the security of the British positions along the Jaffa-Jerusalem road and Allenby determined to push the XXI Corps forward from Jaffa about eight miles and the XX Corps some ten miles north from the Jerusalem positions. On the days following the entry into the Holy City minor gains had been made. On the night of December 20th and XXI Corps attacked, their

advance being aided by fire from the Allied fleet. Fighting under the greatest difficulties the XXI Corps gained all its objectives by December 22nd. Allenby now considered the British position around Jaffa safe.

The proposed attack of the XX Corps in the east, however, was delayed due to adverse weather conditions and indications of the probable Turkish counter-offensive.

Christmas day passed quietly. But on the night of the 26th the VII Turkish Army launched its attack. They first struck along the Nablus-Jerusalem road. An all day battle resulted, the Turks piercing the main British positions only to be driven out.

On the 27th Allenby counter-attacked with two divisions on the right of the Turks, at first, seemingly, with little effect. At noon of the same day the Turks opened an assault against the whole front of the XX Corps. Again the British were at several points driven from their positions along their main line, only to return and drive the Turks back at the point of the bayonet.

The threat against the Turkish right had by this time assumed such proportions as to cause the sending of reserves to the mentioned point.

On the 28th the XX Corps took the offensive and by the evening of that day the Turks had been hurled back from three to six miles and the British had gained for themselves positions of greater value for the defense of Jerusalem. The XX Corps continued its attacks on the 29th and 30th. On the latter date the Turkish opposition was broken. In these four days of fighting the Turkish casualties had been between 4,000 and 5,000, the British losing about 1,000 effectives.

II. THE CAPTURE OF JERICHO.

For about six weeks following the unsuccessful Turkish attempt to drive the British from their positions around Jerusalem, there was little fighting. Until the difficulty in supplying his forces might be somewhat alleviated Allenby was in no position to continue his northerly advance.

Another difficulty which now confronted him was the fact that the British right flank was in reality in the air as the Turks still retained possession of Jericho to the east of the Holy City. Also, in the trans-Jordan valley there was a large body of Turkish troops, the IV Army, whose chief mission had been to guard the Hedjaz railroad against the Arab Northern Army of the King of Hedjaz, an ally of Great Britain. The Arabs had been slowly moving north up the railroad line.

On February 19th Allenby struck east with the triple purpose of giving greater protection to his right flank, of clearing the west bank of the Jordan in order to obtain a base for further operations to the east of the river, and to cause the Turks to draw some of their forces to the east of the Jordan with a view to his further operations which were to follow later on the fronts of the VII and VIII Armies.

For this operation he employed two infantry and one mounted division. The infantry attacked direct towards the hilly country beyond Jerusalem while the cavalry made an encircling movement from the south in an attempt to cut off the retreat of the Turks from Jericho and its vicinity.

The British experienced great difficulty in surmounting the natural obstacles which abounded in this region. The Turkish resistance was strenuous and progress was slow. On the morning of the 21st the mounted troops finally reached Jericho and the Turkish forces were either driven across the river or retreated north. The Turks evaded the encircling net with insignificant losses.

Two weeks later Allenby started another northerly movement of the XX and XXI Corps, not part of his fighting plan, however, which after two days of stiff fighting resulted in his obtaining a very strong defensive position and giving greater protection to his right flank.

III. THE TRANS-JORDAN RAIDS.

Allenby's position now was such that he considered it an opportune time to strike against the Hedjaz line, to cut the railroad at Amman thirty miles east of Jericho and by drawing Turkish forces from the south thus to aid the Arabs in their advance northward.

An infantry division, one mounted division, and the Imperial Camel Corps were assigned to this task. The advance started March 21st. The roads were found impassable due to heavy rains and the wheeled trans-

portation and guns were sent back. Not until six days later did any of the units reach the railroad line. On the 28th, 29th, and 30th the British assaulted Amman meeting with no success. Turkish re-enforcements having been rushed to the scene of operations.

In the meanwhile the left wing of the raiding forces which had reached El Salt found themselves threatened from the rear. British success was seen to be impossible and the whole force was withdrawn. By April 2nd no British remained east of the Jordan except a force left to guard the newly established bridgehead near Shunet Nimrin.

Again on April 30th Allenby sent another force across the Jordan to cut off the 5,000 Turkish troops occupying Shunet Nimrin and to take and hold El Salt until the army of the King of Hedjaz might reach that section. The attack on El Salt made by cavalry units was successful but the forces detailed to take the Shunet Nimrin positions failed. Again, the British were drawn back across the Jordan, this time having suffered severe losses. The bridgehead, however, was still held.

4. The Reorganization of the British Forces.

Despite the failure of the two trans-Jordan raids in attaining their objectives they served the purpose of leading the Turks into the belief that the main British attack would be east of the Jordan in the direction of the important railroad junction of Deria. In accordance with this view General Liman Von Sanders, who early in March had relieved Von Falkenhayn, drew troops from his armies west of the Jordan and placed them in position east of the river. This movement fitted in with Allenby's plan which was to draw as many Turks to the east as possible and then with overwhelming forces to shatter the enemy lines on the coastal plain. The lines of the VIII Army being broken, the cavalry forces were to sweep across the Plain Sharon, enveloping the entire VIII Army which had only northeasterly connection with its base, and to cut it and the VII Army off from any possible avenue of escape to the north.

Unforeseen circumstances served to delay the execution of this ambitious plan. Grave conditions from the standpoint of the Allies which had resulted on the Western Front due to the German drive in the spring of 1918 caused the withdrawal of the greater part of Allenby's white troops. Indian troops were sent him as replacements from Mesopotamia and India. Some were veterans well fitted for the Palestine type of warfare; other units, however, were composed of raw troops sent direct from India.

A reorganization was thus necessary and only minor raids and attacks marked the summer activities of the British. The Turks, however, launched an attack in force against the British right in July, German detachments aiding in the attack. The attackers were momentarily successful but were later driven back.

5. The Destruction of the VII and VIII Armies.

By September Allenby was prepared to strike his final blow, one of the most audacious of the World War. Four-fifths of his entire force he concentrated on but one-fifth of his front facing the VIII Turkish Army. Entire sections of his front he either stripped or left lightly held. Only complete domination of the air by the British permitted the successful movement of the British units to their place in the line of battle.

With the British now lay the advantage of numbers. While three Turkish armies of six corps faced Allenby their units had but one half of their effective strength. Opposed to the Turkish 50,000 odd effectives were four mounted and seven infantry divisions of the British and a French brigade with a strength in all of over 75,000.

Meanwhile in the east fifty miles beyond Amman the Arabs were assembling for a dash on Deria.

On the morning of September 19th Allenby struck. Taken unawares the Turkish right and center was crushed under the rush of the overwhelming numbers hurled at them. The left of the VIII Army held somewhat better, the hilly country being more suitable for defense than the plains.

The way was now open for the cavalry of the Desert Mounted Corps which had been brought across the entire British front from the east during the concentration. And the mounted troops swept through the gap along the coastal plain opened by the infantry.

The work of the cavalry was prodigious. Thirty-six hours after the opening of the attack one division had dashed eighty miles over the Plain of Sharon and the Samarian Hills and had seized Beisan cutting off any possible northern route of retreat for the VIII Army in the direction of Damascus.

In the meanwhile the XX Corps had started north towards Nablus to close the roads leading to the lower Jordan valley. The VII Army fell back before advance of the XX Corps.

The amazing speed of the British advance bewildered the Turks. Their communications broke down. Many Otterman units unaware that the British horsemen were far in their rear fought valiantly. The British left swung to the east driving the Turks into the hill country towards Nablus. On the 21st Nablus fell to the XX Corps.

But one possible avenue of retreat was now left open to the now demoralized VIII and VII Armies, that over the Jordan River by the ford at Jisr ed Damieh. But by the 22nd Damieh had been taken by a special force which Allenby had organized to move up the Jordan valley.

Immured in Allenby's great net, the two Turkish armies, five days after the blow was struck, were almost entirely in the hands of the British.

6. The End of the Campaign.

The only effective force which now remained to be considered by Allenby was the Turkish IV Army. Until the third day of the British advance it had made no movement. Then, finding itself isolated it fell back towards El Salt and Amman.

In the meanwhile the Arabs had cut the Hedjaz railroad and joined forces with the British operating across the Jordan. The Turks were driven north, a large number surrendering at Amman.

To cut off the retreat of what remained of the IV Army Allenby ordered his cavalry to move on Damascus. One column was pushed out to the north of the Sea of Galilee; the second moved south of the Sea of Galilee towards Deira. The latter column made a junction just south of Deria with the Arab force. By October 1st Damascus had fallen. And the Turkish IV Army completely encircled passed almost in its entirety into Allenby's hands.

Only isolated and demoralized groups now were left to oppose Allenby's further advance. His next move was to seize the coastal ports as bases for his supplies. Tyre, Sidon, and Beirue fell within a week.

The last stage of the campaign was the entry on October 26th of Aleppo by the British cavalry in conjunction with Arab forces. From Aleppo detachments were pushed forward fifteen miles to the Bagdad railroad line.

In a little over five weeks time the opening of the British offensive against the VIII Army's positions around Jaffa Allenby had advanced some three hundred miles, captured 75,000 prisoners, among them some 4,000 Germans and Austrians, and had completely destroyed three Turkish armies.

ANALYSIS AND CRITICISM.

Throughout his campaign General Allenby's actions were such as to indicate that he was a keen student of the Napoleonic principals of warfare.

Napoleon's XVI Maxim states in part: "Never do what the enemy wishes you to do—Avoid positions he has had time to fortify and entrench—Never attack a position in front which you can gain by turning". Opening his offensive, the British commander made an encircling movement around the left of the main Turkish position at Sheria rather than attempting a frontal attack on the strong Gaza lines upon which the Turks had expended much effort since the unsuccessful efforts in the vicinity of Gaza on the part of the British in the spring.

Also, his assault on Beersheba was aided by the wide turning movement of his mounted forces through the desert. The cavalry without great difficulty crashed through the lightly defended eastern edge of the town. The Turks had deemed their left flank well secured by the desert, but they had failed to consider the great British superiority in mounted troops and the value of such units as the Imperial Camel Corps in overcoming the difficulties of the desert region.

Just prior to the main attack on the Sheria position the British commander made a subsidiary movement against the Gaza position which served to draw one division from the Turkish reserves into the lines. One division in itself is no great number. But in this theatre of war, where the opposing forces were comparatively limited, one division comprised ten per cent of the total number of divisions available to the Turks.

That the Turks immediately upon the capture of Beersheba were alive to their danger and attempted to distract Allenby by drawing part of his force into the very difficult country north of the town, is much to their credit. That they were not successful in defeating or at least delaying the execution of the main project of the British would seem due less to any faulty consideration of their plan than to the lack of sustained offensive power and fighting ability either on the part of the Turkish commander or the IV Army as a whole.

Had the IV Army commander displayed the same degree of boldness as did Allenby in continuing with his main plan despite the threat to his right flank, he might have caused the British to suffer at least a temporary set-back.

Von Kressenstein in the face of the rapidity of the British movement following the fall of the Sheria position showed marked ability in so skillfully extricating his VIII Army from the net which the British cavalry was to lay for him. To his efficiency in the employment of his rear guards, characteristic of the German, the credit for the escape of the Gaza force must be given.

However, an interesting conjecture might arise at this point. The Turkish forces in Palestine were superior to the British by some 80,000 men. Without question the Turkish units in Gaza outnumbered those of the XXI Corps which faced the city. The British had but one line of communication, that down the Desert Railroad along the coast to the Suez.

Had Von Kressenstein taken the offensive, driving down the Desert Railroad, might not Allenby's weak line of communication to the Sheria position have been seriously menaced and an enforced withdrawal of his forces become a necessity? True, the British cavalry might have cut through in the rear of the Turkish Gaza force, but the VII Turkish Army was no mean force to deal with and by forcing its way would have placed the British in great danger.

The success of any such movement by the Turks would, of course, depended upon the degree of communication which existed between the VIII Army and the VII Army of the Turkish forces, and throughout the period from June 1917 to the end of the World War it is certain that the system of communication between the various Turkish units in Palestine was weak in the extreme.

In favor of an advance by Von Kressenstein rather than a retirement, however, was the fact that the Turks had always proved a splendid fighter when well-led, certainly a better soldier in the attack than the retreat. Allenby, if placed in Von Kressenstein's position might have been governed by the VI Maxim that: "However skillful the retreat, it will always weaken the morale of the army—Retreats always cost more in men and material than the most bloody engagements."

Once the Sheria lines had been broken Allenby pushed through at once. In attacking the El Kubebeh-Beit Jebrim line and taking Junction Station Allenby made one of the very few frontal attacks of his entire campaign. Here, however, it must be noted that the Turkish line had hardly been organized before the blow was struck.

Jaffa, like Gaza, was taken without the necessity of a frontal attack due to skillful maneuvering and the seizure of points which isolated the city. The capture of Jaffa was almost bloodless so far as the British were concerned.

Napoleon holds that: "The offensive once assumed must be sustained to the last extremity". Allenby pressed on at once in the direction of Jerusalem, halting his advance only when his force had far outrun its supplies and its guns and when his troops were utterly exhausted, certainly in this case a "last extremity." Only then did Allenby pass to the defensive.

The Turks at once took the offensive attacking the whole of the British line. However, the Turkish forces following their retreat were of necessity somewhat shaken. Hence, the successes gained were but

temporary. Their best effort was made at the British positions around Jaffa at which point the British line of communication now along the main railroad to Junction Station and thence south along the narrow guage road, was perilously close to the VIII Army .

As was the case at Gaza the Holy City was taken as the result of an enveloping and turning movement rather than a frontal attack.

In the Turkish attempt to retake the Holy City we find the VIII Army inactive while the VII Army attack. It would seem that, inasmuch as the British line of communication was still close to the Turkish VIII Army, some movement, if only a demonstration should have been made towards the south if for no other purpose than to draw British troops from the vicinity of Jerusalem to the west.

In the attack on Jericho Allenby again, as was the case at Sheria employed his cavalry in its legitimate role of operating to the flank and to the rear of the enemy in an effort to cut off his retreating forces. A second time this attempt failed, this time due as much to the difficulty of the terrain as to the resistance of the Turkish soldier.

Upon the two trans-Jordan raids of the British only unfavorable criticism can be directed. In the March raid the British tier the impossible, that of attacking the strongly held Turkish positions at Amman with small arms fire alone available. That it had been found necessary to send back the artillery due to the difficulties of transport would indicate either that the reconnaissance had been neglected or the whole attempt was poorly conceived.

In both the March and April raids small columns were pushed far from their base into country in which the Turks were operating to the north, south and east, and even these small forces were widely dispersed.

True, the two raids to the east of the Jordan served one purpose in leading the Turkish commanders into drawing a considerable portion of their forces to the east of the Jordan and away from the region in which Allenby had planned to strike his main blow. But for this purpose it would seem that methods less costly in human lives might have been employed—for example, a display of great activity in the vicinity of the bridgehead, the improvement of the roads leading to the Jordan crossings as if for heavy use, or an increase in aerial activity towards Deria.

From a Turkish standpoint the necessity of an early attempt to retake Jerusalem immediately after the capture of the city by the British might be offered as an excuse for the existence of the Turkish forces west of the Jordan as two distinct bodies without lateral communication. But with this attempt a failure, the continued division of the VIII Army and the VII Army into two bodies without lateral communication for some thirty miles to their rear appears inexcusable.

The concentration of so great a proportion of the British forces on the extreme left of a 40 to 50 mile front in September preceeding Allenby's last blow demonstrates a woeful lack of knowledge of even the rudiments of reconnaissance requirements on the part of the Turks. The successful withdrawal of the Allied troops from the Gallipoli Peninsula should have served as a lesson to the Turkish army.

With this audacious concentration complete the attempt against the weakened Turkish forces could be in no doubt.

In the final break through the British cavalry was employed with its maximum degree of efficiency operating on the flank and to the rear of the VIII Army. Allenby had selected a route for his mounted troops where conditions were ideal for the use of cavalry—along the Plain of Sharon.

As the VIII Army had failed to co-operate with the VII during the latter's effort to retake Jerusalem, so we find the IV Army passive for three days while the remainder of the Turkish forces were being encircled by the British. The IV Army hesitated—and was lost. Here the wide dispersion of forces and a complete lack of communication, so apparent in the Turks following the fall of the Holy City, was again evident.

“The strength of an army—is estimated by multiplying the mass by the rapidity; a rapid march augments the morale of any army, and increases its means of victory. Press on!” asserts Napoleon. Never permitting the Turk to regain his composure after the VIII Army's lines had been crushed on September 19th and advancing 300 miles in a little over a month's time, Allenby showed himself to be one with the

Emperor in his belief that "a rapid march—increases the means to victory".

LESSONS.

That the cavalry as an arm of the service has by no means outlived its usefulness is the outstanding lesson of the campaign in Palestine. Without the presence of the Desert Mounted Corps with his command, it is evident, Allenby would have been confronted with a task involving years in its duration rather than months. Only cavalry with its great mobility could assure so complete a victory in a country such as Palestine where railroad facilities were meagre in the extreme and good roads were few.

We are prone to judge the usefulness of cavalry by our observation of its very limited work on the Western Front from 1914 to 1918 where, after the first few weeks of the war, there existed no flanks.

Future wars will not of necessity be fought under conditions such as obtained in France and Belgium. To the Spaniards and French operating in North Africa or to United States forces in such regions as that along the Mexican Border cavalry is as indispensable now as was the case prior to 1914.

RECONNAISSANCE is a factor never to be ignored. By his personal visit to the front and a careful consideration of the existing conditions Allenby found the one weak link in the Turkish line. In the space of few days as a result of this reconnaissance he destroyed a Turkish line which had held the British stationary for months.

On the other hand to the failure of Allenby or his subordinates to properly reconnoiter the roads and country leading across the Jordan appears to be due the necessity for sending back the British artillery during the March raid and the resultant unsuccessful assaults on Amman.

The annihilation of the VIII, VII, and IV Armies in September 1918 was attributable to a great extent to their failure to judge the necessity for continuous COMMUNICATION between all branches of their forces. An Army inferior in numbers opposed by an aggressive enemy places itself in a hopeless position when it fails to keep its various units in constant communication with each other.

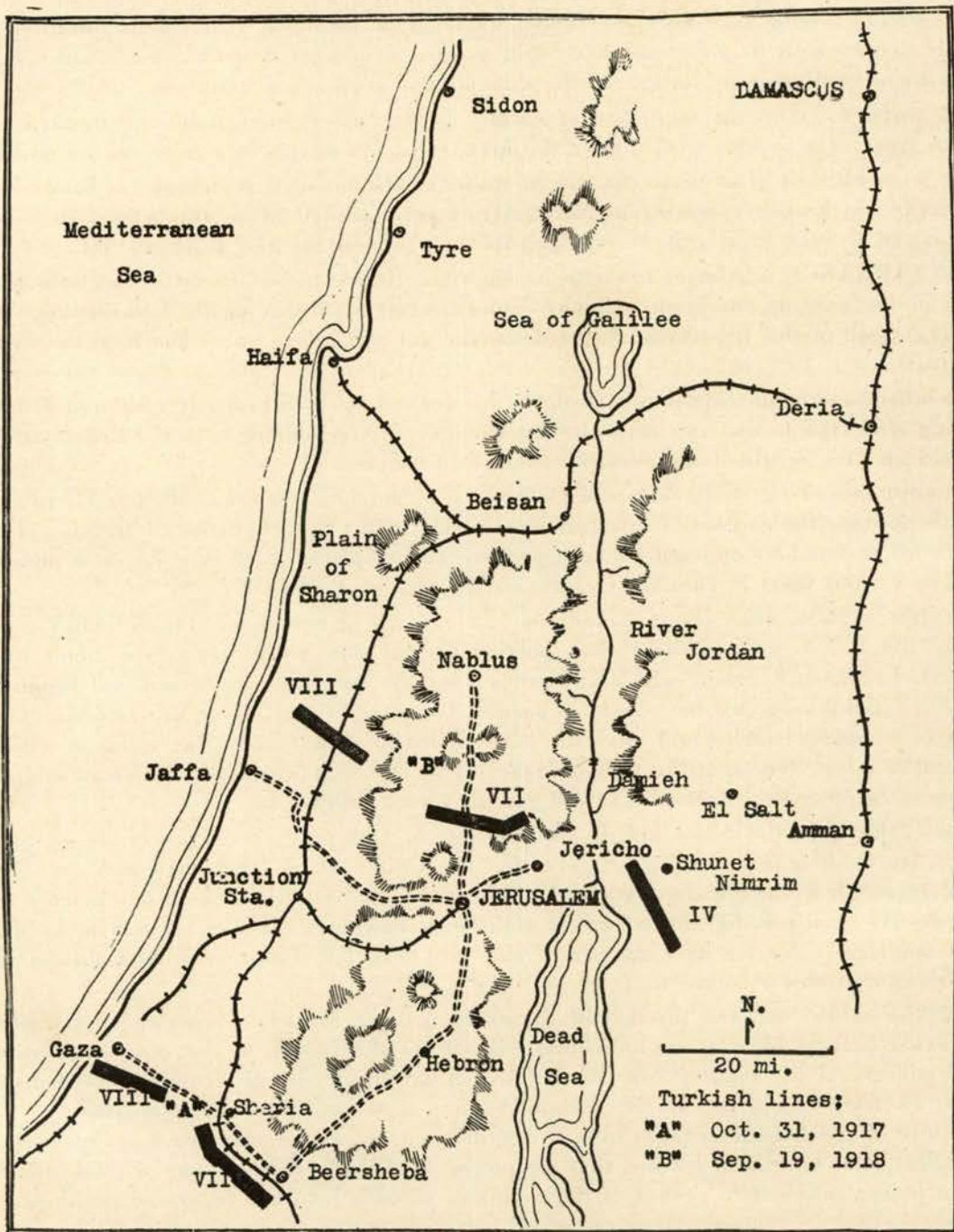
As theatres of war differ their conditions so are the problems of TRANSPORT varied. Here again we must not be too prone believe that, judging for the outstanding success of motor transportation on the Western Front, such means will always suffice for the carrying of personal and supplies of armed forces. Allenby's right wing, we have seen, depended for its existence upon the Imperial Camel Corps, the only type of transport which could serve the purpose in the desert and arid region in which his right flank was forced to move. The camel, a type of transport animal with which the American soldier is unfamiliar is capable of carrying loads from 250 to 450 pounds twenty miles a day.

The horse, the mule, the camel and the ox as means of transport are all made the subject of study by the British Army. It is improbable, certainly, that the United States Army will ever be called upon to wage war in a region where the camel or ox would be indispensable. Nevertheless, in our potential theatres of war there are deserts equally as difficult to traverse as those in Palestine. Hence, a lesson to be derived from the Palestine campaign is that we must not permit ourselves to be lulled into no sense of absolute dependency upon motor transportation for future warfare.

The Turkish soldier suffered throughout the campaign due to lack of capable LEADERSHIP. We find him always a brave soldier as an individual. But from the failure of the superior Turkish force to withstand the advance of the smaller army of the British fighting hundreds of miles from its base, we learn the lesson that an army cannot be effective without leaders of resourcefulness and initiative.

The failure of the British to take Amman despite their assaults of three days again proves the lesson which should long since have been learned that the power of RIFLE FIRE alone, without the support of artillery, is no longer sufficient to permit of the taking of strongly held and organized positions.

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PART IV.

THE WESTERN FRONT

OPERATIONS OF ALL EXCEPT THE BRITISH FORCES ON THE WESTERN FRONT

AUGUST 2, 1914 TO SEPTEMBER 2, 1914.

—BY—

Capt. William E. Goe, Infantry.

I. POLITICAL SITUATION PRIOR TO AUGUST 2, 1914.

Following the Balkan war the great nations of Europe were in a state of unrest. However, there were few events that would indicate this on the surface of the general political situation. Nevertheless Germany and Austria had a keen eye on both France and Russia, and those high up in governmental circles of all European countries knew that a slight "incident" might cause trouble and possibly war.

This incident occurred at Serajevo, Bosnia, June 28, 1914 when the Archduke Franz Ferdinand of Austria was assassinated. Bosnia was an overwhelming Slav state annexed to Austria in 1908 much against the will of Serbia. Austria Hungary, because Serbia blocked the way to Salonica and interfered in her Balkan activities, at once made believe that the plot of the assassination originated in Serbia and took steps toward reparation. In effect her demand on Serbia was that she break up at once any system of propaganda against Austria and punish those found guilty of such an act. In addition to this she demanded the right to investigate the assassination of Archduke Franz Ferdinand with her own officials. There were other but unimportant demands. Serbia yielded to all the minor points but refused when it came to the question of abdicating her sovereignty, by allowing Austria Hungary to personally investigate the assassination. There was on compromising on the part of Austria Hungary—her plans were arranged—and war was declared on Serbia July 28, 1914.

With this declaration of war on the part of Austria Hungary, Russia mobilized forces in Poland and indicated she would resist an Austrian invasion in Serbia. Germany, apparently well understanding the Austrian-Hungarian movement in Serbia issued an ultimatum to Russia demanding that she immediately cease the mobilization of forces to be used either against Austria or Germany. Like Serbia, Russia refused the demand and Germany declared war August 1, 1914.

Germany and Austria Hungary were now at war allied against Russia and Serbia. At the same time she declared war on Russia, Germany asked France if she intended to remain neutral. France made no satisfactory reply and the silence was followed by a demand for the use of Forts Verdun and Toul for the duration of war against Russia if she (France) remained neutral. France promptly refused the demand for the fortresses and August 1st started to mobilize. Germany declared war on France August 3rd.

With these events following one another in very rapid succession Germany next demanded an unobstructed passage to northern France for his armies through Belgium. Belgium was a neutral power and her neutrality was guaranteed by Germany. This demand was refused by the Belgium government and August 3rd German Troops crossed over the border in the neighborhood of Liege. Great Britain was brought into the group of belligerents August 5th when Germany refused to cease violations of Belgium neutrality.

Without demand or pretext the neutrality laws of Luxemburg were violated by Germany August 2.

Thus by August 5th, 1915 Belgium, Great Britain, France, Russia and Serbia, allied, were at war arrayed against Germany and Austria Hungary. Since this monograph deals with the operations on the Western front, exclusive of the British forces, the parts played by Russia, Serbia and Austria Hungary in the East will be excluded and only those of Germany, France and Belgium discussed.

II. DISPOSITION OF TROOPS AT OUTBREAK OF WAR.

In making dispositions of troops on the western front, Germany grouped her armies in two groups: The first group, with which she intended to strike the decisive blow, lay along the Belgian frontier and consisted of the First, Second and Third Armies under von Kluck, von Bulow and von Hausen, respectively. In this group were thirty-two divisions and a large force of Cavalry. The total was about half of the German forces in the west. The second group, disposed along the southern frontier of Luxemburg and in Lor-

raine, consisted of the Fifth and Sixth Armies, totaling thirty-two divisions. The Fifth Army was commanded by the German Crown Prince and the Sixth by the Bavarian Crown Prince Rupprecht. The connecting link between the two groups was formed by the German Fourth Army under Duke Albrecht of Wurtemburg consisting of four divisions. In addition to the Armies forming the groups there was a separate Army, the Seventh, in Lorraine consisting of four divisions under von Heeringen.

The grouping of the French Armies immediately following the outbreak of hostilities was as follows: An Alsace group of five divisions with four reserve divisions was assembled near Belfort under General Pau; along the Lorraine frontier south of Metz was the main offensive group, the First Army under General Du-Bail consisting of eight divisions and the Second Army under General de Castelneau consisting of ten divisions and three reserve divisions; the Third Army of eight divisions and three reserve divisions under General Ruffey was near Verdun; the Fifth Army of six divisions and three reserve divisions under General de Lanrezac watched the exits of the Ardennes from Belgian Luxemburg as far north as the Belgian frontier near Rocroi; the Fourth Army of eight divisions and two reserve divisions under General Langle de Carey was in reserve behind the centre.

The original grouping of the German and French armies was destined to be only temporary disposition and many shifts and changes including the formation and disposition of new French armies followed the events of Liege.

The bulk of the Belgian forces were distributed in the west of Belgium. One division was at Liege when the war began.

III. NARRATIVE.

So far as the Western front is concerned, the first significant event occurred August 2nd, when German covering troops which had been kept in readiness for several days near Coblenz crossed over the Luxemburg border and took possession of the capital and the railway system. The little Duchy made no armed resistance and there is no military importance attached to the event except that it constituted a violation of the neutrality laws of a state whose neutrality was guaranteed by the invader.

On the same day three corps from the First and Second Armies were hurried to the Belgium border near Aix-La Chapelle. At 7:00 P. M. a demand was made on the Belgian government for an unobstructed passage of German armies through Belgium. With barely a consideration the demand was refused, the note of refusal reaching the German government at 4:00 A. M. August 3rd. Hostile movements commenced at once and by night after stubborn Belgian resistance, the town of Vise just north of Liege was occupied by the Germans.

This was the beginning of Liege.

Liege and the passage way it controlled was an all important point to the plan of the invasion. The city itself lies in the lower Meuse valley and is one of the chief railway and commercial centers on the great international trunk lines connecting Cologne and Brussels and its speedy fall, in order to advance the German armies up the Meuse thence into France, was a paramount issue. Defending the city were twelve modern forts six known as the large pentagonal type and six known as the small triangular type. They were built by Brailmont, a Belgian engineer officer, shortly after the conclusion of the Franco-German war of 1870. The armament of the larger forts consisted of two 6" guns, four 4.7" guns, two trench mortars and four 3.9" guns all mounted on steel cupolos standing on concrete emplacements. The command of the smaller forts was identical with that of the larger except the guns were fewer in number. Considering the forts together, they were arranged so as to form a ring around Liege, six being on the right bank of the Meuse and six on the left bank. All were connected by communicating ways and none was nearer than 8,000 nor greater than 9,000 yards from the city. The forts were separated by distances ranging from 4,000 to 7,000 yards. The total garrison accommodated 30,000 men.

The attack proper on Liege began on the night of August 4-5 and was directed against the fortifications on the southeast side of the city. Including volunteers, the Belgian defenses were manned by about 20,000 men under the command of General Leman who was better known as a student of military engineering than he was as a soldier. All during the night the Germans kept up an incessant bombardment with field pieces of the smaller type. During this phase of the preliminary, it is significant to note that no high angle, large

caliber mortars were brought into action. Following the bombardment, August 5th, the Germans launched their first offensive with infantry and attempted to capture Forts Boncelles, Embourgh, Chad-Fontaine and Fleron. The attack failed and the Germans were forced to retreat to their original position.

After the failure of the attack the bombardment, with the number of guns greatly increased, continued on the same strong points. August 6th another attack, organized on a much larger scale than the first one and including the 7th, 9th and 10th Corps of the First and Second armies was delivered. The attack was partially successful and as a result, Forts Fleron and Chad-Fontaine were taken. The fall of these forts broke the perimeter of the defensive ring and the Germans in small detachments on August 7th entered the city. At the same time other forts still in possession of the Belgians kept up the resistance.

Realizing after the fall of Fleron and Chad-Fontaine that his troops were in danger of capture, General Leman ordered the retirement of the third Belgian Division, leaving only the troops that were actually defending the forts. The Third Division, moving westward shortly took up a position thirty miles from Liege across the Ghetto forming a junction with Belgian troops already assembled there.

With the outer ring of defense broken, the bombardment of the remaining forts continued with increased severity. But no more direct frontal attacks with infantry were delivered, indicating that the Germans were becoming extremely cautious in their use of personnel against highly organized defenses and were depending almost entirely on artillery to remove obstacles from their route of advance. Within the next four days all the forts south of Liege were in possession of the German, and the Belgians, seeking to check the advance of the invader as long as possible concentrated their defense activities about the forts to the north of the city.

By August 7th the field trains transporting the huge German and Austrian mortars which were soon to astound the world by their destructive power, arrived. The caliber of these pieces range from 280 to 420 centimeters. They were of the high angle, short barrel, low muzzle velocity type made especially for use against steel and concrete fortifications. The terrain about Liege was well known to the Germans and they had no difficulty in placing these guns in firing positions by means of a map. These guns placed in hidden positions more than three miles from their targets, were first brought into action on the forts north of Liege about August 13th. So great was their destructive power that forts subjected to their fire only remained intact for a short time. By August 15th all of the forts about Liege were in the hands of the Germans, the last to fall being Fort Loncin. With the fall of this fort, General Leman was taken prisoner.

Simultaneous with the operations at Liege, the French were active in the south along the Alsace-Lorraine-Luxemburg frontier.

The French General Staff, either not aware of the events at Liege or believing the German offensive in that quarter to be merely a demonstration, according to its prearranged plan, began on August 7th a series of offensives in a north-easterly direction through Alsace and Lorraine and one east through the Ardennes.

The first, directed through Alsace from Belfort, was little more than reconnaissance in force and was as much political as it was military. At this time French mobilization was only half complete and commanders experienced difficulty in handling their organizations. The advance reached Altkirch and Mulhouse, both towns falling to the French with little resistance. The latter town had been occupied only a day when German resistance coming from the Seventh Army manifested itself in force and the French offering slight resistance drew back within their own border.

Another offensive in the same direction was launched August 15th and the town of Mulhouse was retaken. This offensive conducted by General Pau with the Army of Alsace was better organized than the one of August 7th, and at first it showed signs of success. It particularly made a favorable impression on the French adherents of the province of Alsace. However, by August 19th, the events of the northern operations of the German Armies, now known in detail to French General Staff, made it necessary to discontinue this movement and withdraw the Army of Alsace and distribute its units in support of the French Groups to the north which were beginning to feel the pressure of the German offensive through Belgium.

The third French southern offensive commencing August 14th was a major operation involving the First Army under General Dubail and the Second Army under General de Castelnau. The direction of ad-

vance, starting from the vicinity of Toul and Epinal, was toward the main railroad connecting Metz and Strassburg. With the first attack the German forces withdrew offering only slight resistance to the French in their forward movement. By August 18th the First Army reached Saarebourg on the Metz-Strassburg railroad about eighteen miles from the French border. The following day it gained more ground and was preparing to continue the movement. On the left of this army, advancing in the same direction, was the Second Army. Its terrain was more difficult than that of the First Army and its movements therefore proportionately slower, but the German resistance was about the same. Apparently the Germans were withdrawing in front of the French advance according to a prearranged plan. With little effort the Second Army entered Chateau Salins and was pushing toward Morhange. At Morhange the German withdrawal suddenly changed to a counter offensive, and preceeding their initial attack with a heavy artillery bombardment, the 2nd French Army was forced to take the defensive and by August 20th, it was badly defeated and was retreating in a disorganized condition. This reverse caused the First Army to discontinue its advance and come to the assistance of the Second. In making the junction, considerable confusion was experienced, and only after extreme efforts on the part of Generals Dubail and Castelnau was order in the ranks restored and an orderly retreat taken up. Both armies were withdrawn to a line connecting Luneville and Nancy and from this position by August 28th checked the advance of the German Sixth and Seventh Armies which were following the advantage gained at Morhange. The German advance reached a point within eight miles of Nancy.

General Joffre, chief of French General Staff, still of the opinion that the Northern German advance could be checked by striking in an easterly direction, organized another offensive which was the fourth since August 7th. The plan was to dislocate von Moltke's (von Moltke, Chief of German General Staff) pivoting movement at Metz by attacking his Fourth and Fifth Armies just north of this point through the Ardennes. For this operation the Fourth and Third French Armies, the latter supported by the counter parts of Pau's Army of the Alsace which had been broken up, were organized as an offensive group. The joint operation began August 21st. The next day the battle of the Ardennes was fought. At the time of contact both the French and German Armies were advancing and a series of confusing engagements in which the French were defeated, was the result. The Fourth French Army suffered severely and retreated in disorder finally taking up a defensive position August 23rd on the west bank of the Meuse. The Third Army met serious reverses at Virton and also retreated beyond the Meuse. The general direction of retreat for both armies, the Third pivoting at Verdun, was toward the Marne.

All of the French invasions were failures insofar that none of them gained a material advantage over the enemy, other than showing conclusively that the French, man for man, were equal to the Germans each offensive resulted in a waste of men and a serious loss of time. The collapse of the fourth and final French offensive deranged the entire French General Staff plan and indicated clearly that its theory was wrong and that it must be quickly abandoned. By August 25th France as a nation was in grave danger and the French cause seemed hopeless. Four French armies—First, Second, Third and Fourth—had been beaten in the field and in their own territory, while on the other hand the German Armies had no where met with serious reverses and three of them, First, Second and Third were now moving toward Paris at top speed. With the movements of each day the fall of Paris became more imminent. Under such circumstances as these the necessity of a change in play resolved itself on the French General Staff.

In making the change, General Joffre held to one of his maxims, that of a mass of mobile reserve. With this theory uppermost in his mind he organized the Sixth French Army, August 26th, near Montdidier under General Manoury and published a memorandum to his Armies that it would be used to reconstruct his left flank and for counter offensive purposes when the opportune moment arrived.

Going back to the north with the fall of Liege and even before the completion of this event, the First, Second and Third German Armies began their westward movement across the Belgian border driving at a position from which the great enveloping movement through northern France toward Paris could be executed. This was directly in accordance with the pre-war German General Staff plan as worked out by von Schlieffen and with the exception of Liege, was functioning to a perfection.

After passing Liege, von Kluck with his First Army which was the largest of the German Group and the one designated to be used on the outer flank of the enveloping movement, rapidly moved toward the Ghetie River on the left bank of which was concentrated the Belgian army. Contact was gained, August 17th, and the next day von Kluck crossed the river driving his enemy before him. August 18-19th the Belgians retreating, crossed the Dyle and August 20th went into the outer defenses of Antwerp. Simultaneously with the operations toward the Dyle, von Kluck, with a portion of his army, attacked Airschot and Louvain and August 20th occupied Brussels. Leaving the 3rd Corps at Antwerp and the 4th Reserve Corps at Brussels, von Kluck, with the remainder of the First Army, started south. By August 21st he was near Mons marching southwest from Brussels.

As early as August 12th, units of the German Second Army crossed the Meuse at Huy and took up the march toward Namur preparing the way for the main army which was following. By August 21st the entire Second Army was north of the Meuse moving toward Namur, its right flank corps joining the left flank corps of von Kluck. Moving simultaneously with the Second Army, the Third Army advancing westward came into position near to and crossed the Meuse from Dinant. Both armies passed through the Ardennes.

As a result of these movements by August 21st, nine and one-half German corps covered and flanked by Cavalry patrols in force were deployed on a seventy-five mile front extending from Mons around Namur to Dinant ready to strike a concentrated blow southward. The German Armies on this particular front totaled about 400,000 men. Confronting the three German Armies were the British Army and the French Fifth Army drawn up for battle in the Dinant-Charleroi-Namur-Mons Angle. Their total active strength was approximately 170,000 men. This was the situation when the German northern offensive opened.

Before taking up the events of the German northern offensive and those of the subsequent allied retreat to the Marne, it is essential to keep in mind the approximate movements prior to September 5th of the German Armies considered as a whole. On August 21st, describing the situation graphically, the German armies, beginning with the Fifth, pivoted near to and encircling Verdun, and extending right to the First, were beginning to execute the turning movement which was finally to place them on an approximate east-west line dipping gently south, passing through Paris and Verdun facing generally south. The movement was that of a huge radius pivoted at Verdun and sweeping south from Mons toward Paris. The right flank of the line, that is the tip of the radius, which was von Kluck's First Army, never quite touched Paris and its final position was to the right of Paris between Paris and Verdun. Likewise, August 23rd, the German Armies in the south, beginning with the Fifth, pivoted near Verdun and extending left to the Seventh, were beginning to execute a turning movement which finally placed them on a line facing generally southwest passing approximately through Epinal and Verdun.

With the French Fifth Army facing him at Charleroi on the Sambre, von Bulow from the north of the river, opened the northern German offensive on the morning of August 21st. His corps came into action successively from left to right, the left being nearer the river. The French outpost north of the Sambre were quickly driven in and across the river by the left flank corps which was the Guard Corps. This corps following its advantage, crossed the river and by 9:30 A. M. held Arsimont two miles south. By evening the 10th Corps on the right of the Guard Corps was across the river and the 7th Corps on the extreme right pushed the French back to the Charleroi-Mons road. At nightfall von Bulow held the crossings of the Sabre at Charleroi and was ready to extend his offensive further south the next morning. At dawn August 22nd all of the German corps were heavily attacked by the French. The advance of the German Guard Corps was checked temporarily but with the aid of re-enforcements and heavy artillery the French opposing it were pushed back and by the close of the day occupied a position on the heights overlooking the Sambre between Fouse-Gougnyes. On the right the 10th Corps, after sustaining heavy losses, reached a line four miles south of the river and joined in line with the guard corps. The 7th Corps advancing west of Charleroi attacked the French 18th Corps driving it south and across the river. By night, August 22nd, all of the German Second Army corps engaged at Charleroi were south of the Sambre ready to resume the offensive.

During the night of August 22nd the French Fifth Army received re-enforcements and was preparing

to counter attack the next morning. In the meantime the German Third Army attacked the right wing at Dinant and the Belgians surrendered Namur. These events preceded the possibility of the counter attack. On the morning of August 23rd, the German Second Army continued its southward offensive. At this time de Lanrezac received information that the British on his left were about to be attacked at Mons by three of von Kluck's First Army corps and that a fourth corps was attempting to encircle the extreme allied left. Under these circumstances he ordered a general southward retirement of his entire front.

Simultaneous with the operations of Charleroi the 7th Corps of von Bulow's army attacked Namur. The Germans, using their experience gained at Liege, did not attack this strongly fortified position with infantry but instead used artillery of the 42 centimeter, high angle type to reduce the fortresses. The allies expected Namur to withstand the German assault much longer than Liege. It was encircled by nine forts of the Brailmont type and between them trenches had been dug protected by wire entanglements. Contrary to expectations, Namur fell practically with the first artillery bombardment. The German high angle guns in their firing positions were entirely beyond range of the Belgian fortress guns. Some of the forts fired no more than ten shots. The fourth Belgian division, supplemented by several French batteries, in all about 30,000 men, defended Namur at the beginning of the attack. German troops entered the city August 23rd.

The battle of Mons (British-German) was fought August 23-24 and before its conclusions, that is before the British began to withdraw south away from von Kluck, the French Fifth Army had been retreating twelve hours. With the British withdrawal from Mons, the allied retreat to the Marne commenced.

From August 24th almost without interruption the allied right pivoted at Verdun, slowly retired southwest and south toward the Marne. In spite of the experience gained by the fall of the fortified cities of Liege and Namur, the French attempted to hold Maubeuge, another strongly fortified city. It fell to the Germans September 7th after a siege lasting two weeks and its only aid to the French was the fact that it kept three or four German divisions out of the operations during the retreat to the Marne. The British made a stand at Le Cateau against von Kluck and succeeded in checking the advance temporarily. With these two exceptions and the counter attack of the French Fifth Army August 29th, the allied retreat once started was uninterrupted. (For a detailed account of the English operations during this period see the following article.)

After defeating the British at Mons and LeCateau von Kluck August 27th moved in a southwesterly direction gradually coming in contact with French units on the British left flank. These were the elements of Manoury's new Sixth Army then being formed near Montdidier. Keeping contact, especially with von Kluck's right, the French withdrew southwest in the general direction of Paris. After LeCateau the British withdrew almost straight south and were neglected in their retreat by von Kluck. They crossed the Somme at Ham, August 28th. Apparently under any circumstances von Kluck was attempting to envelop the allied left flank.

August 27th, due to von Kluck's activities after Mons and LeCateau, the French-British left was nearer Paris than the Fourth French Army which had been withdrawn across the Meuse after its participation in the French fourth offensive of the battle of the Ardennes. Joffre now in order to avoid a salient withdrew this army toward the Marne. Likewise on its right he withdrew the Third Army, it pivoting near Verdun and conforming in its retirement to the movement of the Fourth Army. This was in accordance with the revised French General Staff plan of gradual retirement. On the left of the Fourth Army the Fifth also moved toward the Marne.

Continuing this movement southwest, August 28th von Kluck captured Peronne and August 29th moved toward Amiens with his right extending as far north as Albert and his left near Ham and after defeating the French units in his front crossed the Somme with his 2nd and 4th Corps and Cavalry Divisions. August 30th he drove the French Cavalry through Amiens and by August 31st had forced Manoury with the main body of the French Sixth Army across the Avre. He halted north of the stream, his army facing generally south extending from Amiens through Roye toward Guiscard. Manoury withdrawing, passed through Criel toward the northern defenses of Paris.

During the operations on the Avre, von Kluck reached his extreme western point. The main allied Army retiring southeast of Paris and it became necessary for the German General Staff to decide whether

to attack Paris or follow the main army. Heretofore von Kluck's mission had been to encircle the extreme allied left. There was now a gap between the French Sixth Army and the main allied left. August 31st von Kluck changed direction from southwest to southeast, indicating the German General Staff decision. This revised General Staff Plan was probably based on von Moltke's assumption that the British Army was annihilated and the French Sixth Army incapable of making a serious flank counter attack against von Kluck's right. To strengthen this decision he knew that the French at this time were barely holding their own south of Verdun near Epinal and Nancy against the German left wing attack and therefore could send no re-enforcements north. He also was aware of the fact that de Lanzerac's counter attack against Von Bulow August 29th had placed the French Fifth Army inside of von Kluck's left and in a position to be enveloped by a turning movement southeast. Under these circumstances he no doubt believed that the time had come for von Kluck to change direction from southwest to southeast, miss Paris, strike Lanzerac's left and roll the French armies up toward Verdun. At any rate after August 31st, von Kluck, leaving a light flank protection at Amiens, moved southeast with all possible speed.

By September 1st his line consisting of the 9th, 3rd, 4th and 2nd Corps lay with its left slightly north of Vic-Sur-Aisne and its right on the main Amiens-Compiègne road. Manoury's Sixth Army had moved to a point south of Senlis which shortened the gap between it and the British left. The next day, September 2nd, von Kluck was crossing the Marne. Some of his Cavalry units at the same time penetrated the gap between the French and the British to within fifteen miles of the northern defenses of Paris. On this date the German Second Army was crossing the Aisne. The Third, Fourth and Fifth German Armies pivoting near Verdun kept a steady pace south and southwest. The Allied left gradually retired to and beyond the Marne.

Thus on September 2nd with the opposing armies approaching an approximate east-west line connecting Paris and Verdun, the long retreat, which commenced on the Belgian frontier, was near an end. The Allied counter offensive started September 5th.

IV. CRITICISM.

(1) Violation of Neutrality Laws: In violating the neutrality laws of Belgium and Luxemburg, Germany indicated to the world that she had sunk to a low level from a moral standpoint and that she knew little of the psychology of nations. The violation of Belgian neutrality more than any other one thing brought Great Britain into the War.

(2) Failure of German General Staff: The German General Staff depended too much on information coming from the front and was too far in rear to observe for itself. For instance, the revised General Staff plan was based partially on the assumption that the British were annihilated. Von Kluck probably gave this information when he saw the discarded supplies and equipment along the line of British retreat. Later events proved that the British were not annihilated. This was a material mistake due to poor intelligence.

(3) Under Estimation of Enemy: The German General Staff believed the German Army to be the most efficient in the world. It probably was. But this was no reason why it should believe French and British incapable of strong resistance especially when their national honor was involved. By the rapid German advance through France it was believed the enemy was fleeing for safety. It did not consider that this retirement might be a strategical retreat. The battle of the Marne proved that it was.

(4) French Failure to Solve German Plan of Attack: The four French offensives indicated that they entirely misunderstood the plan of the German invasion. The French up until August 20th believed the German operations around Liege to be a series of demonstrations. This theory cost them the use of all north-eastern France for a period of four years.

(5) Unpreparedness of French Armies: The pre-war French General Staff contemplated taking the offensive first in case of war with Germany. Due to their unpreparedness it lost the initiative and the German armies were in motion before the French mobilization was half complete.

(6) Allied Strong Dependence in Fortified Areas: The allied assumption that the strongly fortified

regions of Liege and Namur were impregnable was based on the long resistance made by the Russians at Port Arthur against the Japanese. None of the allies had experimented with artillery for the reduction of such defenses. Consequently their plans based on the resisting power of Liege and especially Namur at the beginning of the war caused them to make costly errors. The mobilization of the French Sixth Army was delayed at Charleroi because the French General Staff believed Namur would withstand the German attack for several weeks. It fell at the first attack. The French made another costly error when they attempted to save Maubeuge, also a fortified city.

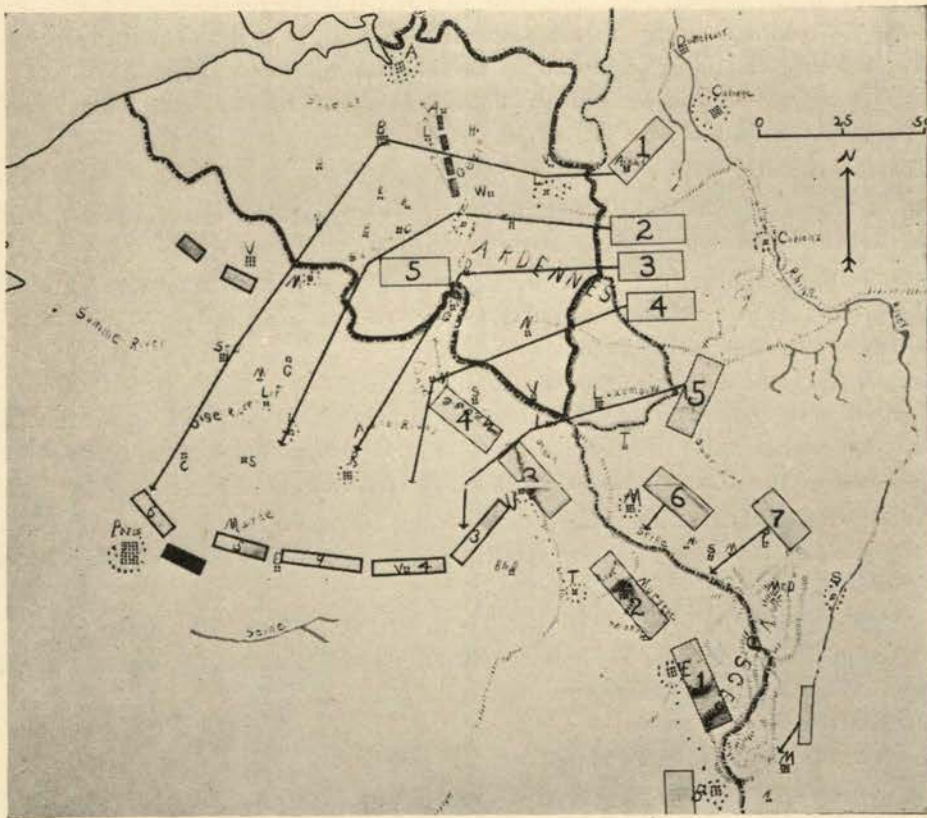
V. LESSONS.

(1) **Von Kluck Exposes Flank:** All maxims of war forbids exposing the flank of any unit regardless of its size. Von Kluck did this when he turned southeast to follow the main allied army. As a result he had to quickly turn around when his right flank was struck by the French Sixth Army. This was the beginning of the Marne, September 5th.

(2) **Germans Advance too Rapidly for Their Trains.** An Army should not travel faster than its supply trains. The Germans were far ahead of their trains on September 2nd and as a consequence were low both in ammunition and food supplies. This fact greatly influences subsequent events.

(3) **Failure to Follow Beaten Enemy:** There are few instances where a victorious army should not follow a beaten enemy. Von Kluck failed to observe this after defeating the British at LeCateau and as a result he later had to contend with a strong reorganized British Army. An unmolested beaten army is quick to reorganize.

References:—Forty Days in 1914, by Maurice; The March on Paris, by Von Kluck; Elements of the Great War, by Belloc; The London Times History of the World War; Literary Digest History of the World War; The German General Staff, by Falkenhayn; Fortnightly History of the World War; Short History of the Great War, by McPherson; History of the Great War, Vol I, by Buchan; Guide to Military History of the World War, by Frothingham.



THE OPERATIONS OF THE BRITISH EXPEDITIONARY FORCES

AUGUST 21ST to SEPTEMBER 2ND, 1914.

—BY—

Capt. Norman D. Finley, Infantry.

TERRAIN

North of Paris and west of the plateaus and scarps, which form the eastern and northeastern sectors of the Paris Basin, stretches the indulating plains of Normandy, Picardie and Artois.

Branching streams cut across this plain, forming a series of low hills with gentle slopes.

The streams, large enough to be called rivers, run through shallow valleys, and infrequently, as in the case of the Somme, these valleys are covered with ponds and marshes.

Above the valleys the ground is dry and excellent roads are to be found.

The plain continues through Belgium but lacks the hills of northern France. Near the coast the plain is below the level of the sea at high tide, and is a flat treeless plain.

Rivers crossing the plain in Belgium are sometime dyked to prevent the spread of their waters. Thus they are converted into canals in places, as in the case of the lower Yser.

The country is very fertile and agriculture flourishes. The forests have been removed to permit intensive farming on every available acre.

The population is dense.

It is evident therefore that both the richness of the country and its favorable topography makes it a natural pathway for travel between eastern and central Europe to France.

This plain forms part of a greater plain by which one can travel from Russia to the Pyrenees without passing through a tunnel or rising six-hundred feet above sea level.

From a military viewpoint the plain has four advantages:

1. It has no topographical barriers of serious importance.
2. It is supplied with numerous roads and railroads by which troops can advance simultaneously.
3. It can produce enough food to subsist large bodies of troops for a long time.
4. It passes close to the iron and coal fields at the base of the Ardennes.

From the above description and a study of the map of northern France and Belgium it is easy to see that the only topographical barriers of any consequence are the large rivers; such as the Marne, Aisne, Oise, Somme and Sambre.

COMPOSITION OF THE BRITISH EXPEDITIONARY FORCES.

The British Expeditionary Forces were placed in command of General Sir John French and consisted of about 80,000 men divided into two Corps and one Cavalry Division as follows:

FIRST CORPS,

Lieut. Gen, Sir John Douglas Haig.
Two Infantry Divisions,
Six Infantry Brigades,
Four Companies Engineers,
Two Squadrons Cavalry,
Eighteen Batteries Field Artillery,
Two Batteries Heavy Artillery,
Ammunition Column and Park.

SECOND CORPS:

Lieut. Gen H. L. Smith-Dorrien,
Three Divisions,
Ten Infantry Brigades,
Six Companies Engineers,
Three Squadrons Cavalry,
Thirty Batteries Field Artillery,

Six Howitzer Batteries.

Three Batteries Heavy Artillery.

Ammunition Column and Park,

(Note) One Division did not join until August 25, 1914.

CAVALRY DIVISION:

Major Gen. E. H. Allenby,

Four Brigades,

Five Batteries Horse Artillery.

ROYAL AIR FORCE.

MEDICAL DETACHMENTS.

GENERAL SITUATION.

On August 4, 1914, the Germans opened their attack on Liege, Belgium; and England declared war on Germany.

The German Army did not capture Liege until August 14, 1914. As soon as Liege was captured the Germans pushed southward, with Paris, France their objective.

On the German right was their First Army, commanded by General Von Kluck. Connecting with Von Kluck's left was the Second Army, commanded by General Von Bulow.

On August 12, 1914, the bulk of the British Expeditionary Forces sailed from Southampton and landed at Boulogne.

On August 20th the Germans captured Brussels and the Belgian Army retired towards Antwerp.

By August 21st the Fourth French Army (Gen. Langle de Cary) was in position on the left bank of the Meuse with its left resting on the fortress of Namur. Namur occupies a commanding position in the angle of the Meuse and Sambre and at that time consisted of a ring of four large and five small forts mounting about three hundred and fifty guns. At right angles to this force, behind the Sambre, and extending towards the west, was the Fifth French Army under General Lanrezac. The right of this Army was at Namur, the center at Charleroi, and its left towards Binche.

On this date the British concentration was practically completed just south of Maubeuge.

The German Second Army opened fire on Namur, August 21st, with artillery, and its Infantry had entered the outer ring of Forts north of the city.

POSITION AT MONS.

Dispositions to move the British Expeditionary Forces into position on the line Conde-Mons-Binche were made on August 22nd. This line was to be occupied as follows: Second Corps (Smith-Dorrien) from Conde to Mons, inclusive; First Corps (General Haig) from Mons eastward toward Binche. The Fifth Cavalry brigade at Binche commanded by General Chetwood. The Cavalry Division commanded by General Allenby was in reserve behind the left flank.

Reconnaissance to the front was to be conducted by the Fifth Cavalry Brigade, assisted by a few squadrons from General Allenby's command.

Reconnaissance was carried on as far north as Soignes, where German cavalry was encountered in force, and although German Infantry was observed on the roads, their strength could not be ascertained because the German Cavalry was in such force that they drove the British off.

On this date the German Second Army attacked the Fifth French Army along its entire front and heavy fighting ensued. In the meantime General Von Hausen pushed forward from the cover of the forest of the Ardennes Mountains and attacked the right of the Fifth French Army and the left of the Fourth French Army. This attack was successful and threatened the retreat of Lanrezac's Army.

PLAN OF OPERATION.

A conference was held on the morning of August 23rd by General French with Generals Haig, Smith-Dorrien, Allenby and the French Officers detailed for duty with his forces, in regard to the plans of operations.

This plan had been drawn up by General Joffre, commander of the French Army. The plan was one following the open square strategic plan of Napoleon—the corners of which are pushed towards possible points of contact with the enemy. This plan is adopted when the strength of the opposing forces is unknown, as in this instance, when General Joffre did not know the strength of the German Armies. The forces first

coming in contact were to hold or take up a fighting retreat until the enemy's strength developed. When his strength was developed the other corner was to be maneuvered into support, thus bringing a superior force into opposition. The success of this plan depended largely on the ability of the center to hold the enemy in check. Thus the British were to assume a defensive position and act on the defensive until further orders.

The strength of the German Army, advancing on the British, was assumed to be between one and two Corps, plus one cavalry division.

BATTLE OF MONS.

At 3:00 p. m. August 23rd, the Germans opened fire on the British position with artillery. The First Corps was pushed back to the high ground south of Bray, and the Fifth Cavalry Brigade evacuated Binche. This left the Third Division in a very dangerous salient. The Third Division was on the right of the Second Corps in front of Mons. All this time General French assumed that the French on his right were still in position and that he was acting in accordance with plans. Such assumption was warranted by information received, but this information was not actual facts.

At 5:00 p. m. General French received a telegram from General Joffre, inexplicably delayed, conveying the information that the forces attacking the British greatly exceeded the estimate, and at least three Corps were in front and one Division was attempting to outflank his left from the direction of Tournai. It also contained the information that the French on his right were retiring and that the Germans had crossed the Sambre between Namur and Charleroi. The news of the turning movement was borne out because a German Corps attacked Tournai on the 24th and captured it from a small force of French territorials. Although this was alarming news General French's forces were committed to battle and it would be impossible to withdraw before dark. He was enabled however to withdraw his center (Third Division) south of Mons before dark.

Upon the receipt of the telegram from General Joffre an attempt was made to confirm it by aeroplane and plans were made for a retirement on the 24th of August.

Thus at Mons the British employed about 70,000 men and the Germans had about 200,000.

PLAN OF RETIREMENT FROM MONS.

The plan for the retirement was for one division to make a strong demonstration against the enemy and under its cover the Corps would retire. One Corps was to assist the retirement of the other in a like manner. A position had been selected on the line Maubeuge-Bavai, in case of forced retirement, and it was decided to retire to this line.

RETIREMENT FROM MONS.

In the early hours of August 24th, the Second Division made a strong demonstration to retake Binche and under cover of this demonstration the Second Corps retired to the line, Quarouble-Dour-Frameries. The Second Corps held on this line and allowed the First Corps to retire to the line of Maubeuge-Bavia. At this time the Germans were exerting a strong pressure on the Second Corps and General Allenby, with his Cavalry Division, was ordered to relieve this pressure with a vigorous attack. He attempted a cavalry charge and although this attack failed it somewhat relieved the pressure. At this point the 19th Infantry Brigade was moved up from the line of communication and placed in position south of Quarouble on the left of the Second Corps.

The Second Corps then retired to the line established by the First Corps west of Bavia.

The night of the 24th found the Second British Corps from Bavai extending west towards Valenciennes, and the First Corps from Bavai to Maubeuge. Thus the right was protected by the Fortress of Maubeuge.

NEW PLAN BY GENERAL JOFFRE.

After this defeat General Joffre needed a new plan and it was decided to retire and reorganize, then to assume the offensive when he was ready.

A new French Army (the Sixth) was to be organized in the vicinity of Amiens and when its concentration was completed it was to take a position on the line St. Pol-Arras-Bapaume.

The retreat was to be an orderly one with a succession of counter-attacks, the limit of the retreat so fixed that all armies would reach it at the same time and be ready to assume the offensive without delay.

The rapidity of the German advance was underestimated and the offensive had to be delayed. The Sixth French Army was unable to organize and occupy the line designated for it.

SITUATION AT MAUBEUGE.

On the night of August 24th the French Army on the British right was retiring rapidly toward the south, and when the Second Corps retired to this line there were two German Corps in front and one attempting to turn its left flank. With this alarming situation General French assumed the Germans were attempting to encircle his left and bottle him up in Maubeuge. With such a situation General French decided the best thing was to retire to the line Landrecies-LaCateau-Caudry point southeast of Cambrai. On August 23rd the Fourth Division (General Snow) commenced detraining at LaCateau and the concentration of this division was completed by the 25th. This force was ordered into position with its right south of Solesmes and its left on the Cambrai-LaCateau Road. It assisted the retirement of the First and Second British Corps.

RETIREMENT FROM MAUBEUGE.

This was a comparatively quiet day for the British and the retirement was completed with little difficulty. Thus on the night of the 25th the new line was established. General French had called on General Sordet of the French Army for assistance but General Sordet would not move as he stated he needed authority from higher command and also that his horses were too tired. The heat was intense during the day and the men of the British Army were very exhausted. General French believed the German forces were in the same condition and would not press the pursuit vigorously. On this assumption the men were permitted to lie down to rest without properly preparing trenches.

BATTLE AT LA CATEAU.

General French's assumption was incorrect because when darkness arrived his right (First Corps) was attacked sharply at Landrecies and only gallant fighting held the town. Later in the night a French Battalion from General Lanrezac's Army re-enforced the First Corps and partly due to this assistance, but mainly to the disposition of his forces, General Haig was enabled to retreat towards the south at dawn. With the retirement of the First Corps the British line extended from La Cateau, on the right, through Caudry to southeast of Cambrai. The British Cavalry was greatly scattered at this time, due to the fighting of the last few days, but General French was enabled to assemble two Brigades south of Cambrai and two behind La Cateau.

The Second Corps was to retire after the First Corps, but at daybreak of August 26th General Smith-Dorrien believed he would be unable to retire as ordered, because he thought the attack on the First Corps was a fore-runner of the main German attack. General Smith-Dorrien decided the only way he could retire was to first attack the Germans and drive them off. He was ordered however to retire as soon as possible, as he could not expect any assistance from the First Corps. The fight developed into an artillery duel until mid-day with the German guns greatly outnumbering the British. During the early part of the afternoon the German Infantry attacked, and in order to prevent being wiped out a retirement was begun about 3:30 p. m.

RETREAT FROM LA CATEAU.

About this time some French troops arrived on the left of the Second Corps and this relieved the pressure somewhat but only the action of the Cavalry and Artillery saved the Second Corps. The retreat continued throughout the night towards Noyon. On the 27th and 28th of August the retreat of the Second Corps continued and on the 28th the Second Corps was in position south of the Oise. In the meantime the First Corps retreated without much hinderance toward Le Fere and on the 28th the British Army was united in a defensive position south of the Oise with the left at Noyon and the right at Le Fere.

BASE MOVED TO LE MANS.

On August 27th the British moved their advance base of supplies from Amiens to Le Mans and their base from Le Harve to St. Nazaire.

SITUATION AUGUST 28TH.

The French Fifth Army on August 28th was in position extending from Le Fere northeast toward Guise and the Sixth French Army connected with the British left. This gave the British a breathing spell

and allowed General French a chance to reorganize and rest his men.

RETIREMENT FROM SOISSONS-COMPIEGNE.

About noon August 29th General French received information that five or six German Corps were advancing on the Fifth French Army and that two Corps were advancing on him from the direction of Ham, on the Somme, and a force of three or four Corps was advancing on the Sixth French Army. The Fifth French Army was ordered to attack and under this cover the British retired to a line along the Chemin de Dames, just north of Soissons-Compiègne, where they remained until August 31st. The attack of the Fifth French Army was successful, but they did not exploit their success as this was not part of the general plan, so upon completion of their initial success they took up a retirement with the rest of the Allied Forces towards the Marne.

On August 31st the Germans captured Amiens, and the French Sixth Army retired towards Paris.

RETREAT SOUTH OF THE MARNE.

The first of September saw the entire Allied Forces retiring towards the Marne in compliance with the plans of General Joffre. The British, on September 1st, fought a rear guard action with its First Corps on the Authone and after holding the Germans in check retired southward. The First Cavalry Brigade also engaged the Germans at Nery and after sharp fighting followed the balance of the British Army. The vanguard of the British Army reached Meaux on this day and on September 2nd crossed the Marne in its retreat southward between Lagney and Le Ferte-sous-Jouarre.

LOSSES.

Sir John French reported up to September 3rd 64 officers and 212 men killed, 1223 wounded and 13,642 missing, and it is believed the Germans suffered more than the British.

COMMENTS AND CRITICISMS.

1. Although the British selected their position at Mons, it is impossible to see how proper disposition of forces could have been made, as they had no plan of action when the position was occupied. The plan was not discussed until August 23rd.

2. The British Cavalry did not operate far enough in advance at Mons. They encountered German Cavalry about five miles in front of the British lines and with a force of this size, Cavalry should be at least a days march in advance.

3. Poor flank protection. Cavalry kept in reserve instead of working well to front and flanks. Had this been done General French would have known of the German attempt to turn his left from Tournai. Tournai is about sixteen miles from Conde.

4. Lack of reconnaissance during the Battle of Mons. General French was in ignorance of the strength of the forces attacking him until after 5:00 p. m., when a telegram was received from General Joffre, although the fight had been in progress several hours.

5. Lack of co-ordination between the British and French commands.

6. No unity of command in Allied Forces at any time during the retreat.

7. The rate of advance and size of German Armies always underestimated.

8. Failure of General Smith-Dorrien to carry out superior orders at La Cateau, thus dividing the British Army and bringing on a fight before the commander was ready.

References:—Forty Days in 1914, by Maurice; Why Preparedness, by Reilly; Topography and Strategy in the War, by Johnson; Literary Digest History of the World War; The Marne Campaign, by Lt. Col. Whitton; The March on Paris and the Battle of the Marne, by Von Kluck; New York Times History of the War, Vol. I; The Dispatches of Lord French; Nelson's Encyclopædia, Vol. 8.

THE FIRST BATTLE OF THE MARNE.

—BY—

Capt. Charles A. Valverde, Infantry.

The Battle of the Marne may be described generally as those engagements on the Western front, between September 5th and 15th, 1914, brought about as a result of the Allied armies changing from defensive to offensive operation.

During the latter part of August 1914, the French armies and the British Expeditionary forces, that had been sent north to check the invading forces of the enemy and turn them back, had failed. The Allied forces were out-numbered from the start and had been defeated in practically every engagement.

General Joffre, in supreme command of the French armies, had early concluded that further effort to drive the enemy back, or to even check their advance, would be futile and only result in useless sacrifice, and that his only course was to withdraw, gradually, into France, delaying the enemy all he possibly could. This would permit the completion of French mobilization, and at some future time, after he had been reinforced, he would take the offensive with his whole force and drive the enemy out of France.

This decision of Joffre's is borne out by orders issued by him August 25th and here quoted:—

"It being impossible to execute the offensive movement which had been projected, the subsequent operations will be carried out in a manner to constitute on our left, by the united strength of the 4th, 5th and British armies, and the new troops gathered in the eastern region, a massed force capable of taking the offensive, while the other armies will, for the necessary time, hold in check the efforts of the enemy."

It will be seen, therefore, that the withdrawal of the Allied armies was not due entirely to their defeat, but rather to enable the French command to carry out their plans for a subsequent offensive.

The plans of the German General Staff included the occupation of France and the destruction of the French armies so that their undivided efforts could be turned to the eastern front. To accomplish this the High Command had planned to envelop the Allied left, break through the French right, east of Verdun, and break through their left center, thus separating their armies and destroying their lines of communication.

To defeat those plans, General Joffre was making his strategical withdrawal, pivoting on the fortress of Verdun in the east, and causing his left to withdraw sufficiently rapid to prevent envelopment. His left was to fall back on the defenses of Paris and pivoting there, his center was to fall back but not beyond line Siene-Aube. He hoped that the time for his proposed offensive would come prior to the limit of his withdrawal. The armies of the Frontier from Verdun eastward to the Swiss border, were to hold—this he felt could be done due to the strong fortifications there.

Thus, during the last week of August, while the enemy was making desperate efforts to envelop the Allied left, severe fighting was in progress east of Verdun in the vicinity of Nancy. There, from September 1st to 9th, the Germans made repeated attacks, proceeded by tremendous artillery bombardments in their efforts to break through the French right, but were unsuccessful in each effort. The French line held and in several counter-attacks, gained ground.

This defensive operation on the part of the French was the first real "turning of the tide" against the enemy, and although treated as a separate engagement, was due to its strategical relation to the other phases, a part of, and in reality, the first phase of that stupendous struggle—"The First Battle of the Marne."

Some time during the last few days of August, it became necessary for the German General Staff to withdraw several corps and divisions from their western front and send them to their eastern front. At about the same time, the French mobilization, having been rushed towards completion, two new armies had been assembled and placed in the line. They were, 9th, under General Foch, and the 6th, under General Maunoury. Therefore, just prior to the events that were to follow, the contending forces were more equal in strength.

The foregoing bring us up to September 3rd, the date on which things began to happen that initiated the second and third phases of the battle of the Marne. With reference to the map it will be seen that the Allied line from Verdun westward had taken the form of a curve. Pivoting on the fortress of Verdun, it

extended south and southwest, then northwest and the left of the line was immediately northeast of the defenses of Paris. From Verdun eastward, the line stretched southeast to the Swiss border. The enemy line generally confirmed.

The disposition of the Allied armies was as follows:— From Verdun eastward, there was the 2nd and 1st French armies, in the order named under Generals de Castelnau and Dubail, respectively. From Verdun westward, the 3rd French Army, General Sarail, stretched from Souilly, southwest of the defenses of Verdun to Revigny and faced northwest. The Fourth Army, General Langle de Cary, from the left of the 3rd Army to Sompuis. The 9th Army, General Foch, before mentioned as being recently assembled, came next and occupied the front south of La Fere Champenoise, between Camp de Mailly and Sezanne and faced the marshes at St. Gond. The 5th Army, General Franchet d'Esperey, was next in line and inclined a little to the southwest and the region below the forest of Crécy, where the British Army, under Sir John French, was posted, its left resting on the defenses of Paris.

The 6th Army, General Maunoury, also mentioned previously as being recently organized, had been assigned to the defenses of Paris and occupied a front on the north of the British Army and the northeastern outskirts of the entrenched area of Paris and faced east. General Gallieni commanded the defenses of Paris.

In the German line, east of Verdun, were the 6th and 7th armies, under the Crown Prince of Bavaria and von Heeringen respectively. Beginning at Verdun and extending westward, were the 5th Army, under the Crown Prince of Prussia, the 4th Army, under Duke Albrecht of Wurtemberg, the 3rd Army, under von Hausen, the 2nd Army, under von Bulow and the 1st Army under von Kluck.

The 5th Army encircled the defenses of Verdun and opposed the right of the 3rd French Army; the 4th opposed the left of the 3rd and the right of the 4th French Armies. The 3rd Army opposed the left of the 4th and right of the 9th French Armies. The 2nd Army opposed the left of the 9th and the right of the 5th French Armies, and the 1st Army opposed to the British Army.

On the night of September 3rd-4th, it was reported to General Gallieni that contact with the enemy immediately east of Paris had been lost. Early the following day it was determined that the 1st German Army had changed its direction of march and instead of marching on Paris, was then moving in a southeasterly direction, leaving their flank and rear exposed to attack.

General Gallieni lost no time in communicating with General Joffre and plans were immediately formulated for Maunoury to attack the exposed flank and rear of the enemy while the British engaged their front and incidentally to launch the proposed counter-offensive along the whole front at the same time. With this in view, a consultation was held with General French, the British Commander, in an effort to have him attack the enemy (von Kluck) on the next day, in conjunction with Maunoury's attack on the exposed enemy flank.

General French refused and gave as his reasons that his army could not be prepared for an attack in less than forty-eight hours. General Gallieni, however, was determined to attack, with or without the British, and accordingly ordered Maunoury to move east on the following morning, preparatory to crossing the Ourcq and attacking the enemy.

The afternoon of the same day, September 4th, 1914, General Joffre issued the following order:—

1. Advantage must be taken of the risky situation of the German 1st Army to concentrate against it the efforts of the Allied armies on the extreme left. All preparations must be made during the 5th for an attack on the 6th September.

2. The following general arrangements are to be carried out by the evening of the 5th:

- (a) All available forces of the 5th Army are to be ready to cross the Ourcq between Lizy and Mayen-Multien in the general direction of Chateau-Thierry. The available forces of the 1st Cavalry Corps, which are close at hand, are to be handed over to General Maunoury for this operation.
- (b) The British Army is to establish itself on the line Changis-Collommiers, facing east, ready to attack in the general direction of Montmerace.
- (c) The 5th Army will close slightly to the left and take up the general line Courtacon-Esternay-Sezanne, ready to attack, generally speaking, from south to north. The 2nd Cavalry Corps will insure connection between the British Army and the 5th Army.
- (d) The 9th Army will cover the right of the 5th Army; it will hold the southern exits of the marshes of St. Gond and part of it will deploy in the open north of Sezanne.

3. The different armies will attack on the morning of the 6th of September:—

The following are supplementary orders issued by Joffre on the 5th September:—

Fourth Army: Tomorrow the sixth of September, our left armies will attack the German 1st and 2nd armies in the front and flanks. The 4th Army will cease its southerly movement and attack the enemy, co-ordinating its movements with that of the 3rd Army, which will issue north of Revigny and take the offensive.

Third Army: Covering itself against attack from the northeast, will debouch to the west to attack the left flank of enemy forces marching west of the Argonne (4th Army) which have received orders to attack.

Von Kluck's sudden change of direction not only exposed his flank and rear to the French 6th Army, but indicated a change of plans of the High Command. It must have been obvious to General Joffre that the enemy had given up hopes of enveloping his left and was going to concentrate in breaking through his center. At any rate, that is exactly what they had done, as will be disclosed later. Whatever Joffre's conclusions were, he knew one thing and that was that the time was at hand for his proposed counter offensive and he intended throwing his entire force into the action and drive the enemy out of France.

THE BATTLE OF THE MARNE.

Von Kluck had posted his IV Reserve Corps on the east bank of the Ourcq to protect his flank from any possible emergency, thus, during Maunoury's movement on September 5th towards the Ourcq, preparatory to crossing it, a number of local engagements between covering detachments took place. With that exception, however, no fighting took place. The remainder of the Allied armies continued their withdrawal to the south.

On the morning of September 6, the Allied armies along the entire front, west of Verdun, attacked, those to the east were engaged, and the allied counter offensive was on. The 6th Army soon engaged the IV Reserve Corps and the latter was forced back toward the Ourcq. It was not long, however, before the commander of the IV Reserve Corps realized the situation and sent urgent appeals to von Kluck for assistance—the latter replied by dispatching the II Corps, and during the day sent further re-enforcements. As a result of these re-enforcements, the fighting became intense.

The British Army had moved forward at dawn, but were engaged very little during the day. On the British right the French 5th Army had attacked the German 2nd Army and a violent battle developed along its entire front, due to the enemy attacking at the same time. D'Esperey managed to gain ground in spite of the resistance and continued his successes after dark that night.

On the following morning, Maunoury continued his attack. His re-enforcements were on their way; the first cavalry corps was moving to his left and the 61st Reserve Division was moving out of Paris. During the early part of the day he made good progress, but later when more German re-enforcements arrived, the situation took on a less favorable turn.

The re-enforcements of Von Kluck that had hurried off to strengthen the line on the Ourcq had left only a comparatively small force in front of the British consisting chiefly of cavalry. This cavalry screen was successful in holding up the British advance to that they were of no assistance to Maunoury.

The 5th Army felt the release of pressure on its left caused by the withdrawal of von Kluck's forces to re-enforce his right, but at the same time the 9th Army on d'Esperey's right was being violently attacked and forced back so that he caused the X Corps (right of 5th Army) to act towards the right and thus relieve Foch's left. The day resulted in a substantial gain of ground for the 5th Army.

September 8th, was remarkable for the violence of the German attacks. The situation with regard to Maunoury was serious. Instead of von Kluck being caught in a trap and crushed, as might have been expected, he had extricated himself and was threatening a counter-stroke west of the Ourcq. In other words, his efforts seemed to secure a technical victory rather than merely hold the French. The British had failed completely thus far in engaging von Kluck's main force and he was enabled to concentrate his whole force against Maunoury.

During the 8th, the British managed to advance to the Petit Morin uninterrupted, but at that point, their crossing was contested during the greater part of the day. Finally during the late afternoon they ac-

completed a crossing after the bridges had been destroyed.

The 5th Army, like the British, had experienced little difficulty in advancing to the Petit Morin, but were there held up during the greater portion of the day. The advance of the 5th Army was made possible by Bulow giving way to maintain contact with von Kluck.

On September 9th, the crisis of the battle was reached. Maunoury was all but defeated. In the absence of a general reserve, re-enforcements were difficult to obtain. However, General Gallieni, on the night of the 8th, had collected all the odds and ends he could get from Paris, including the 62nd Reserve Division, and had sent them out to the front by means of rail and motor transport, including taxi cabs, and these re-enforcements were available on the morning of the 9th, in time to be of material assistance to Maunoury.

Then, too, the British and 5th Armies, were more successful on the 9th and by evening had crossed the Marne and engaged the enemy on its right bank.

The British had at last accomplished the mission expected of them on the 6th, and von Kluck was engaged on two fronts. But von Kluck was withdrawing. Orders had been received from the German High Command, through a general staff officer, directing his withdrawal.

Von Bulow was confirming, and thus, in the pursuit that followed on the night September 9-10th, the 6th Army crossed the Ourcq.

The 1st and 2nd German armies continued their withdrawal during the 10th and 11th. On the 12th, they reached their prepared positions along and behind the Aisne, where they turned and checked the Allied pursuit.

Having thus seen what transpired on the left during the Battle of Ourcq, of what might be termed the second phase of the Battle of the Marne, let us now see what had been taking place in the center at the same time.

THE SECONDE PHASE.

Referring to the orders of the French commander, dated September 4th, it will be seen that the mission of the 4th Army was to attack the enemy in his front, co-ordinating his movements with that of the 3rd Army; that the mission of the 3rd Army was to attack on the left flank of the German 4th Army; the 9th Army to hold the line south of the marshes of St. Gond. It will be thus seen that the French High Command intended breaking the enemy line at the junction of the 4th and 5th Armies, taking advantage of the oblique position of the 4th German Army with respect to the general line.

At dawn on September 6th, the 3rd and 4th Armies launched their attacks as had been ordered, but the enemy attacks came at the same time and a terrific engagement ensued. The attack of the 3rd Army to the north-west was blocked by the action of the Imperial Crown Prince attacking to his front at the same time Albrecht of Wurtemberg concentrated his efforts on the French 4th Army. Neither army was able to advance but had all they could do to hold their own.

The fact that von Kluck was forced to turn about and face Maunoury did not change the plans of the German High Command with respect to breaking through the French centre. That must be accomplished in order to gain a decisive victory.

On September 5th, the centre was in that position of the Champagne-Pouilleuse which lies between the sharp edge of the Briel Plateau in the west and Troyes-Chalons road in the east. The country was an open plateau, falling gently eastward towards the Marne. It contained one curious feature. In the chalky soil of the plateau lies a pocket of clay, ten miles long, from east to west, and from two to three miles in width. Through that pocket, flows the Petit Morin, a very small stream, indeed here lay its springs. The place had been canalized to prevent flooding. This area is called the marshes of St. Gond. In fair weather the ground is comparatively dry, but during and after rains it is a quagmire, due to the high ground to the south shedding water and overflowing the canals. The marshes were crossed from south to north by two main high-ways. At this time the marshes were wet and formed a natural barrier to the German advance.

On September 5th, Foch's army was along the southern edge of these marshes and to aid him in carrying out his mission of holding the line he sent advance troops to the north edge of the marshes; establishing the 42nd Division on his left on the high ground to the southwest of the marshes, ready to deploy in

the plain to the north. His IX Corps occupied the centre along the southern edge of the marshes; the IX Corps was on his right and occupied the front from the eastern edge of the marshes to Sommesous, with a cavalry division covering the gap between his right and the 4th Army. He was opposed to von Bulow's left and von Hausen's right.

On the morning of September 6th, Foch met the attack of von Bulow and von Hausen. His left was unable to advance to the plains to the north. His advance troops were forced back through the marshes to the south edge. His centre was forced back by von Hausen's right. His right was weakened and only darkness saved it from falling back. His left, although unable to advance, held firmly the high ground it occupied.

Next day, September 7th, the Germans renewed their attacks furiously and although his centre held, his right gave way and was forced back several kilo-metres.

The following day, the 8th, his right gave way again and this time his centre was forced to conform in order to prevent being flanked.

Foch was aware of the seriousness of his situation and that at any moment the crisis might come. His mission was to hold. He knew that the success of the Allied operation in the west depended on his holding. Almost since the beginning of the operation, von Bulow's army had been closing in to his right in order to maintain contact with von Kluck in the east—thus widening the gap between his opposing armies. Foch saw this also and based his future operations upon it.

It will be remembered that the 5th Army, on Foch's right had been able to lend the left of the 9th Army considerable assistance, and it was due to this assistance, together with the strategical position of his left, that it was able to hold. The right and centre of the 9th Army, having been forced to the south during the 6th, 7th, and 8th, his front was forced in the shape of a curve with von Bulow's left and von Hausen's right confronting, with the gap between the opposing armies gradually but surely widening.

A plan for an offensive suggested itself to Foch and he immediately prepared to execute it. His plan was to withdraw his 42nd Division from his left, move it to his centre, and launch it into a sudden attack on von Hausen's right flank, at the same time counter-attack along his whole front. To take the place of the 42nd Division he borrowed a division from d'Esperey's right Corps, that had been supporting him, and gave the necessary orders for the movement of the 42nd Division, to begin the next morning, September 9th.

The fighting along Foch's front, during the forenoon of the 9th September, was intense, but the line held. Early in the afternoon, the fighting began to lessen and later on, it was determined that the enemy was withdrawing. The 42nd Division arrived soon after, but the proposed counter-offensive was not launched. Instead, the pursuit of the retiring enemy was begun and by night the 9th Army occupied its original position.

The German withdrawal had begun earlier in the afternoon of the 9th as a direct result of a German staff officer ordering the withdrawal in the name of the Emperor.

There were many and varied versions and legends regarding the operations of Foch on September 9th, but the facts do not support them.

The operations of the French 3rd and 4th Armies, during September 7th, 8th and 9th, were of stubborn defense. They had attacked on September 6th, but before the day was over were forced again on the defensive, and during the three subsequent days, were gradually forced back.

Von Hausen's retirement on the night of September 9-10th and the morning of the 10th, had uncovered the right flank of the German 4th Army about the same time that Foch's right met de Cary's left and the two pounced upon the exposed flank of the 4th Army and caused its hurried withdrawal to conform to von Hausen.

The army of the Imperial Crown Prince, acting as a pivot for the German withdrawal, refused to give way under the furious attacks of Serrail, but held its position throughout the 10th and 11th, and on the 12th, began to withdraw and conform to the new position established by the armies of von Kluck and Bulow in the east. By the 14th, this army had settled in a position across the Argonne.

The withdrawal of the German armies was by no means a route, but a well carried out movement. The retreat was successfully accomplished and by the 13th, they had checked the vigorous pursuit of the

Allied armies. The positions to which the German armies retreated were very strong. They had been laid out in advance to be used in case of forced retirement. For several days, General Joffre attacked, still hoping to dislodge the German Armies and drive them out of France, but, in their new lines, they were too strong and not only beat off the Allied attacks, but improved their own positions.

Thus, ended the First Battle of the Marne, and along with it, the beginning of the end of open warfare on the western front. Trench warfare had begun and was to continue for four years.

CONCLUSION.

The German armies had not been defeated on the field of battle and judging by that alone, the First Battle of the Marne was not a decisive victory for the Allies. But, as will be remembered, the plans of the German General Staff included the destruction of the French Armies and the occupation of France in order to concentrate their entire efforts in subduing Russia. It was necessary to carry those plans out immediately before the Russian mobilization could be completed. The Allied counter-offensive (The Battle of the Marne) defeated those plans entirely, and judging the battle by those results, it was a decisive victory for the Allies.

After four days of intensive fighting in their efforts to break through the Allied lines, the Germans, although they had attained local successes, were no nearer their goal than at the beginning of the fight. They did the most logical thing open for them to do, viz.—retreated to more favorable terrain, there to formulate new plans for the conduct of the war.

General Joffre's decision to withdraw into France, without expending more of his strength than necessary, was a very wise one. Had he given battle sooner, he would, in all likelihood, have been defeated, and the results of such a defeat can scarcely be estimated. By withdrawing, he not only prepared troops for the supreme effort, but he lengthened the enemy's lines of communication and shortened his own, which in itself was a decided advantage.

It is true that as a result of his withdrawal he sacrificed a large portion of France, but, considering, the results attained were well worth the sacrifice.

There are many phases of the Battle of the Marne that can well be criticised. Standing out among them are the failure on the part of either side to provide for a general reserve to be available for use by the High Command. Had the German High Command had such reserve, it could have carried out the original plans of their General Staff by breaking through the Allied line at nearly any point, on September 9th. On the other hand, had General Joffre had such reserve, he could have demoralized the German centre and, perhaps have accomplished his purpose of driving the enemy out of France.

Then, also, there were entire corps and separate divisions of cavalry in both groups of armies, but there was a decided absence of their use in shock action, for which cavalry is primarily intended. Had either side concentrated a corps or more of cavalry opposite a weak point in the enemy's line and charged that point, a break would undoubtedly have resulted.

Both the Duke of Wurtemberg and von Hausen failed to realize the weakness at the junction of the 9th and 3rd French Armies and the 3rd and 4th Armies. Had they concentrated their efforts on these junctions instead of on direct frontal attacks, they would have, at least, been more successful.

Although not mentioned before, the German General Headquarters was at Luxemburg, a hundred miles in rear of the centre of their front—which resulted in a certain loss of control and co-ordination.

Von Kluck's action on September 3rd, cannot be too severely criticised. He had been directed to cease his efforts to envelope the Allied left and concentrate towards the centre where von Bulow and von Hausen would strike. Instead of withdrawing a portion of his force and sending them around the rear, to the point concentration was desired, he deliberately moved his whole force, with the exception of his IV Reserve Corps, by the flank, thus exposing his flank and rear, and inviting attack. He knew nothing of new French forces which had been assembled in the west—a fact that reflects badly on his intelligence service. He knew only that the British Army was in front of him, and he had only contempt for the British. He, of course knew that Paris was defended, but he never thought it likely its defenders would leave and attack him.

Von Kluck, however, redeemed himself to a great extent, by his brilliant manœuvre of extricating himself, after having been attacked in the flanks, and changing the situation from one of certain defeat to one of near victory.

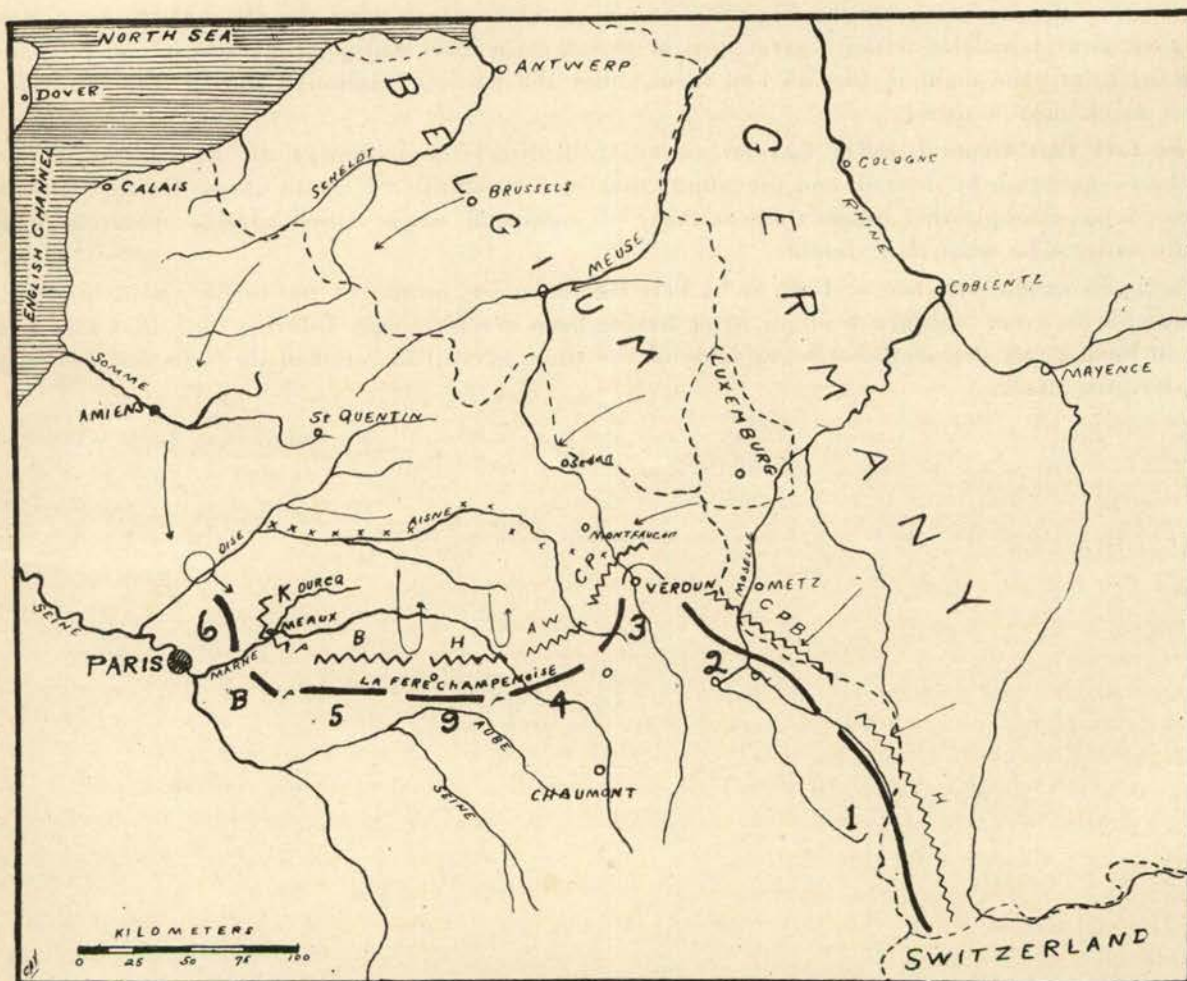
The failure on the part of the British commander to co-operate more fully with General Joffre, was a cause of the loss of a far-reaching victory for the Allies. Due to the ignorance of von Kluck as to the existence of the French 6th Army and the situation of his exposed flank, a sudden attack, as was desired by Joffre would have accomplished much. The British commander would not attack on the morning of the 5th as was desired and even on the 6th, when he did attack, he failed in his mission of engaging von Kluck.

General Gallieni should also be criticised for directing Maunouy to move toward the Ourcq on the morning of the 5th after he knew the British were not going to attack until the 6th. Maunouy's move on the 5th took away from the action a great deal of the surprise effect that might have been possible had both armies waited until the night of the 5th and then, under the cover of darkness, moved into position from which to attack next morning.

The fact that General Joffre had no authority to direct the actions of the British and could only ask for the co-operation he desired, and the results that such a condition brought about during the Battle of the Marne, is an example that unless there is unity of command when Allied armies operating together, the results will not be what they should.

The brilliant manœuvring of Foch at La Fere Champenoise, cannot be too highly praised, and should be an example to every military leader. After having been fiercely engaged during four days with superior forces, and having met defeat almost every hour of the time, he still maintained the situation was excellent and prepared for attack.

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THE BATTLE OF THE OURCQ.

—BY—

Lieut. Murray T. Davenport, Infantry.

INTRODUCTION.

The Battle of the Ourcq, termed by some "The decisive factor in the victory of the Marne", was one of the important, if not the most important, phases of that group of battles now known as the First Battle of the Marne fought between September 5th and 12th, 1914, which marked the end of the German hope to crush the French and end the war in the West in six weeks. From a purely now military viewpoint it was probably the most romantic phase of the group of battles as into this battle General Gallieni is popularly supposed to have rushed his entire army in Paris taxicabs and saved Paris and the entire French army. From a military standpoint it was important for the effect it had on the German plans, for its threat upon the entire right of the invading army and in conjunction with the other phases of the Battle of the Marne, the forced retreat of the German army. From the standpoint of the military student it furnishes material for considerable strategical study.

THE MILITARY SITUATION.

To properly understand the battle we should first consider briefly the events leading up to its opening. Flushed with his victories in Belgium and Northern France, driving the entire British expeditionary force before him, von Kluck, commanding the First German Army, had made a wide swing to the west. Avoiding the natural barriers and coming south along more favorable terrain than that on the routes of the other German armies, he approached Paris from the north and slightly west of north. The British had retreated towards the east, leaving Paris a few miles to their left. Between Von Kluck and the sea appeared no formidable enemy. The remnant of the Belgium army need not be considered. Scattered French forces seem to have given him little concern. Still it was necessary for him to leave behind sufficient troops to care for his lines of communications, daily growing longer. Starting from Germany with 200,000 men, he had left one brigade before Antwerp and another to garrison Brussels. These were to join him as soon as relieved by Landwehr troops from Germany. His army consisted of four regular army corps, the Second, Third, Fourth and Ninth and the Second Cavalry Corps and the Fourth Reserve Corps.

General Von Kluck, himself, has been styled a "self made man". He had risen from comparatively humble station as a lieutenant and had finally been enobled by the Kaiser. He had spent his whole life with troops and had no experience of staff work. This may account for the fact that he does not appear to have been in the full confidence of the German High Command, and as one historian puts it he "had no purchase with G. H. Q." Personally, also he had little regard for General Von Bulow on his left and differed with him on strategical and tactical matters. He had been under Von Bulow's orders during the latter part of August. Under Von Kluck were able generals such as Von Quast, Gronau, Linsingen, Marwitz and Sixt Von Armin.

Apparently Kluck's only opponent was the retreating British Army which had numbered about 70,000 men at the outset. This army was commanded by Field Marshall Lord John French. Under him were such generals as Haig, Cavan, Horne, Smith-Dorrien and Allenby. The force was divided into three army corps and Allenby's cavalry corps.

On the British right was the French Fifth Army under General Franchet d'Esperey with such later well known generals as Mangin and Petain. They had retreated practically as far as the British and were in slight contact with Von Kluck but chiefly with Von Bulow in command of the German Second Army on Von Kluck's left.

General Gallieni was then Governor of Paris, whose garrison proper consisted of the 83rd, 85th, 89th and 92nd Territorial Divisions and a Marine Brigade under Vice-Admiral Ronarich. The Entire Allied Army from Paris to the Vosges was then estimated at 46 divisions while the Germans were estimated at 41. Von Kluck estimated the difference at six divisions in favor of the Allies. Exclusive of the garrisons of Paris and Verdun, Whitton estimates that General Joffre had no less than 700,000 men. The Germans were estimated to have 900,000 but many of these were in the back areas.

As Von Kluck rushed forward he was at first ordered to swing west of Paris. He called attention to

the gap this would leave between his army and that of Von Bulow. The latter finally sided with Von Kluck on that point and they prevailed upon the German High Command to change this plan and attempt to roll up the French left by having Von Kluck leave Paris to the west and keep in touch with Von Bulow. However, Von Kluck was told to keep echeloned one days march to the rear of Von Bulow's right. But he found himself already one days march ahead of Von Bulow and even overlapping Von Bulow's right. Von Kluck has been criticised for not obeying this order but as he himself points out he would be forced to halt for two days, thus giving the British a chance to rest and he dared not do that, disputing the oft repeated statement by other authors, that he considered the British a badly beaten army.

This plan of the German High Command to leave Paris indicated that at no time had they regarded that city as the main object of attack although all their armies were cheered by the prospect of an early capture of the enemy's capitol. But "their military theorists from Clausewitz to Bernhardt had consistently preached the doctrine of the 'major objective', the destruction of the enemy's field army". This plan fell in handily with the strategem of General Joffre. All the way back from the frontier he had been seeking a place to stand, to get the enemy into a sack and to draw the string. Now he indicated that his stand would be back of the Seine. For his purposes he needed at least one new army, two if possible, and he had no reserve. Just north of Paris were the 61st and 62nd Reserve Divisions which had retreated in that direction from before Von Kluck. With these divisions at a nucleus Joffre built up the French Sixth Army. At the same time he built the French Ninth Army under General Foch back of the French center. By stripping his entire line of every available brigade or division Joffre formed two new armies.

For the commander of the Sixth Army Joffre chose General Maunoury, "a distinguished artillery officer who had held the posts of Commandant of the Ecole de Guerre and the Governor of Paris". He was a man about 67 years of age. On August 25th Maunoury was in command of three reserve divisions driving in the right wing of the Crown Prince's army. But General Joffre was even then planning his flank attack and dispatched Maunoury to Paris. To join the two reserve divisions already in the position of assembly Joffre drew the Seventh Corps from Alsace and the Fourth Corps from the Third Army. He also ordered the 55th and 56th Reserve Divisions, Sordet's First Cavalry Corps, a Moroccan Brigade and the 45th Division from Algeria to hasten to Paris. According to Major Gebel, General Ebner commanded the 61st and 62nd Reserve Divisions, General Drude the 45th Division, General Vautier the 14th Division of the Seventh Corps and the 63rd Reserve Division and General Lamaze the 55th and 56th Reserve Divisions and the Moroccan Brigade. General Boelle arrived later with the Fourth Corps.

It is difficult to find a correct statement of the size of these three armies. Von Kluck says he started with 200,000 men but does not give in detail how many he left in Belgium and along his lines of communications. Judging purely from the pre-war strength of his brigades he must have had 170,000 troops at least still under his personal control. Although the British original 70,000 had suffered heavy casualties the "ranks had been filled up with re-enforcements and some of its lost guns replaced". Simonds says Maunoury had considerably less than 100,000 men at the outset and the force was doubled during the battle. Figuring from the pre-war paper strength of the French army bigades Maunoury had at least 150,000 men. Thus the French Sixth Army, coupled with the British, outnumbered Von Kluck but the entire British force in this battle only met a thin screen left behind as a rear guard while Maunoury's army did not all reach the field until days after the fighting started. Von Kluck also had whole Corps out of the fighting on certain days when they were marching to change positions. It seems likely that in local engagements some times the Germans and sometimes the French had the numerical superiority by a slight margin while along the entire Ourcq front the balance was about equal. To this equality however, must be added the ever present threat caused by the presence of the British.

THE TOPOGRAPHICAL SITUATION.

East of Paris we find the Seine, the Grand Morin, the Petit Morin and the Marne flowing in general westward directions on practically parallel lines until near their confluences. The two Morins join the Marne somewhat northeast of Paris. The Ourcq rises well to the northeast between the Marne and the Vesle and flows parallel to the Marne to La Ferte Milon when it turns southwest for about 14 miles and joins the Marne. The Ourcq, the two Morins and the Marne are described as slow moving but deep and unforda-

ble. They are well provided with stone bridges. The streams are lined with woods and country homes. The plateau of the Ourcq is broad and level, especially on the west of the river where the fighting took place. The plateau falls abruptly to the river valley. This plateau is cut by two tributaries of the Ourcq and Marne running almost west to east, known as the Therouanne and the Gergone, thus forming in reality three plateaus. Here we find a few wooded hills around Meaux, the hills of Monthyon and Penchard. There are some scattered villages and some large farms "whose buildings, recalling the Chateau Hougoumont at Waterloo played a similar role in the battle". There were no hedgerows, the underbrush was thick in the woods but in large forests was less dense. Where the British advanced similar conditions prevailed. The terrain was not unsuited to cavalry work. The roads were generally very good but were lined with trees, making range work easier for the artillery.

THE BATTLE PLANS.

One month of war and the allies had been defeated in "battles compared to which the battles of 1870 were small engagements". But in 1870 those battles had destroyed the French Army while in 1914 although the Allies had met with these heavy reverses the army had not been destroyed.

General Joffre's plan has already been outlined. He wanted to entice Von Kluck as far south as possible, then have Maunoury strike him on the flank and rear. On September 3rd when all civilians who could were leaving Paris and the rest preparing for a siege word reached General Gallieni that the German army under Von Kluck was veering to the southeast away from the city. "If they do not come to us, we will go to them with all the force we can muster" he announced and on the 4th sent word to Maunoury, who was under his orders, to prepare to attack and be ready to move by afternoon. This action he then communicated to General Joffre, who that evening, the 4th of September, issued the order for the advance as follows:

1. Every advantage is to be taken of the dangerous situation of the German First Army by a combined movement of all forces of the Allied Armies on the extreme left wing. All preparations will be made on the 5th to begin an offensive on the 6th.
2. The general position to be occupied by the 5th is as follows:
 - (a). All the available strength of the Sixth Army will be in a position of readiness in the north-eastern zone of Paris, so as to be able to cross the Ourcq between Lizy and May-en-Multien in the general direction of Chateau Thierry; the available forces of Sordet's cavalry will be under the orders of General Maunoury to assist this movement. (The opponent will be Von Kluck.)
 - (b). The British Army is on a line Mangis-Coulommiers ready to attack facing east in the general direction Montmarial. (The opponent will be Von Kluck.)
 - (c). The Fifth Army will extend slightly to its left and take up a general line Courtacon-Esternay-Sezanne, ready to attack in a general direction south to north; The Second Cavalry Corps (General Conneau) will be responsible for maintaining touch with the British Army. (The opponent here will be Von Kluck and Von Bulow.)
 - (d). The Ninth Army (General Foch) will cover the right flank of the Fifth Army; it will hold the southern exits of the marshes of St. Gond, and part of it will deploy into the plain north of Sezanne. (The opponent will be Von Bulow and Von Hausen.)
3. The offensive will be commenced by the various Armies on the morning of the 6th of September". (The designation of the opponents of each of the armies does not appear in the original French orders and was evidently added by Von Kluck, according to his English editors.)

Whether or not this plan was suggested by Gallieni, as many of his admirers contend, or by Joffre or was in the minds of the French General Staff for some time as Von Kluck believes, is unimportant from a purely military standpoint. Von Kluck likens the plan to that of Hannibal at Cannac. The blow to be struck by Maunoury has also been likened to that delivered by "Stonewall" Jackson upon Hooker's right at Chancellorsville.

At just what time the information was given to General French is somewhat obscured. Generals Gallieni and Maunoury conferred with him on the 3rd and 4th of September. It is apparent that the British retreat came to a halt on the evening of the 4th. On the 5th General Joffre in person told General French

of the plans. These called for no attack by anyone before the 6th yet a great storm arose about the head of Lord French for the alleged delay of the British in getting into the attack.

Von Kluck was still pushing southward and veering off from Paris. He now complains bitterly of the failure of the German Intelligence Department to furnish him information, saying of the assembly of the Sixth French Army, "and yet the assembly of such a mass of troops on the flank of the German western wing had been kept a secret." His own reconnaissance must have been faulty as the 61st and 62nd Reserve Divisions of the French had retired before him and contact with them might have informed him where they went. He was, however, not wholly oblivious to a possible danger from the garrison of Paris and left along the Ourcq as a flank guard the Fourth Reserve Corps under General Gronau and a screen of cavalry, consisting of the 4th Cavalry Division.

A new German plan was announced to Von Kluck by which, as soon as the enemy had been pushed back of the Seine he was to turn back and face the west on a line from the Aisne to the Marne while Von Bulow was also to pivot and face Paris from the Marne to the Seine. Actual orders to make such a move were received by Von Kluck and at 11 p. m., on the 5th of September he issued orders to initiate this pivot. In his own account he says this move was based "on belief that there was as yet no great danger threatening the right flank and that a march back to cover it could be carried out without interruption".

Thus we have the plans for the armies. Their dispositions on the 5th of September were as follows: For the Germans, the Fourth Reserve Corps and the 4th Cavalry Division were on the Ourcq, the right flank; The second Corps was astride the Grand Morin and still advancing, the Fourth Corps was south of the Grand Morin from Coulommiers to Cherru. Both of these corps were facing the British. Further east the Third Corps was midway between Montmirail and Provins and the Ninth Corps near Esternay and Morsaine, facing the British and French Fifth Army. The Cavalry Corps under Marwitz was in front of the Third and Fourth Corps, facing the British. The Allied line, starting on the right of the forces we are considering consisted of the Fifth French Army, then the British with the Second French Cavalry Division as a connecting link. Then to the left the garrison of Paris and just north of the city Maunoury's assembling troops.

THE WEATHER.

Weather has an influence in battles. The condition of the men, especially the heavily equipped infantry, is effected materially by sun or rain. During this battle the first few days were clear and warm. Sunday, September 6th, the day the main attack was to begin proved a "day of almost tropical heat". The Germans especially noticed this heat, possibly because Von Kluck's men had already marched 312 miles in about 30 days, and many of them fell out on the march back to the Ourcq. Rain came during the night of the 8th and the 9th was a day of rain and high winds. There was some fog also on the 8th which bothered the British aviators and causes Conan Doyle to make some pertinent remarks about the use of aircraft in rear guard actions as follows:

"It is one of the noticeable results, however, of the use of aircraft that the bluff of a rear guard has disappeared and that it is no longer possible to make such a retreat as Massena from Torres Vedras, where the pursuer never knew if he were striking at a substance or a shadow", and again; "The weather had become so foggy that the aircraft was useless, and it is only when these wonderful scouts are precluded that a general realizes how indispensable they have become to him. As a wit expressed it, they have turned war from a game of cards into a game of chess."

BEGINNING OF THE ACTION.

"The battle was not the sudden rally of thousands and hundreds of thousands of soldiers, who had been for days fleeing before a victorious enemy. It was the result of a clear, cool and deliberate plan." In furtherance of this plan at noon of the 5th of September General Maunoury started to place his troops in position for executing the expected attack on the 6th. He sent General Lamaze with his 55th and 56th Reserve Divisions and the Moroccan Brigade from their position south of Dammartin towards the line St. Scupplets-Monthyon. No opposition was expected by Gallieni or Maunoury west of the Ourcq and Lamaze was to cross that river or get into position to cross it early the next day. But scarcely had Lamaze moved when his men came under fire from the batteries of the German Fourth Reserve Corps, guarding Von Kluck's

flank and in position well to the west of the Ourcq. For once the German reconnaissance was superior to that of the French and Gronau had been aware of the presence of Lamaze since the day before and had guessed at his purpose. He does not appear to have communicated his findings to his superior, Von Kluck, at least the latter makes no mention of it and says himself he remained ignorant of any danger from his flank until during the night of the 5th after he had given the order to conform to the Supreme Command's plan for a pivot back to face Paris.

Lamaze met stiff resistance. He pressed forward by hard fighting but by nightfall had gained only a couple of miles and was still ten miles away from the Ourcq. The nature of his attack on Gronau having been communicated to Von Kluck he hastened up the movement directed by him in his order of 11 p. m., by which the Second Corps was to march in two columns by Trilport to Germigny and by Pierre Levee and Monteaux to Isle-les-Meldeuses and the Fourth Corps to move to the vicinity of Doue. They were to leave weak rear guards on the Marne to occupy the bridges. The Second Cavalry Corps was to continue a forward demonstration towards the Seine. He changed his orders by having the Second Corps march at 3 a. m.

SEPTEMBER SIXTH

Von Linsingen, in command of the Second German Corps thus rushed back towards the west to the assistance of Gronau. He sent his Fourth Division by way of Lizy towards Trocy and the Third Division towards Vareddes. West and north of Vareddes the Third met resistance from what Von Kluck thought was the British but which seems to have been the Moroccan Brigade. Von Linsingen found Gronau hard pressed by Lamaze on the 6th and threw his divisions into the line partially intermingled with those of the Fourth Reserve Corps. This intermingling of units continued along the German line during the battle, which Von Kluck admits was not desirable but was unavoidable on account of the necessity for getting the reinforcements into the fight. Lamaze at first made headway, took St. Soupplets, crossed the Therouanne and the Monthyon ridge and in the afternoon was facing the Bouillancy-Puisieux ridge with his right around Etrepilly five miles from the Ourcq. Vautior was now in the line on Lamaze's left with the Seventh Corps.

Still Von Kluck considered he had time and that the two corps he had sent back would check any opposition from the direction of Paris and would in fact crush all opposition and join his other corps again in time to roll up the British. Like the rest of the German commanders he considered the strong resistance in Loraine to indicate the presence of a large army and figured there could be many spared for the Paris demonstration.

During the 5th Joffre and French had held another conference and decided the British should strike in a northeasterly direction instead of east as first planned. Accordingly on the morning of the 6th the British started northeastward. Conan Doyle and Maurice remark on the moral effect on the British army of this change from retreat to offensive. Opposition was met from the rear guard left by the German Fourth Corps. The British were in line with their Fourth Division on the left, the Second Corps in the Center and the First Corps on the right. The banks of the Grand Morin were occupied without serious fighting, most of the fighting of the 6th being done by the French to the right and left of the British. The German 11 Cavalry corps went as far south as Rozoy before turning back on the sixth.

In spite of the heavy fighting on Maunoury's front he had deemed it necessary to send the Eighth Division of the French Seventh Corps to act as a connecting unit between the British left and the Sixth Army. The British advance was made at the same time as that of the French Fifth Army. D'Esperey attacked the German Third and Ninth Corps as well as the German Second Army under Von Bulow. The Ninth Corps was especially hard pressed and called for help. The gap between the German First and Second Armies was filled only by the First Cavalry Corps. This gap seems to have been closed by Von Kluck's eastward veer, and the Third and Ninth Corps were echoloned in front of Von Bulow instead of behind him as desired by G. H. Q. Von Kluck was still sure he could crush Maunoury with two corps and in the afternoon of the 6th he turned over the Third and Ninth Corps to Von Bulow. Before noon of the 7th Von Kluck, at last fully realizing the danger from Maunoury, called upon Von Bulow to send back the two corps. They were extricated from the fighting and rushed back, leaving Von Bulow with a considerable problem as D'Esperey was driving hard and the British were threatening.

SEPTEMBER SEVENTH.

On this same morning, the 7th, Maunoury's army was heavily engaged. He had by then received the 45th Algerian Division and the remnant of the 61st Reserve Division. Vautier was having a desperate struggle around Etavigny and the skillful handling of his five field batteries by Nivelles was all that saved the left wing. So fierce was the fighting, which was hand to hand much of the time that at Nogeon farm the French captured a flag, which was lost and recovered three times. By noon Von Kluck had in the Ourcq line on the north or right wing the Seventh Infantry Division, and the 4th and 16th Infantry Brigades and the Fourth Corps, less the 16th Brigade, under General Sixt Von Armin, on a line Antilly to Acyien-Multien. In the center from Vincy to Manouvre was General Gronau with the Fourth Reserve Corps. On the left on a line Trocy to Varedes General Trossel had the 3rd Infantry Division and the 22nd Reserve Division.

Kluck, now finally awake to the situation believed he could turn Maunoury's left and extended his lines in that direction. Maunoury had little with which to counter such an extension. About noon Von Linsingen launched an attack on the Antilly-Trocy line, which somewhat relieved his left flank which was suffering heavily from artillery fire, although Maunoury had no very heavy artillery. This attack drove the French back through Villers St. Genest and Le Bas Bouillancy and the 22nd Reserve Division occupied Etrepilly. Shortly after noon Von Kluck ordered the Third and Ninth Corps to hurry their movement to the right of the Ourcq line. A second order followed at 2:30 a. m., Cavalry and Artillery were to press forward with all speed. The trains were to draw off to the north leaving the roads clear for the advancing combat units. Mindful of the British threat he ordered that one infantry brigade with heavy artillery of the Third Corps should act as rear guard and communicate with the Second Cavalry Corps operating about Trilport. The advance division of the Third Corps made good time and arrived that night at Lizy. The Ninth Corps reached Chezy on the Marne. The order given during the afternoon sent the headquarters guard from Vondrest where Von Kluck spent the day, into the fight, indicating a critical situation.

The situation looked dark for Maunoury that night. Gallieni evidently realized this and hastened the movement of General Boelle's Fourth Corps, which had just arrived from Serrail's army on the right allied wing. To get these re-enforcements into the line by morning Gallieni used, as he is quoted as saying, "a civilian's idea" and rushed them out in the Paris taxicabs. By morning half the Corps was in position on Maunoury's left wing. Michelin estimates that about 1,000 taxicabs were requisitioned for this move. The police even stopped cabs on the street and forced the passengers to get out and walk. Halsey says, "These drivers honestly believed that on the strength of their tires and the power of their engines would depend the safety of Paris and perhaps the life of France". During that day also the French First Cavalry Division was sent from the Seine to Maunoury's left. The Eighth French Division, in the gap between the Sixth Army and the British, were south of the Marne near Meaux and considerably bothered the German Second Corps.

The British and Fifth French Armies were still advancing on the 7th. The chief opposition to the British came from Von Marwitz's cavalry. The German cavalry was not trained to fight dismounted nor with the rifle in the same manner as the British cavalry and the result was that the British were not delayed at any point for very long and Allenby's 45 squadrons routed 2 German squadrons, and by evening the British had advanced to the Petit Morin from St. Ouen eastward.

Conan Doyle mentions several incidents in the cavalry actions showing differences of tactics. Two squadrons of British charged face to face into double their number of Germans. "The casualties were slight, greater on the German side". Again 70 Germans charged a dismounted British squadron. "Thirty-two dead Germans were picked up in front and those that rode through were destroyed by the horse holders".

In contrast to the gloomy outlook for Maunoury Von Kluck thought he was in a favorable situation. Reports reached him that the country around Senlis, well to the west of the Ourcq, was free of the enemy but that strong French detachments were about Nanteule-Haudouin, at Monteuil, Silly-le-Long, St. Soupplets and Betz. The danger along the lower Grand Morin did not appear very threatening. Believing in his ability to cut out flank Maunoury to the north he gave orders for the Third and Ninth Corps to start their march next morning at 2 a. m., in order to come into the action as soon as possible north of Antilly on General Von Armin's right. The Second Cavalry Corps was to continue to cover the flank and to operate also from Tril-

port on the enemy artillery north of Neaux. During the evening a brigade of the Fourth Reserve Corps and the Second Grenadier Regiment arrived from Brussels and were attached to General Sixt von Armin.

SEPTEMBER EIGHTH.

The German attack that day extended along the entire Ourcq front. They early captured Betz and pressed towards Nanteuil. The French attempted to counter this danger on the left wing by an attack on the right and by a valiant thrust at Trocy. Von Kluck ordered the Fifth Infantry Division of the rapidly advancing Third Corps to pass through Cocherel towards Trocy and this attempt to break through was halted. In the same order the left column of the Ninth Corps was ordered towards Mareuil and the right towards La Ferte Milon.

About this time in the morning Von Kluck also learned more definitely about the British. He organized a composite brigade of one infantry regiment and two field artillery regiments under Von Kraewel to act as a rear guard in conjunction with the cavalry already engaged. He had previously organized at Montreuil-aux-Lions one regiment of infantry and a brigade of artillery from the Ninth Corps to be used as a general army reserve. This he now placed at the disposal of the commander of the Ninth Corps for use against the British if needed. Von Kluck's orders also designated the line of communications for the transport wagons as Chateau-Thierry-Fere-en-Tradenois-Fismes. He believed in keeping his trains out of the way of maneuvering combatant troops.

The British advanced across the Petit Morin after some spirited resistance in places. Haig and Smith-Dorrien both had sharp fighting but by evening the Third Corps had reached the Marne at La Ferte-sous-Jouerre. The German Guard Rifles made a desperate stand near Orly after being deserted by their cavalry and were cut to pieces. Keeping step with the British D'Esperey took Montmirail in the afternoon.

The fighting along the Ourcq front on the 8th is described as fully as bitter as on the previous day, and with many hand to hand encounters. The quadrangles of several farms formed local storm centers. Whitton speaks of one between Pusieux and Etrepilly where one company of French attacked and seven returned, then two companies captured it and only ten answered the roll call. The French cavalry made an audacious dash towards La Ferte Milon in the evening. A detachment supposed to have been from Gironde's squadron of the 22nd Dragoons of the 5th Cavalry Division had a brush on the road near that place. They did not know in the dusk that they had been within a stone's throw of Von Kluck and had forced him and his entire staff to jump from their cars and seek cover along side the road, prepared to defend themselves with whatever arms they could grab. The staff was changing headquarters to La Ferte Milon at the time and came near being a rich haul for the French Cavalry.

The first column of the Third German Corps came into the line that evening. The balance later and the Ninth also moved into position to strike an enveloping blow at Maunoury's left. Von Kluck also learned that Lepel with his brigade from Brussels had reached Verberis, well to the west of Maunoury, and 15 kilometers behind him was advancing the 10th Landwehr Brigade. He sent Lepel orders to advance through Baron and attack on the 9th. Von Kluck's two corps had marched back from their "farthest south" position in forced marches. They had been given little sleep and were exceedingly weary. But the French were also near exhaustion from fighting and there appeared to be no re-enforcements. Gallieni had been using the 62nd Reserve Division that day organizing positions to which Maunoury could retreat. In an effort to create a diversion and make Von Kluck worry about his communication Gallieni also sent some Zouaves by rail and motor from Paris to Senlis and Creil and the Fifth Cavalry Division went on a wild ride into the Villers-Cotterets woods. These availed little, in fact Von Kluck says he was informed by his air men that evening that there was no enemy around Senlis.

SEPTEMBER NINTH.

As already mentioned this day was windy and rainy. Filled with the belief that he could crush Maunoury's staggering forces before Von Bulow would need any assistance Von Kluck hurled Von Quast's Ninth Corps from the wooded country on the north and the advance was satisfactory. Lepel advanced to Baron. The French left fell back to Silly-le-Long, not far from its starting point. Villers-St-Genest and Nanteuil fell to the Germans. Boelles corps fought gamely and were told by Maunoury to die rather than give way.

Maunoury had no place to look for reinforcements. The same fierce fighting on the part of the French marked this day. Madelin says the First Battalion of the 103rd Infantry, supported by two batteries, held the enemy behind Nanteuil in a "kind of fierce rage".

While this was going on along the Ourcq the British were crossing the Marne. Von Kluck had given orders to blow up the Marne bridges but had been too late, except for the bridge at La Ferte-sous-Jouarre. West of Chateau Thierry the British found the bridges intact and no attempt to defend them. By 9 a. m., the British Second Corps was over the Marne with the Third Division four miles beyond before the German artillery began to protest. Had the British then pushed forward Von Kluck would have been in still greater difficulties but the First and Third Corps were held up until afternoon. The French Fifth Army was at the same time pushing Von Bulow back slightly east till his right wing was on a line Marny to Le-Thoult.

Thus while Von Kluck thought every thing was going nicely for him he began to get tidings of a different state of affairs on his left, practically in his rear. He heard from Von Bulow about his right wing. Then he heard from Marwitz that the British were crossing the Marne at Nanteuil-Charly. He was forced to make provisions for this danger and at 11 A. M., ordered Von Linsingen back to the left of the lower Ourcq. Then about 1 P. M., he got a wireless from Von Bulow that the entire Second Army was retreating and his right would be on Damery, showing a gap of 30 miles between the two armies. The message should have read Dormans, which made the gap in reality 40 miles.

Lt. Col. Hentsch, Chief of Intelligence, from G. H. Q., came to Von Kluck's headquarters shortly after noon. The latter was not there at the time and does not explain where he was and before he got there Col. Hentsch had gone, telling General Von Kuhl, Chief of Staff, of the serious situation of the entire German Army to the east and ordering the First Army to retire back of the line Soissons to Fere-en-Tardenois. Von Kuhl pointed out difficulties in this and Hentsch said then go straight back with the left flank about Soissons.

Thus just as it was looking the darkest for Maunoury, about 2 p. m., Von Kluck gave orders for a retreat. General Boelle had just rallied his forces and was aiming a last desperate thrust towards the north when he found the hitherto victorious army in front of him was not offering much resistance. News came that Betz was evacuated. Then that Varedes and Etrippely were free of Germans. The tired Sixth Army crept forward cautiously. Two fresh divisions in Maunoury's hands at that time would have spelled disaster for Von Kluck. The next morning Maunoury pressed the pursuit as hard as his weary soldiers could up both sides of the Ourcq and on until the Germans were back across the Aisne on the 12th in entrenched positions prepared for them previously by Landwehr troops. The British and the French Fifth Army followed Von Bulow also up to the Aisne and Vesle near Fismes. Madelin says part of this retreat the Germans were so hurried they failed to pick up their wounded or bury their dead. It also seems certain the Germans were hard pressed for food and the supply of shells was running low. "Germany, like every other Power engaged in the war", says Maurice, "had underestimated the enormous expenditure of ammunition which the prolonged battles of these days entail."

Nowhere did I find even an estimate of the casualties of this battle on either side.

SUMMARY AND DEDUCTIONS.

There can be little criticism of the original German plan to be carried out by Von Kluck and Von Bulow to turn the Allied left. The German objective was not simply Paris but the destruction first of the enemy's field army, then the capture of his fortified places would be a comparatively simple matter. This was in accord with all previous German strategical teachings. The chief weakness in this plan lay in the fact that the Germans did not have superiority in numbers, which is a requisite to envelopment where large armies are engaged.

General Joffre's plan appears feasible, to draw the Germans into a sack. He had a slight superiority in numbers and he kept retreating until he got the enemy in just the position he desired. Several times on the retreat he was tempted to stop but waited until conditions were more propitious. He has been criticised for deciding to make his stand on the Siene as that river did not afford such good protection as other geographical situations. There is controversy over just whose plan it was, Joffre's or Gallieni's or some member of the general staff. That point is of no military importance, the point that the plan worked at least part-

ially and the Germans were denied their objective, that of destroying this Allied Army in six weeks as they had expected, is the chief matter of importance.

One weakness on both sides was in the fact that there was no general reserve. Joffre did not have any, he had no men with which to form such a reserve. The Germans did not have a general reserve, had evidently never planned for such a unit. Locally Maunoury had no reserve because of his lack of men. Von Kluck, during the battle, did form an army reserve for himself with one infantry regiment and some artillery out of the Ninth Corps but no sooner did he have it formed than he had to turn it over to the disposition of the commander of that same corps to assist in the rear guard actions.

Von Kluck calls attention to the faulty organization of the German armies there the three wing armies, his own, Von Bulow's and Von Hausen's were under three separate commanders with no central commander nearer than G. H. Q. Part of the time also he was under the command of Von Bulow. The latter, busy with his own army, knew little of what went on near Von Kluck. His suggestion that it would have been much better to relieve the senior of the three commanders and put him in supreme command of the three armies, thus securing unity of action, was logical.

The prime necessity of constant reconnaissance and knowledge of what the enemy is doing has never been more clearly demonstrated than in this battle and in the retreat immediately preceding it. Von Kluck says he did not know Maunoury was assembling an army. The German Intelligence system had broken completely as soon as the armies took the field. But he had his cavalry and should have kept in touch with the retreating French. His cavalry surely could have gained some idea of what was going on north of Paris and his air men had every opportunity to gain at least an inkling of what was going on. So while criticising some one else he might take some of the blame on his own shoulders. It is also a fact that he was not in the confidence of the G. H. Q. He knew nothing of what was going on along the rest of the line in France, supposed the Germans were everywhere advancing as he was, did not know that troops had been withdrawn to be sent against Russia, and thus was ignorant of many facts that might have influenced his decisions.

On the other hand the French reconnaissance was faulty at times. Joffre, Gallieni and Maunoury confidently expected to send Lamaze to the banks of the Ourcq on the afternoon of the 5th without opposition and surprise the Germans by his attack the next morning. It seems the ordinary precautions would have told them that Gronau was waiting for them twelve miles west of the Ourcq. His intelligence at that time was superior and surprise was prevented. He does not appear to have gotten word to Von Kluck about his knowledge for the latter was evidently surprised to hear that he had been attacked on that flank. German Great Headquarters may have had some idea of what was planned north of Paris when the order was issued for the First and Second Armies to pivot and face Paris but if so Von Kluck was not made acquainted with their suspicions.

One important tactical feature was shown by the British and German cavalry clashes. Face to face cavalry charges usually resulted in a practical draw. But charges by cavalry against dismounted troops proved disastrous for the mounted men. The British had been trained with the rifle in dismounted action, while the German cavalry had not.

Another lesson was in the use of motor transportation. It is difficult to ascertain the exact truth about how many and on what dates the Paris taxicabs were used. But the fact is well established that they were used to good advantage in getting troops to the firing line. Paris motor buses were all put into use when mobilization first started and were kept in the service and it was the smaller taxicabs in the general service about the streets of the city that were called into use in this emergency. Their success in a strong argument in favor of a thoroughly motorized infantry.

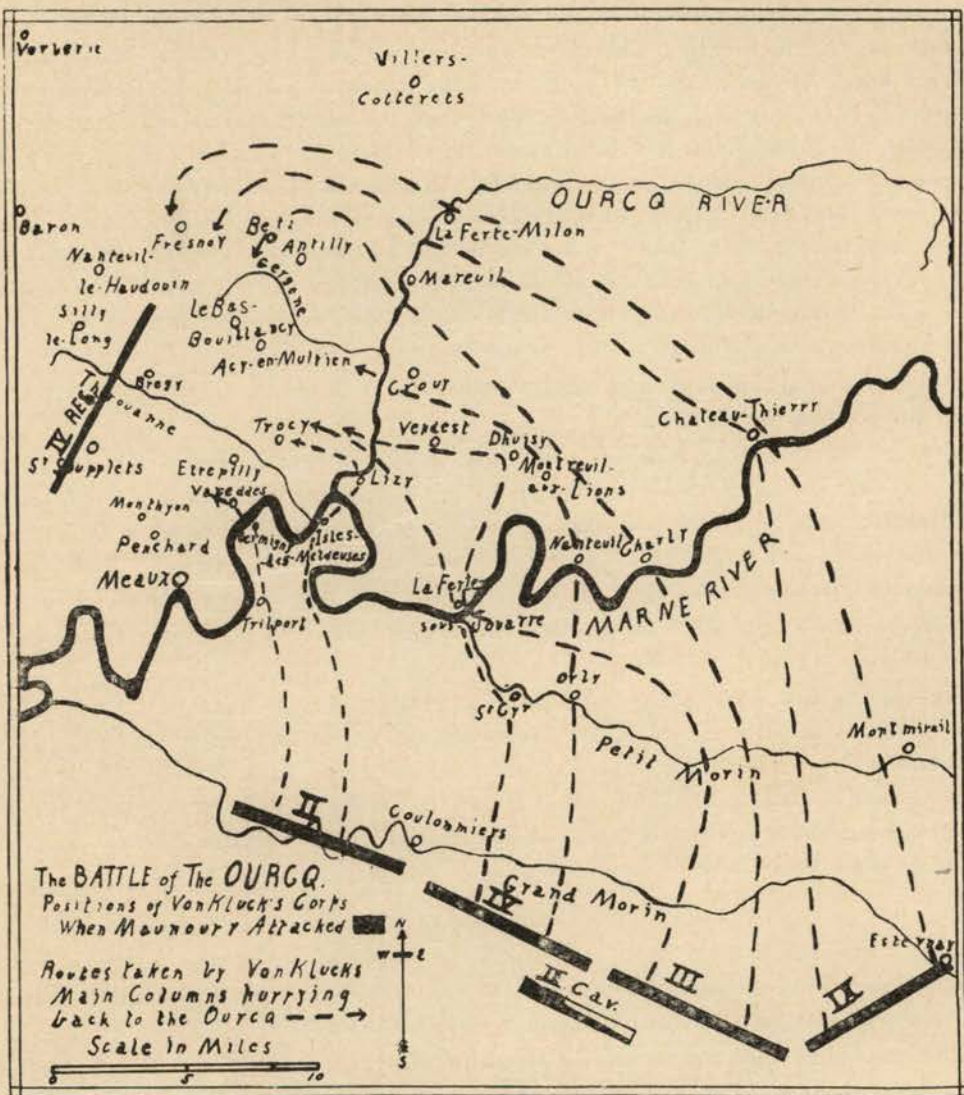
There was a great hue and cry raised about the head of general French for not attacking with more promptness. Yet from the authorities reviewed here it does not appear that all of this abuse was merited. The British retreat practically ended on the night of the 4th. He might have struck on the 5th but according to Joffre's own order he was not asked to attack until the 6th. Maunoury was not to attack until the 6th and the premature start of the fight on the Ourcq could not be blamed to him. With regard to the slowness of his advance on the 6th there seems to be little ground for criticism, his army had been retreating

for weeks and the men were near exhaustion and it was physically impossible to drive back faster.

The battle proved beyond a doubt the wonderful fighting ability of Von Kluck. Surrounded with every obstacle he fought back gamely and almost turned the tide the other way, probably would have had it not been for the situation to the east of him.

Summing it all up the Battle of the Ourcq was one of the outstanding features in a war of great features. In connection with the other phases of the First Battle of the Marne it turned back the German tide of invasion, put heart again into the French army and populace, and changed the entire course of the war.

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THE RACE TO THE SEA.

—BY—

Capt. Frederick McCabe, Infantry.

In order that we may get a clear understanding of the situation on the western front at the beginning of the "Race to the Sea", it is well to briefly review the events of the war that preceded. With their left pivoting on Thionville the German forces moved in a great wheel, the rim of which was Von Kluck's I army moving thru Belgium. It will be remembered that the Belgium fortresses were quickly reduced, that the Belgium Army sought refuge in Antwerp, and that the British and French retreated from Mons. On the 9th of September the Allies successfully counter attacked the Germans on the Marne and drove them back. By September 12th we find the German Armies digging in on a general line from the heights of the Aisne to Verdun.

The positions of the contending armies at the opening of "The Race to the Sea" were as follows: Von Kluck's I Army from Noyon across the heights of the Aisne to just west of Berry-au-Bac, was faced by Maunoury's VI Army on the left and the British forces on the right; Bulow's II Army and Hausen's III Army extending from just west of Beery-au-Bac to near St. Menchould, were faced by D'Esperey's V Army on the left and Foch's IX Army on the right; from St. Menchould to the Aisne River was the Duke of Wurtemberg's IV Army faced by Langle de Cary's IV Army; from the Aisne to the Meuse River crossing the Argonne forest was the V Army under the Crown Prince, faced by Serrail's III Army; extending from Verdun to Nancy was a fortified gap, and along the Grand Couronne in front of Nancy was the IV German Army under the Crown Prince of Bavaria, faced by De Castelnau's II Army; the VII Army under Heeringen faced the I French Army under Dubail in the Vosges region.

The Germans also had their III Corps under Von Beseler in the vicinity of Antwerp in order to checkmate any move on the part of the Belgians.

At this juncture it was the chief problem of both armies to link up the front northwest of Paris with the Belgian front. It was essential that the British forces retain the channel ports because they were the chief base of supplies. It was necessary, too, for the Allies to extricate the Belgian Army besieged in Antwerp, and to do this they must connect up their line with the Belgians. It was equally important that the Germans keep the Allies from connecting with the Belgians and that they hold the Channel Ports.

Marshall Joffre's plan was to turn and envelop his opponents right flank, but failing in this, to form a junction with the Belgian Army.

In accordance with the above plan, on September 11th General Maunoury began the turning movement on the west bank of the Oise river. With reinforcements at hand, namely the XIII Corps, on the 17th and 18th of September the Sixth Army had advanced up the right bank of the Oise in the region of Lassigny. Noyon was taken on the 21st. The task before the Sixth Army was difficult due to the wooded heights that extend along the Oise in this region and thier success is due to the fact that the newly constituted 7th Army had been moved in on the left.

7th ARMY.

In accordance with the general plan of turning the German right the Seventh French Army was organized, and put under the command of General De Castelnau. It will be remembered that De Castelnau commanded the Second Army at the Battle of the Grand Couronne.

The Seventh Army detrained on the line Clermont-Beauvais, covered on the Somme River by territorial troops under General Brugere. De Castelnau advanced on the general line between the Oise and the Somme and by the 21st of September was progressing through the flat country toward Le Fere and St. Quentin. On September 25th reinforcements from Von Bulow's command were disputing further advance. The Seventh Army was pushed back from Noyon and Lassigny after three days battle and on September 28th held the line from Ribecourt on the Oise, thru Roye, behind Chaulnes, thru Albert to Hebreterne on the plateau north of the Somme.

It is proper to note here that any advance of the French in the direction of St. Quentin and Le Fere was fought with great danger for the German source of supply, the main line of which running through

Belgium passed by way of St. Quentin. Consequently the Germans attacked along the above line and continued their attacks until the middle of October. A terrific struggle took place in the center at Roye which was captured by the Germans on October 3rd, but they were unable to advance further. Repeated attacks were also made on De Castelnau's left wing on the Albert plateau but without success. It is said that the Germans rate the battle of Albert as one of the bloodiest of the war.

The 7th Army was outnumbered to the extent of one corps, for De Castelnau had the XIII, IV, XIV, XX and XI Corps which were opposed by the German IX Reserve, II, XVIII, XXI, I Bavarian, II Bavarian, and XIV Reserve Corps.

10TH ARMY.

In furtherance of the plan of outflanking the Germans, the front of De Castelnau's Army was prolonged on September 29th, to the north with the territorial Divisions under Brugere. These troops, with the aid of the First Cavalry Corps under Conneau holding the line of the Cojeul on the left of the Territorials, were covering the detrainment of troops of the Fourth Army at Arras and Lens.

The X Corps advancing from Amiens was to assemble around Ficheaux. A newly formed provisional corps under D'Urbal was detraining at Arras. These two corps with the First Cavalry Corps were to attack the German right flank which was believed to be about Bapaume. On October 3rd the entire 10th Army was to move in a general southeasterly direction. However, before the X Corps had reached its area of concentration the right of the Provisional Corps was attacked by the IV German Corps moving in from the east. The X Corps was then ordered to change its direction from Southeast to Northeast in order to take the new enemy force on the flank. The early attack of the Germans left gaps between the different French Units moving into position. A gap in the center of the Provisional Corps was filled by the First Cavalry Corps and one between the X Corps and the right of the Provisional Corps was filled from general reserve troops.

On October 3rd the Territorials retired after being attacked by the Guard Corps. This left a wide gap between the 7th and 10th Armies, but it was not taken advantage of by the Germans.

At this juncture we find Maud'huy's Army with both flanks in the air and being pressed by the German Sixth Army under the Crown Prince of Bavaria.

It was also on this date that reinforcements, namely, the XXI Corps, DeMitry's 2nd Cavalry Corps and the 45th Division reached Maud'huy. The XXI Corps advanced by La Bassee against the flank of the I Bavarian Reserve Corps, which had come into position to the right of the IV German Corps. The reinforcements, however, failed to relieve the situation.

By October 5th owing to the extreme gravity of the situation General Maud'huy began taking steps preparatory to retiring in the direction of St. Pol, should such become necessary as a result of further progress of the enemy.

Just at this critical time General Foch, who had been given command of all troops from the Oise to the Lys, arrived at 10th Army Headquarters. He ordered that an attack be made to relieve the situation. The German advance was stopped, and from this date onward the engagements around Arras begin to draw to a close.

The positions held by the 10th Army on October 7th were as follows:

Beaumont-Arras (X Corps), Arras—West of Neuville
St. Vaast (Provisional Corps), Carency-Aix Noulette (43rd Division and Cavalry Corps), S. E. of Grenay-Loos (XXI Corps) with Cavalry toward Pont a' Vendin and Carvin.

While the battle of Arras was still in progress the German right wing was extending further north. By October 3rd the IV Cavalry Corps had come into line to the right of the I German Cavalry Corps, which was then engaged with II French Cavalry Corps, with its right south of La Bassee. Mean while between Lens and the B'ethune-La Bassee' Canal the XIV German Corps had come into line forcing back the French Cavalry to the west of Lens-La Bassee' road to the line Vermelles-Cambrin.

To the north the German Cavalry extending beyond the Lys covered the whole country from La Bassee to Ypres. The First and Second Cavalry Corps under Conneau and DeMitry respectively, were disputing

the advance of the Germans. Their places in the French 10th Army being taken by the 13th Division from the Lille garrison. However, by October 9th the Germans had penetrated as far as Hazebrouck and Cossel.

The Lille garrison now being surrounded was forced to surrender. This took place October 12th. Lille was the manufacturing center of western France and of decided importance to the French; and therefore, it seems only logical that a greater effort should have been made to save it. The answer however, is found in the precarious condition of the 10th Army, which drew on the garrison at Lille for support.

THE BRITISH ARMY.

It was evident now that assistance must be brought to bear on the left of the French 10th Army in order to save the left flank from being turned. In order to do this the French High Command had authorized the change of the British Army from its position on the Aisne River to the vicinity of Ypres. The relief of the British began on October 3rd.

On October 11th the British Second Corps under General Smith-Dorrien had marched from Abbeville to the line of the Canal between Aire and Bethune. On his right was French Cavalry and on his left the British Second Cavalry Division. The task of the 2nd Corps was to move on La Bassée and Lille. Due to the strong natural positions of La Bassée a direct frontal attack was given up in favor of wheeling the Corps to the right, pivoting on Givenchy and then getting astride of the La Bassée-Lille road. By October 14th the British were heavily engaged with the XIII and XIX German Corps of the IV Army, and advanced against this opposition until they reached a line from Givenchy to in front of Aubers. The Germans here violently counter attacked stopping further advance of the British.

The Third Corps under General Pulteney, which had detrained at St. Omer, was moving on Hazebrouk by October 12th. Advancing against considerable resistance from the German XIX Corps and IV Cavalry Corps, the III Corps by the 17th of October occupied the line from Boise Grenier to Le Gheir in front of Armentières.

On October 14th Allenby's Cavalry Corps, consisting of the First and Second Divisions, moving north of the Lys river covering the left of the III Corps, secured the high ground above Berthen. Allenby continued his operations up to the 19th but was unable to force a passage to the east bank of the Lys. The territory between the II and III Corps was now covered by Conneau's Cavalry.

By October 16th the IV Corps, consisting of the 7th Infantry Division and the 3rd Cavalry under Sir Henry Rawlinson, came into line on the left of Allenby. Rawlinson's Corps had been covering the retreat of the Belgian Army, which by the above date was moving into a position northeast of Ypres along the line of the Yser by Dixmude to Nieupoort. The line taken by Rawlinson's Corps extended from Zandvoorde, thru Gheluvelt, towards Langemarck and Pollecappelle. On the 18th Rawlinson was directed to move on Menin but found that he had an impossible task due to superior forces of the enemy.

On the 20th of October to continue the flanking movement Sir Douglas Haig's First Corps which had detrained at St. Omer, and moved up on the left of Rawlinson's Corps, was directed to move to Thourout with the intention of advancing on Bruges and Ghent.

THE FRENCH VIII ARMY.

The territory from the left of the British at Langemarck to the right of the Belgians at Dixmude was covered only by De Mitry's Cavalry Corps. A new French Army under De Urbal, the VIII, was organized and assigned to the task of filling this gap.

THE BELGIAN ARMY.

At the beginning of the war in August the Belgian Army, in order to avoid envelopment by the German I and II Armies, fell back within the forts surrounding Antwerp. It was not until September 28th that the Germans turned their attention to the reduction of Antwerp. To this task was assigned the German Third Corps under Von Beseler.

On October 4th and 5th one brigade of British Marines and two naval brigades arrived in Antwerp to aid the Belgians. These reinforcements were of little value and by October 8th the Belgian Army began its retreat across the Scheldt River.

Sir Henry Rawlinson with a cavalry division and an Infantry Division, aided by a French Naval Brigade covered the retreat of the Belgians. By October 16th the Belgian Army was in a position from Nieuport to Dixmude.

THE GERMAN IV ARMY.

The resistance that began to manifest itself against the Allies from the Lys to the Sea was the IV German Army under the Crown Prince of Wurtemberg, which began to move forward to attack on October 18th. The III Reserve Corps moved from the vicinity of Ostend to cross the Yser River between the Channel and Dixmude to clear the coast. The XXII Reserve Corps southwest of Bruges was to pass to the north of Thourout and march on Dixmude; the XXIII Reserve Corps further south was to pass to the south of Thourout and march on the Ypres Canal between Dixmude and Ypres; the XXVI Reserve Corps was to march through Roulers on Ypres; and the XXVII Reserve Corps formed at Courtrai was to cross the Ypres-Commines Canal south of Ypres.

ANALYSIS AND CRITICISM.

The first question that presents itself is: Why did the Germans fail to take possession of the channel Ports in August? After the retreat of the French and British from Mons there were no troops to interfere with their free access to the West. The answer, I think, is the belief of the Germans in the power of their turning movement. It would be an easy matter to turn back after the defeat of the French and British and take possession of these vital points.

After the German defeat on the Marne, the above question is again presenting itself. Why, after their subsequent rally on the Aisne, did not the Germans begin the flanking movement instead of permitting the Allies to initiate it? It is hardly conceivable that they failed to recognize the value of the channel ports, and if they did, they certainly knew of the importance of their own line of communications. There are two reasons, or possible reasons, for the line of action pursued by the Germans.

First, their army was defeated and reorganization takes time. It was five days (from the 12th to the 18th of September) between the rally on the Aisne and the first counter offensive.

Second, it seems probable, after the defeat at the Marne, that the Germans changed their plan of operations from an envelopment of the Allied flank to a break thru the center, or in any event to draw the Allies into sustained parallel action and then turn their left flank. This seems to be borne out by the fact that from the 18th to the 24th of September the Germans attacked along the entire line from the Aisne to St. Mihiel. The French 6th Army and the British held against Von Kluck's attacks. Maud'huy's 18th Corps stopped all attempts to cut thru on the Craonne plateau and below. Some initial success was gained by the Germans around Rheims, but Foch was able to hold. The most serious attempt however, was the thrust between the heights of the Meuse and the Grand Couvonne, the object being to isolate Verdun and take the 3rd French Army in the rear. This attempt failed primarily to the over caution of Von Strantz.

It seems quite evident that the plan of piercing the center was given up by September 28th and serious effort made to take the Channel Ports. Reduction of Antwerp was begun on this date. The German failure to take Antwerp before committed them to the wasting of precious time before sweeping forward to take the rest of the ports. Antwerp fell on October 9th and even then had the Germans had sufficient troops at hand they could have won thru to the sea, because it was not until October 20th that the final gap in the line was filled. It seems quite evident that they were moving on interior and much shorter lines than the Allies. That the Germans permitted the successful withdrawal of the Belgian Army from Antwerp at the very last moment is indeed surprising and hard to account for. Suffice it to say that this move was permitted and the final door in the opening to the sea was closed to the Germans.

The British should be criticised for permitting the Channel Ports to remain unprotected. Had they thrown troops across the Channel they could have connected up the battle line with the Belgians in Antwerp, thus saving Antwerp as well as all the other ports. The position then would have been a constant threat upon the German line of communications thru Belgium.

LESSONS TO BE LEARNED.

Taking "The Race to the Sea" as a whole some nineteen corps on the German side and seventeen on the Allied side were brought into action. To comment upon the tactics employed would hardly be appropriate here. There are, however, two lessons that should be remembered from this study.

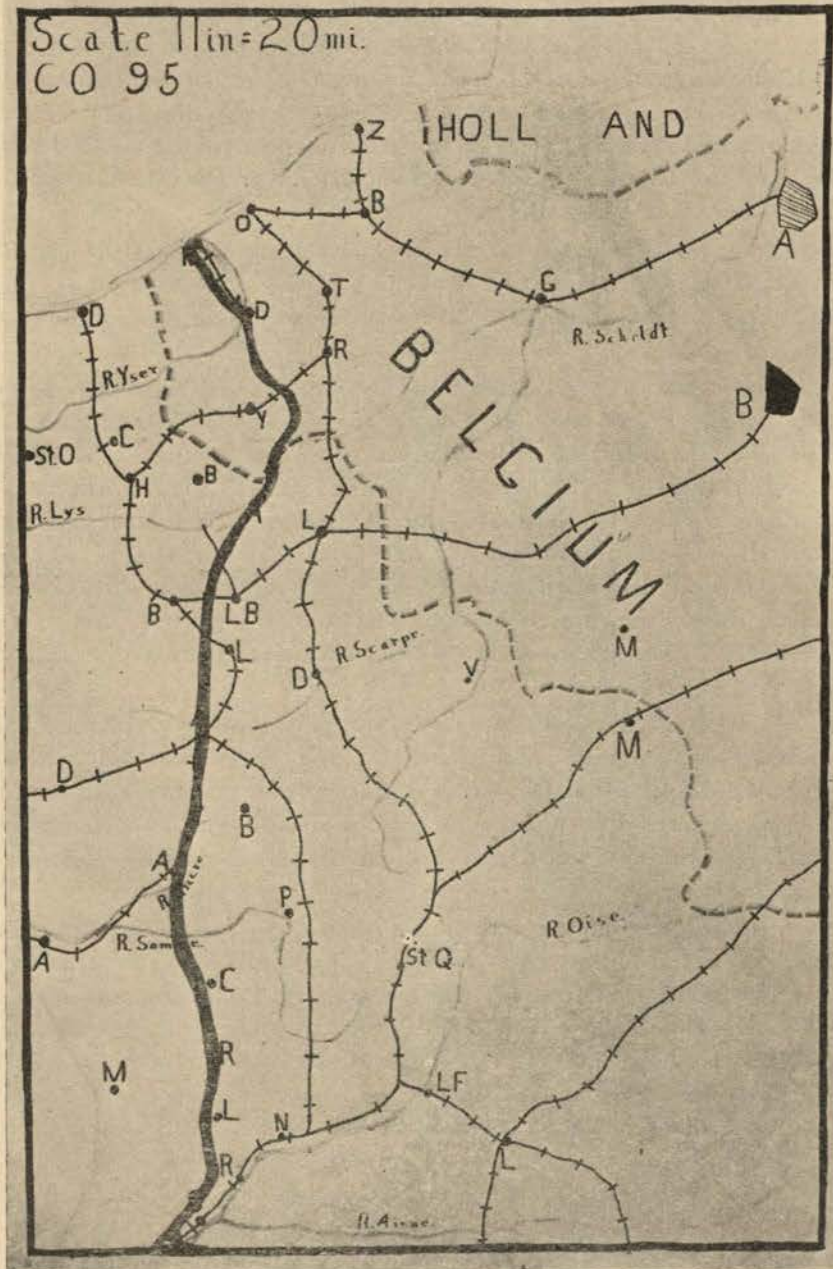
Mention has been made of the German change of plan after the Battle of the Marne from a flanking movement to an attack upon the center. It is sound tactics to stick to your plan unless conditions make a change imperative.

The German Guard Corps on October 3rd, after having driven off the French Territorials between the 7th and 10th French Armies, failed to take advantage of this gap. Information of the situation to this front was evidently not obtained. The lesson to be taken here is that reconnaissance shall not cease throughout the entire engagement.

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THE RACE TO THE SEA

Scale 1 in = 20 mi.
CO 95



OUTLINE OF OPERATIONS ON THE WESTERN FRONT
FROM SEPT. 15, 1914 TO DEC. 31, 1914.

—BY—

Capt. Everette M. Yon, Infantry.

September 15th saw the end of the German retreat from the Marne, for that day Von Kluck assumed a counter-offensive against Maunoury and drove him towards the Aisne. The British 1st Corps suffered severe counter attacks and heavy losses during the day but repulsed the German on each occasion.

On the 16th, the French were on a line a few hundred yards from their original crossing places at Vic and Fontenay. Soissons was heavily shelled and the Northern part of the town burned. The French left continued a flanking movement up the Oise Valley, which was checked by the German IX Reserve Corps. Esperey, with his Fifth Army, tried in vain to storm the heights of Craonne, but was forced to drop back, leaving the British flank up in the air. The Germans had taken Brimont from Foch, forcing him back nearer Rheims. He also lost the heights of Nogent l'Abbes, east of Rheims, from which the enemy could deliver an accurate volume of shell fire into the city.

Sir John French realized that the German retreat was at an end, and it was his opinion that the whole of the German First Army was in front of his position. He contemplated an attack, but a conference with Maunoury on the 16th and the falling back of the Morrocans of his right convinced him that the plan was hopeless.

On the 17th Maunoury's Sixth Army, which had been reinforced, checked the German attack and regained all the ground that had been lost. They drove the enemy back behind Nampcel and from the quarries of Autrech. The Fifth Army was still assaulting Craonne without success. Foch's Ninth Army had fallen back to just outside Rheims. The heights of Brimont and Nogent l' Abbes were in the hands of the Germans, although Pompelle on the southern spur of the ridge was still held by the French. The German advance was now stopped before Rheims. Farther to the east Langle had made little progress. His position was still about three miles short of the Bazancourt-Grand Pre Railway. On the same day Bri-doux's Cavalry Corps raided the German line of communications as far as Ham and St. Quentin, doing which the commander was killed. The British First Corps was also heavily engaged, but Haig repulsed the enemy with great loss.

Maunoury in the operation of the eighteenth could not gain against Von Kluck's position and the German IX Corps was seriously menacing his left. The Craonne escarpment still withstood the assaults of Esperey's Moroccans. Foch held his own at Rheims, but the fighting was fierce at several points throughout the day. On the Champagne front the Wurtembergers successfully resisted Langle's advance. The British hampered very little during the day, but a general night attack was launched against the 1st Corps which they succeeded in staving off.

From the result of the fighting on the 16th and 17th we can readily see that the rear guard action known as the Battle of the Aisne had closed. The German hope of crushing the allies at one blow had failed disastrously and in their bewilderment of defeat they turned from the confident open offensive to the burrowing method of trench warfare. The High Command, quick to realize the defensive features of the Aisne escarpment, had chosen this as their line of defense, and the wisdom of this decision was well borne out. The method of warfare was changed completely as a result. French and Joffre realized that the Germans were no longer retreating and the rebuffs their fierce attacks met with proved the strength of the German positions. The only thing left to do was to adopt similar tactics to the Germans and at the same time extend their flank to the north in an effort to double up the right flank of the German Army.

ALLIED SITUATION AND PLANS.

At this time the general situation was strategically bad for the allies. Bulow's attack on Rheims endangered the allied center, and if Langle failed it would give an opening for a vital enemy thrust. The situation at Verdun caused Joffre much anxiety. Sarrail was short of men and if the Crown Prince could reduce the Heights of the Meuse and turn his right flank a clear road would be left open for the Germans.

Joffre, knowing that a further frontal attack on the German positions would be fruitless, started

the sap and mine method of warfare and began arrangement to further extend Maunoury's left flank with the idea of cutting the German line of communications thereby forcing the withdrawal of the right wing of their army. Consequently he formed two new armies—the reconstructed Second Army under De Castelnau and the Tenth Army commanded by Gen. Louis Maud'huy. Castelnau was ordered to take position northeast of Maunoury with the Tenth Army on his immediate left.

TRENCH WARFARE.

The new method of warfare was the order of the day on the Aisne front from September 18th onward throughout the year. The British 1st Corps was heavily engaged with the enemy on the 18th and 19th. They succeeded in repulsing the Germans but no particular advantage was gained by either side. The 2nd Corps suffered a violent attack on the 20th, but with the aid of reinforcements sent by Marshall French the enemy were repulsed. On the 22nd new dispositions were made on the British front and the first line of troops were given a much needed relief.

Langle had made no appreciable headway on the Champagne front, but he managed to hold his ground and the readjustment going on behind the German lines temporarily removed the danger of a concentrated attack. The enemy was still exerting a great deal of pressure against Rheims. On the 18th the bombardment of the city commenced and lasted for ten days. During this time the famous Cathedral and a large portion of the city was destroyed. Foch withstood the shock of the German attack successfully and on the 28th he delivered one of his famous counter strokes. The Station of Prunay was retaken and the enemy driven back to Brimont, thereby disengaging the whole front and breaking the enemy counter offensive. The Fifth Army had practically no success around Craonne. The crossing at Berry-au-Bac was still in the hands of the Germans. On the 28th the Moroccans made a supreme effort to gain Craonne but their gallantry went for naught.

THE MEUSE OPERATIONS.

After the Battle of the Marne the army of the Crown Prince found itself in a semi-circle facing the defenses of Verdun. His right rested on the Argonne at Varennes and his left connected up with the German Army in the Woevre. The scheme of the German High Command to pierce the French center at Rheims had failed, but he was at the same time putting into execution his plan of getting in the rear of Sarrail's Army and destroying the French right wing.

By September 20th a new army formed of South German reserve corps commanded by Von Stranz arrived in front of the forts of the Meuse. Sarrail at this time had fully seven corps opposed to him greatly outnumbering his original army. Reinforcements reached him from Toul but he was still at a great disadvantage.

Von Stranz lost no time in attacking Fort Troyon on a broad front, but he was repulsed. This made the second fierce attack this fort had suffered and little was left of it. On Sept. 23rd the Crown Prince directed his attack against St. Mihiel. The town was taken after artillery had silenced Ft. Pariches and Camp des Roumains. However, a further advance was halted by a detachment of French cavalry, forcing the Germans to dig themselves in along the river. Their position was a difficult one to hold, but it withstood all allied assaults for four years despite the fact that there was no railroad nearer than Thiacourt and their only line of communication to the rear was one road in poor condition. The feat of the reduction of this salient was accomplished by the Americans near the end of the war.

In the meantime troops went out from Toul garrison and gained ground to the southern edge of the Rupt de Mad—the line of the railway running from Metz to Thiacourt. The Crown Prince made one last great effort against Sarrail on the 13th of October but it failed completely. He attempted a turning movement through the Argonne against St. Menehould, but the French drove the Germans back north of Varennes capturing the town and gaining the road across the Argonne. This enabled them to connect up with the right of Langle's Fourth Army and straightened out the French front which now extended from Verdun due west to the north of Soudain and then along the old Roman Road to Rheims.

THE RACE TO THE SEA.

Throughout the remainder of the month of October there was very little activity on the front south-

east of Soissons except the scheduled artillery bombardments and counter-bombardments together with raids and local attacks which go to make up the routine of trench warfare. However, this was not the case on the left of the allied line. Joffre had already started his flanking movement to the north which historians have dubbed "The Race to the Sea".

(For a detailed account of the "Race to the Sea" see the preceding article).

FALL OF ANTWERP.

From a strategical viewpoint the City of Antwerp was not of very great importance and the operations around and in that city had little effect on the outcome of the great conflict. There was a remote chance that England would make use of it for a port of debarkation and probably for a base of operations but the idea was far fetched. If the Germans had met with success in their first offensive it is likely that Antwerp would have gone untouched. However, after the disastrous results of the Marne the German High Command decided that the occupation of Antwerp would appease the German populace and aid them to forget the failure of the Kaiser's cherished plan.

After the fall of Brussels the Belgian Government had taken its seat in Antwerp. Bearing in mind the lessons learned at Liege and Namur, General DeGuise extended his lines of defense far in front of the fortresses surrounding the city in an effort to keep the heavy enemy artillery out of range. During the first half of September the fighting had been desultory in character, but once the fall of Antwerp was decided upon the German offensive assumed a very definite form.

By the 7th of September the Germans had driven the Belgians back from the line of the Malines and Louvain Railway. The enemy reached the Malines-Tremonde Railway after two days of severe fighting. Here on the 26th the Belgians counter-attacked and drove the enemy from Audekhem and pressed back the Germans from Alost. The next day the success was continued in the vicinity of Lubbecke. However, the Germans regained the ground lost on the day following and immediately began their attack on the first line of the defenses of Antwerp.

The German Commander, Von Beseler, made repeated overtures to the Belgian Government for a peaceful occupation of the city, promising to spare the town from attack provided a policy of strict neutrality would be adhered to by the Belgian population. All of the proposals were promptly refused.

Malines was bombarded on the 27th and the following day the attack on the city proper. Monday, September, 28th, was the beginning of the end. The gaint howitzers directed their fire on Forts Waelhem and Warve St. Catherine, part of the chain of Brailmont forts constructed under the supervision of that officer in 1874. Infantry engagements continued throughout the day from Termonde to Lierre. On the south bank of the Nethe the Belgians succeeded in holding their positions in a creditable manner. The deadly fire of the artillery had its effect, however, and on the 29th Wavre was silenced, but the ruins were still manned.

The Belgian Command had planned on the inundation of the country by letting the water out of the great reservoir as a final measure of defense. However, the fire from the enemy artillery prematurely broke the dam, flooding the Belgian positions and causing a water shortage in the City of Antwerp.

On October 1st Wavre was destroyed, Waelhem reduced, Ft. Konigshoyckt silenced and the village of Lierre set on fire. Farther west the Germans captured Termonde and forced the Belgians across the Scheldt. The defenders then fell back to a line of prepared trenches on the north bank of the Nethe.

The Germans continued to bring up artillery and they soon demolished the newly constructed Belgian trenches. At the same time several villages were destroyed. On October 3 Von Beseler attempted a crossing between Duffel and Lierre, but he was repulsed with heavy losses.

The British Navel Brigades arrived on Sunday, Oct. 4th, and gave a fresh bracer to the despairing Belgians. They were immediately thrown in the lines and performed great work in trying to save the city.

Monday afternoon the left wing of the Belgians fell back a few hundred yards to the north, unable to longer endure the intense shell fire of the Germans. That night the enemy launched a powerful attack on the Belgian center and they succeeded in crossing the river by wading and swimming. The following morn-

ing the Nethe had been won.

On October 6th the Belgians were back on the old line of fortifications, but these antiquated strongholds could scarcely check the big guns of the enemy and the doom of the city was sealed. The Government officials began making preparations for the evacuation. Former German craft lying in the harbor were dismantled and the oil tanks were set on fire. That night the seat of government was moved to Ostend. The inhabitants began fleeing the city in great disorder on the 7th when the impending bombardment was officially announced. The army had begun its withdrawal on the 6th, Von Beseler making no effort at the time to prevent the movement, although he could easily have bottled up the army in the city. On the 7th Von Beseler made an effort to cut off the Belgians, but it was too late. The Belgian flank guard encountered and desperate fighting took place along the Scheldt, the Germans being held along the Lakern Railway line.

The bombardment of Antwerp proper began on the 7th at midnight. Throughout the 8th there was fierce fighting on the line of inner forts while the troops were being rapidly evacuated. By this time nearly all the troops were clear of the city, but a staff slip up caused three battalions of a British Brigade to arrive at the river after the bridges were destroyed. They finally crossed by various methods but were finally forced into Holland or captured by the Germans.

On the tenth Admiral Von Shroeder, the new German Governor, made his triumphant entry into the deserted city.

The Germans pursued the retreating forces and effected the occupation of Ghent, Ostend, Zeebrug and Bruges and established lines of communication for future movements.

ALLIED AND GERMAN PLANS FOR THE FLANDERS CAMPAIGN.

The allied plan of operations at this time was as follows:

The Belgian Army covered by Rawlinson's Command would retire to a line on the Yser to protect the allied left flank. French reinforcements were to be given them. Lille and LaBasse were to be held at all costs. The British plan was to swing southeastward from the latter points and isolate Von Beseler's Army. In case this plan did not succeed an enveloping attack could be attempted from the line of the Lys against the right of the main German Army.

If the German flank extension could be overlapped the allies would be in a position favorable to deliver a telling blow. A German connection with the sea would prevent an attack on the enemy line of communications, but would also prevent a German enveloping attack.

Joffre's plans were divined by Falkenhayn and the latter was determined to force an opening through to the channel ports. He had the advantage in numerical superiority of men, artillery and cavalry, besides his cohorts were fresh and eager, representing the best of his entire army. Once the allied position was pierced several arteries for an advance to Paris would be opened up after the channel ports were occupied.

On October 8th Sir John French visited Marshal Foch, who was in command of all the French forces in the region, and they decided upon the following dispositions and plans:

The road between Bethune and Lille was fixed as a dividing line between the allied forces. If possible the advance would be eastward, the British right and the French left being directed on Lille. To the north the British 2nd Corps would take position on Maud'huy's left with cavalry protecting its own left pending the arrival of the 3rd Corps. The 1st Corps under Haig would upon its arrival take position on the north of the 3rd Corps with cavalry protecting the left flank. Rawlinson's forces were not included in these plans as they had not yet been placed under Marshal French's orders.

The allied front north of Soissons was now held as follows:

Castelnau was west of Roye and Lihons, while Maud'huy occupied the ground from the north end of the Somme plateau to Lens. A Territorian Division was placed in Lille as a preparatory measure in case the Tenth Army moved towards Valenciennes. Arras, a place of great importance, was in the center of the allied front. It was an important railway center and otherwise strategically valuable. On October 11th Smith-Dorrien's 2nd Corps had reached the line of the canal between Aire and Bethune. Conneau's cavalry connected his right with Maud'huy, while Gough's cavalry was operating on his left.

Maud'huy reached Arras on October 1st and began pushing towards Douai, but he was soon engaged with the German IV Army. He was forced back but aided by Castelnau he managed to hold the Germans in check until the 19th when the allied extension was complete. The situation had been very trying for him at times but his ingenuity always saved the day.

Sir John French planned an offensive against LaBassee and Lille by the 2nd Corps. Smith-Dorrien found his way blocked and on the 13th began a wheel movement in an effort to get on the enemy's flank. Fierce fighting ensued and on the seventeenth his troops had advanced as far as Aubers, capturing this village at the point of the bayonet. The 2nd Corps made no further forward progress as they were up against the IV Army, a part of the main wall of the German line.

On the 19th and 20th the Indian Corps arrived west of Bethune and was ordered to reinforce the 2nd Corps. The 3rd Corps under Pulteney had detrained at St. Omer on the night of the 11th. His plans were to get east of Armentieres astride the Lys and join up the Ypres and LaBassee sections of the front, taking his place on the left of the 2nd Corps. Allenby's cavalry was operating on his left and Conneau's cavalry on his right. He encountered the Germans at Metern. On the 15th he was ordered to take up a line along the Lys from Armentieres to Saily which was accomplished by nightfall. Armentieres was entered on the following day, and on the 17th he pushed beyond it to the line Bois Grenier-La Gheir.

The Germans were found holding the line Radingham Perenchies to Frelinghem on the Lys, while the right bank below the point of the canal was held as far as Wervicq. On the 18th an effort was made to clear the right bank of the Lys but the attempt was unsuccessful. Both Smith-Dorrien and Pulteney realized that they were up against the main German position.

By the nineteenth the British front was extended to its farthest forward position between LeGheir and Radingham. This line constituted the right center of the front in the oncoming battle and resulted in an awkward and perilous position. Two divisions of Allenby's cavalry connected the 3rd Corps with the Infantry to the north. They performed valuable service in clearing the country of small detachments of the enemy. Their sector on the line lay between LeGheir and Hollebacke.

Rawlinson, who had been placed under French's orders, was in position on the 16th east of Ypres on the line Zandvoorde-Gheleuvelt-Zonnebeke. To the north the weary and broken Belgian Army lay on the line of the Yser between Dixmude and Nieuport.

On October 18th the four reserve corps constituting the main strength of the IV German Army were on the Roulers-Menim line with the 3rd Reserve corps on its right.

The Belgians were driven from the forest of Houthulst on the 16th, forcing them to fall back behind the Hazebrouck-Dixmude Railway thereby uncovering the British left. However, DeMitry's cavalry counter-attacked the following day and re-established the line.

Sir John French decided to put in effect a flanking movement on the 17th against Courtrai, pivoting on Menim. The following day he ordered Rawlinson to seize Menim and there await the arrival of the 1st British Corps, scheduled to arrive in two days. The task of advancing on a 201 mile front was a difficult one, for Rawlinson was cognizant of the newly arrived German Army. The advance started on the 19th, protected on the flanks by cavalry. The British cavalry on the left captured Ledeghem and Rollegem Cappelle, but they were then forced back on Poelcappelle and Zonnebeke. The French cavalry held Passchendale, a mile to the front. The Infantry after fierce fighting got within three miles of Menim, but the German fire was so hot that the Division fell back and entrenched on an eight mile front east of Gheluvelt.

Haig's 1st Corps arrived at Hazebrouck on the 19th, and he was immediately ordered to advance to Thourout through Ypres with the intention of later moving on Bruges and Ghent.

Marshal French had been in a quandary as to what disposition to make of Haig's Corps, as they were so badly needed along the front. He decided that the line was weakest in the north where it was so thinly held by the Belgians and French. Hence the above move.

French instructed Haig to use his own initiative should an unforeseen situation develop, and one was not long in appearing. A stumbling block was encountered in front of Ypres, and there he remained—forming the left wing of the British Army in the Battle of Ypres.

GENERAL SITUATION.

Let us now examine the allied positions on the eve of the great struggle. Maud'huy's Tenth Army was on the line Albert-Arras-Lens to slightly west of the Vermelles Chateau, south of the Bethune-LeBassee Railway. The Second Corps under Smith-Dorrien held the line Givenchy-Herlies-Aubers-Laventie. Conneau's cavalry Corps supported his left. Pulteney's 3rd Corps was astride of the Lys. To the north Allenby's Cavalry Corps lay on the general line Messines-Zandvoorde. The 7th Division under Rawlinson occupied a line east of the Gheluvelt Cross-roads, forming the point of the Ypres salient. Byng's cavalry was on Rawlinson's left between Poelcappelle and Zonnebecke. Haig's 1st Corps was coming in position between Zonnebecke and Bixschoote. Immediately to the North was the new French VIII Army, formed from independent units and under command of D'Urbal. The remaining front to the sea was held by the Belgians with only six divisions—approximately 50,000 men. However, the allied fleets were lying off the coast ready to give aid in case of a German attack near the coast. The line of battle stretched almost a hundred miles. The allied strength numbered eight and one-half army corps, and opposed to them were eleven German corps, fresh, eager, well trained and with a preponderance of cavalry and artillery.

For the most part the manœuvre ground lay in the Plain of the Scheldt. The heights about Albert and Arras and a few low ridges dotting the front were the few exceptions. Rivers and canals crisscrossed the low country, and all the area near the coast could be easily inundated.

The logical points for a German attack were Arras, LeBassee, Ypres and Nieuport. The importance of Arras has already been mentioned. LaBassee offered a straight route to Calais and Boulogne as did Ypres, while the fall of Nieuport would lay Dunkirk and Calais open to German occupation, thereby cutting the line of the British supply and affording a base for an advance towards the south.

Falkenhayn realized the importance of an offensive against LaBassee and Arras. They also offered the shortest and best lines of communication but he still held to the hope of turning the allied left flank—so Nieuport was selected as the first point of attack.

BATTLE OF THE YSER.

The Belgians under King Albert took a determined stand on the line of the Yser in a low marsh country below the sea level and ill fitted for troops and artillery movements. They had been reinforced by the French and could only hold out a little more than a division as a reserve.

On October 18th Von Beseler endeavored to seize the Nieuport Bridge, and the attack would have been successful but for the sudden surprise enfilade fire on the exposed German flank from the monitors lying close in to the channel shore. The enemy soon realized that if an attack was successful it would have to be launched out of range of the warships. Consequently the Duke of Wurtemberg directed his move towards Dixmude. Joffre tried to stave this off by launching a counter-offensive under Grosetti on the extreme left. The French pushed as far as Wastende but were hurriedly recalled to reinforce the Belgian center, so that the effort went for naught.

The Germans fighting desperately forced a passage of the Yser on October 22nd in the Tervate loop and at the Schoorbakke bridgehead. The day following they crossed at St. Georges and fought their way almost to Tamscapeelle when a Belgian counter-attack drove them back.

A desperate attempt had been made to force Dixmude. On the night of the 24th no less than fourteen attacks had been made on the city, but the gallant French marines had repulsed the enemy with heavy losses.

On the 24th a crossing at Schoorbakke by the Pervyse road bridge was effected and a foothold was gained at a point south of the loop. The following day a crossing in force was made and the Yser was lost.

The Germans were unable to rapidly follow up their success owing to the miry condition of the ground leading to the dikes behind which the Belgians and French were entrenched. By vastly superior numbers the Germans advanced foot by foot suffering heavy losses, gradually forcing the Belgians back almost to the Dixmude-Nieuport Railway, one of the highest spots of ground in that low country. At this time the Germans were confident of success. The Emperor had arrived to witness the final triumph. However, the High Command had not reckoned with the destructive inundation let loose on the 28th—the trump card in King Albert's hand.

On October 30 Duke Albrecht, determined to gain the railway line before the Belgians could let loose more water, launched a powerful attack seizing Pervyès and Rams Coppelle on the line of the objective. But the Belgians and French were not to be denied. Characteristic of their undying spirit in an hour of disaster, they launched a furious counter-attack on the 31st driving the Germans back into the lagoons, where they were caught in the flood that had been let loose. The Germans drowned in masses while they were being shelled from the allied positions at Nieuport and Rams Coppelle. Instead of witnessing a glorious victory the German Emperor was forced to look upon the destruction of a large part of his most favored corps.

The Germans evacuated the west bank of the Yser, checked the Belgian counter-offensive in the north, and on November 7th retook Lombartzyde. A concentrated effort was now launched at Dixmude, but the enemy was successfully held off until November 10th—when the fall of the town was no longer vital to the main issue.

ASSAULTS ON LA BASSEE AND NEUVE CHAPPELLE.

Smith-Dorrien's 2nd Corps on October 19th held a line running east of Givency, keeping north of the LaBassée-Lille road to Herlies, then west of Aubers, connecting with Conneau's cavalry near the LaBassée-Armentières highway. He was opposed by the Crown Prince of Bavaria's command, occupying the line of the LaBassée-Lille canal and all the country to the south and east. Smith-Dorrien, working in conjunction with the French Tenth Army, had aimed to strike the line near Fownes in an effort to isolate the LaBassée position. But instead of carrying on an offensive he had all he could do to hold his own position after the month of October. The German main attack lasted from October 22nd to November 2nd, when they turned on Ypres. On the first day Violannes was lost and Smith-Dorrien withdrew to the line Givency-Neuve Chappelle-Fauquissort, south of Laventie. Here the Germans attacked again on the 24th, but the British artillery held up their advance. The 2nd Corps was in an exhausted condition due to ten days' continuous fighting, and the Lahore Division of India came to their relief in the manner of time.

Neuve-Chappelle was occupied by the Germans on October 27th, but the following day the British and Indians counter-attacked. A desperate conflict ensued and line moved back and forth as counter-attack met counter-attack. The loss was severe on both sides.

Toward the end of the month the remaining Indian Division joined and the "Indian Corps" was formed under General Willcox. The 2nd Corps was withdrawn for a much needed rest. The attack against the sector continued for the next twenty days and the Indians acquitted themselves in a praiseworthy. The allies were, however, gradually forced back to the line Givency-Festubert-Estaires. The German attack on Givency November 7th was repulsed and an artillery duel then ensued for two weeks, giving the infantry a chance to repair and add to their trench system.

BATTLE OF ARRAS.

The fighting around Arras had been waging on Maud'huy's left center. The Germans were endeavoring to extend their lines to Bethune, attack the British right rear and tie them up against the channel. Rupprecht changed his plans and centered his main attack on Arras in an endeavor to split the allied lines. The German High Command would not give him reinforcements, consequently his attack from the 20th to the 26th of October was not strong enough to drive the French from their positions. The city, however, was practically destroyed by artillery fire. The French counter-attacks were furious in the extreme. The circle around the city was slowly widened until the enemy line lay in a loop about Arras. Prince Rupprecht's scheme had dismally failed, and Von Falkenhayn had overlooked one of his best chances to split the allied front.

THE FIRST BATTLE OF YPRES.

The scene of action had now changed to the Ypres sector. Haig's 1st Corps had on October 20th advanced to a line extending from Bixchoote to the cross roads one and one-half miles n. w. of Zonnebeke. He was supported on the left by Bidon's Territorials and Mitry's cavalry. To his right was Rawlinson's 4th Corps composed of Byng's cavalry and the 7th Division. The cavalry patrolled to the front of the flanks a

good distance, but the French were driven from Poelcappelle that afternoon while Byng fell back on Langemarck.

On the 21st the lines extended from north-east of Ypres to Bixschoote and Langemarch, thence to Zonnebeke and Gheluvelt cross roads. Allenby was in front of Messines and the 3rd Corps' line extended ten miles through Armentieres. That day Haig pushed forward against the Germans until the middle of the afternoon when he learned that his flanks were in danger. He, therefore, halted on the line Bixschoote-Langemarck-St. Julien. Here the British offensive stopped, for Haig realized that Thorout and Bruges could never be reached.

The left wing of the German IV Army had been thrown against Rawlinson's front on the 21st and part of his command was enfiladed in the German movement against Zonnebeke. Consequently Haig's right had difficulty in linking up with Rawlinson's left at the Ypres-Roulers Railway. This was an important danger point and had to be safeguarded at all costs. At Belleclair the enemy temporarily pierced the British lines. At the same time he was assaulting Haig's right in a fierce manner, but help came and the ground was held. By that evening Byng's Cavalry had connected with Gough between Hollebeke and Wytshaete.

Sir John French feared for the safety of the salient and held a consultation in Ypres on the night of the 23rd with Haig, Rawlinson, Mitry and Bidon. Nothing could be done, however, but hold to the thirty-mile front until reinforcements could arrive. The congestion in Ypres was relieved by removing the French Territorials to the sector left of Haig's Corps.

Haig threw the Germans back from his ramparts on the 22nd inflicting great losses. Rawlinson's left had suffered a slight set back, while the thin line of Byng's Cavalry manning the trenches on his right heroically held their ground. The sector further south held by Pulteney had likewise seen a good deal of action. The Germans took Le Gheir on the 20th, but they were driven out by a counter-attack on the following day. The enemy again attempted to pierce the line at the Lys on the 22nd but they were unsuccessful.

The failure of the German 23rd Reserve Corps convinced Falkenhayn that he could not break through that part of the line held by Pulteney, so he formed a new corps under Von Fabeck to operate between his IV and VI Armies. Its number alone almost equaled the entire strength of the British.

A sharp salient existed in Rawlinson's front of the 23rd due to reverses by one side of his line, and there was a bad dent in Haig's sector. The latter was straightened out that day and a German attack near Langemarck was beaten off. The enemy also made a vigorous drive on Rawlinson's front but the British managed to hold their ground. Luckily the French Ninth Corps and an extra division arrived that evening to relieve the hard pressed Seventh.

Troop adjustments were made to afford relief to as many of the battle-fagged troops as possible. The newly arrived French advanced on the 24th and won quite a bit of ground. However, that same day the point of the salient gave way at Reutel and the Germans entered Polygon Woods. The French failed, however, to press the attack at this point. The French left again advanced on the 25th and this temporarily relieved the pressure in the center of the line. At dawn on the 26th the Germans renewed an enveloping attack against Kruseik begun the night before and all morning the battle raged fiercely. The day was saved for the allies by a brilliant counter-attack launched by Byng's cavalry from the trenches at Zandvoorde. Pulteney's front had been continually under heavy pressure and to relieve this he shortened his line south of the Lys.

On the 27th the front was held as follows: The 87th French Territorials were on the extreme left north of Bixschoote. Demitry's cavalry and part of the 9th and 16th French Corps were between Bixschoote and Zonnebeke. The 1st Corps from Zonnebeke to Gheluvelt cross roads. Byng's Cavalry held the line from Zandvoorde to Klein Zillebeke. Allenby's Corps lay from Byng's right to east of Messines. Pulteney's 3rd Corps held the sector to the south.

On October 27th French had relieved Rawlinson's Corps from the trenches and attached them to the 1st Corps. Rawlinson was then sent to England to supervise the formation of his new division.

Falkenhayn launched his great offensive against Ypres on October 29th. The first wave broke against the Gheluvelt Cross Roads. Part of Haig's command were driven from the trenches and the battle swayed to

and fro. That night the British were again in possession of Kruseik and the first line reestablished. Byng's cavalry suffered a fierce attack and the Germans also moved against LeGheir on Pulteney's front. The following morning at dawn the Duke of Wurtemberg moved against Bixschoote and Langemarck. The left of the 27th Reserve Corps was directed on Gheluvelt, while Von Fabeck attacked Messines Ridge along the Menin Road. Wurtemberg captured Bixschoote but could not drive the French from Langemarck. Von Fabeck blew the British trenches to pieces with his artillery forcing Byng's Corps back. Allenby sent supports and the line held until relieved that night by a fresh brigade. It was decided to strengthen the gaps and hold the salient from the Cross Roads to the angle of the canal south of Klein Zillebeke at all costs, for if this fell Ypres was lost.

Further south the 2nd Cavalry Division had been forced back on St. Eloi. The First Division sent help but were themselves soon under the heavy fire from the enemy howitzers.

Pulteney's line was pierced but a spirited counter-attack saved the situation. North of Zandvoorde the line suffered severely and the Allied front was retired to just east of Gheluvelt.

The Germans launched an attack in great force against Gheluvelt on the 31st, throwing the line back between Hooge and Feldback. This in turn exposed the flanks of both divisions on the right and left. The French 9th Corps on the right saved the situation for the British. Mussy had shown great fortitude and initiative in keeping his line intact. At one time he gathered a detachment of non-descript non-combatants, threw them into a breach and stemmed the tide.

Allenby's long line was menaced time and time again and the only assistance he could get was two exhausted Indian Battalions and two depleted brigades sent by Byng. In this condition Allenby had to withstand the attack of two fresh German Corps. Hullebeke and Messines ridge were lost and Allenby's position rendered desperate.

By two o'clock Saturday the 31st the situation was critical for the allies. The line had been forced back to the Klein Zillebeke ridge. The French were barely holding out and any minute was likely to see the end of Allenby's defense. The Germans were pouring through the Gheluvelt gap and they appeared to be the victors.

Haig foresaw the fall of Ypres and ordered a retirement to the west of Hooge, although he knew that this stand could not be for long. However, a near miracle happened the German advance was stopped when all appeared to be lost. General Fitz Clarence stumbled across the 2nd Worcester Battalion intact and with them he advanced to the front between Gheluvelt and the intrenched position of the South Wales Borderers who were holding their ground. The combined enfilade fire of these two battalions surprised the advancing Germans and forced them to dig in.

The 1st Division was immediately reformed and the 7th also got back to its place in the line. The 6th Cavalry Brigade filled the gap between the two commands and the German advance was halted.

Reinforcements reached the British on the morning of the 1st. Fierce artillery fire continued throughout the day. An attack was made on Bulfin's front but it was beaten back. However, the Germans succeeded in breaking through on Allenby's left and captured Wytschaete, forcing back the British lines to the west of Messines and Wytschaete.

Artillery duels ensued during the next few days. Troops readjustments were made on November 6th and reinforcements moved in on the side of the 7th Division.

Falkenhayn decided to strengthen Fabeck's group with men and guns, and an additional group composed of the 15th Corps and a picked corps of Prussian Guard was formed under Lensigne.

On Friday November 6th the Klein Zillebeke position was assaulted. That afternoon the French on the right were driven back leaving Conneau's 4th Brigade isolated. Kavanaugh's Life Guards helped the French retake their trenches, but the Germans attack was being pressed in such force that the French were forced back upon the Household Cavalry who had been deployed across the road to stem the advance. Major Hugh Downay's gallant charge stopped the advance, but he lost his life in the attempt.

Nothing but desultory shelling happened on the 8th, 9th and 10th, but it was the lull before the storm. The German Emperor made his supreme effort Wednesday, the 11th. The Prussian Guards, the flower of

the German Army attacked on both sides of the main road in parade formation. Despite the terrific slaughter they pierced the British front in several places, but they were finally driven back with great losses. The failure of the Guard ended the fierce German onslaught against Ypres.

On the left of the salient the enemy tried his new Corps against the Zonnebeke-Bixschoote line but failed, and by November 15th the attack was ebbing.

On November 12th the Germans had assaulted the Klein Zillebeke positions and all along the line to Malines, but little or no success was gained. On the 16th another attempt against the southern reentrant failed. Still another try was made on the 17th but was repulsed. The Germans continued to shell Ypres until the town was in ruins. Fresh French troops soon arrived and the battered British battalions were relieved after holding the trenches four trying weeks. By November 21st the Battle of Ypres was at an end.

The allied victory at Ypres had truly been a magnificent one. At all points the line had held against great odds. The losses on both sides were extremely heavy due to the determined attack of the enemy and dogged heroic resistance by the defenders. The allies had prevented the Germans from reaching their objective and for this reason the First Battle of Ypres will always be ranked as one of the greatest victories of the war.

The attack all along the allied front had subsided by November 20th. The British army had been drawn into the reserve and two French Armies held the line from Albert to the Sea. Several of the German corps were withdrawn and dispatched to the eastern front.

THE WINTER STALEMATE.

Sir John French began making plans of an offensive along the coast towards Zeebrugge, but Joffre disapproved the proposition, as it was his idea to launch an offensive against the German front south of Rheims.

The winter routine then began. Frequent raids and local attacks were made by either side. The allies held the general line Nieuport-Ypres-Messines-Armentieres-Neuve-Chappelle-Givenchy-Arras-Albert-Noyon-Soissons-Rheims-Varennes-Verdun-St. Mihiel-Point a Mousson-Luneville--St. Die-Cal du Bonhomme—to Belfort—approximately 500 miles in length.

Neither side was in position to carry on a prolonged offensive had the weather permitted. The cold and rain made trench life very disagreeable. Each side was busy recuperating losses suffered and the manufacture of heavy guns for trench warfare was pushed with all haste. A few local engagements occurred worthy of mention. The British made attacks on Wytschaete Ridge and Givenchy. Maud'huy thrust once or twice against the enemy at Vermelles. Further to the south intermittent engagements had been going on countless raids and small attacks resulting in no appreciable gain for either side. For the most part artillery duels were the order of the day, while the repair and improvement of trenches went steadily onward in an effort to make them drier and more livable.

CRITICISMS.

Sir John French was hampered in many of his plans and policies by the constant interference of the Home Office. This often led to serious misunderstandings and non-cooperation between Lord Kitchener and the Commander of the British Forces. On several occasions the Secretary for War wrote French Headquarters with reference to allied policies without giving French the information necessary for him to keep in touch with the situation. Marshal French was not cognizant of the expeditionary force for the relief of the Belgians until it was completed. The troops were not under his authority at all until just a few days previous to Rawlinson's arrival on the Flanders front.

Marshal Joffre was also hampered by similar interference during the Marne campaign, but he managed to put a stop to it and thereafter could carry his policies through.

It has never been understood why the German High Command did not at once begin an offensive against the channel ports after their retreat from the Marne. They reached the entrenched position north of the Aisne on September 12th and for six days failed to display any definite plan of action. Their retreat

had been conducted in an orderly manner and there was apparently no reason why they could not have at once assumed another offensive. They finally woke up to the fact that the allies had begun their flank extension towards the north and events proved that they were then too late to outdistance them. The only thing that can be attributed to this lack of initiative was the fact that the German were so overconfident that the Marne setback had for the moment paralyzed them. They had counted so on their simple plan being carried out successfully that they had failed to have another campaign laid out.

Had the Germans pressed their advantage at St. Mihiel as furious as they attacked Rheims, Sarrail's thin line could not have held out.

Joffre committed a tactical error in trying to turn the entrenched German right flank west of Soissons with an inferior force. His decision to extend his left flank to the sea proved a wise one.

The German Command wasted too much time before Antwerp. They failed also to occupy Ghent, Bruges and the North Sea ports which could have been easily accomplished. Von Beseler also failed to act in time to cut off the Belgian retreat from Antwerp although this could have been effected very easily.

In the Flanders campaign Von Falkenhayn failed to take into consideration the nature of the country around Nieuport and Dixmude. He was obsessed with the idea of turning the allied flank. Had he saved his troops from the slaughter on the Yser and thrown his strength against the thinly held line south of Ypres, or had he given Prince Rupprecht sufficient aid at Arras the final result would probably have been different.

There were only a very few mistakes to be found in the strategy of the allied commanders. They had to hold a long line against great odds. The fact that they did not hold out reserves was not their fault for every available man had to be used in the lines. The allied mission was to hold their ground at all costs, and this they succeeded in doing.

The Western Front

(August-September 1914)

The German Offensive against France.

(This map is diagrammatic only)

Arrows indicate wide sweep of the Schlieffen enveloping movement against the Allied left, the attack on the center and the subsequent withdrawal to the Aisne

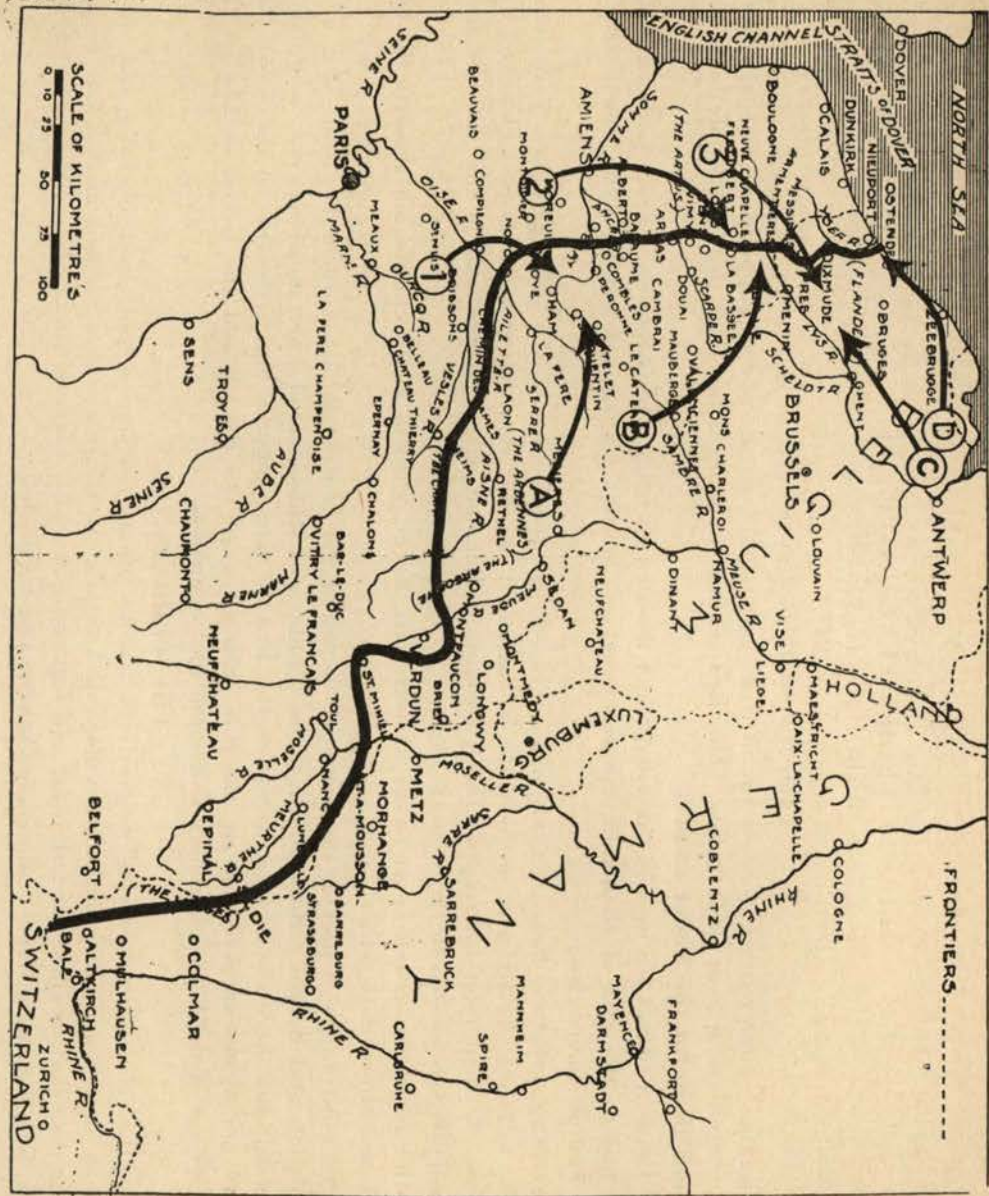
○ → Move of Von Kluck's army to the south east.

— Allied armies in position Sept. 5, 1914, before The Battle of the Marne, (Sept 6 to 10, 1914).

--- German armies in position Sept 5, 1914, before The Battle of the Marne, (Sept 6 to 10, 1914).

xxxx Line of the Aisne to which the German armies withdrew after the Battle of the Marne.

A Cavalry.



THE BATTLE OF NEUVE-CHAPPELLE
MARCH 10, 11, 12, 1915.

—BY—

Capt. Robert P. Bell, Infantry.

A German counter-attack pushed the British just to the east of Neuve-Chappelle, so that on October 27th 1914 the village was in their hands. The British then took up a line just to the west of the village and remained there for the winter months.

The German lines were west of the village and the British front was as follows:—From Givenchy, past Festubert, just to the east of Richebourg, barely west of Neuve-Chappelle and then to the north-east by Faquissart east of Amentieres.

Neuve Chappelle was located at the junction of severay roads, one of the principal ones going north just past the village to Estairs and to the south of LaBassee; another road left this and led to Fleurbsix and Armentieres. A third road intercepted these, forming a diamond shaped figure, and in this the village of Neuve-Chappelle was located in the western angle.

The houses were set well apart in the western part, having gardens and orchards, but those to the east were small and crowded to-gether.

At the most northern part of the diamond shaped figure a triangle was formed by roads and filled with small plots and hedges. Between the houses and the LaBassee road were meadows and farm lands, and in this meadow were the German trenches, the British being about a hundred yards to the west. The barbed wire entanglements were on an immense scale between the British and the Germans, and on the latter side several of the houses had been converted into a fortress.

THE TERRAIN.

A low, but clearly marked ridge began from a point about two miles south-west of Lille and, in a single plateau, went from that point to the village of Fournes. At Fournes it was divided in two, one branch going in the direction of Illes and LaBassee, and follownig the road between those places. The other branch formed the line, Fournes, Haut Pommereau Aubers and Fromelles.

The top of this ridge was a low but commanding plateau, which if in the hands of the British would dominate the approaches to Lille, Roubaix, Tourcoing and to the cities located in the plain of the Scheldt river.

The Des Layes river was small and passed between the village of Neuve Chappelle and the ridge, crossing the La Bassee road at a point to the south known to the British as Port Author. The stream flowed toward the north-east and was crossed by three roads, from Armentieres road: these all led to the ridge.

On the line of the Des Layes were the German second line defenses with strong positions at the bridge heads. Another strong position was at Pietre Mill, a mile north-east of the village.

The Bois du Biez was south-east of Neuve Chappelle and in the same direction from the Des Layes. This was a fair sized wood, though it consisted mainly of the smallies variety of trees.

The breaking of spring (1915) was drying up the water-soaked meadows of the Flanders battlefields.

PLAN OF ATTACK OF THE BRITISH.

Field Marshal Sir John French, decided about the end of February to make an aggressive movement against the Germans. The section chosen for the attack was Neuve Chappelle, north-west of LaBassee at which place there was a slight salient into the British lines. The need of this offensive movement was that of installing an offensive spirit in his comamnd, and to test a new theory of attack.

This theory was, that if an immense amount of artillery could be assembled, and the barbed wire entanglements destroyed by concentrated fire on a definite section of the front, then having accomplished this, to lengthen the range and place a barrage of fire between the enemy and his supporting troops, the infantry could advance without serious resistance.

Sir John French had collected a limited reserve of ammunition and had assembled in the vicinity of Neuve Chappelle, every gun that could be spared from the whole British front for the trial of the new

method of artillery "preparation". This had been tried by the French in Champagne, and it seemed to both him and Marshal Joffre the right tactics to break down the German defenses. The British staff and troops needed practice in this kind of warfare which had the promise of becoming a sound method. A decisive blow was not expected, and the objective was the capture of Neuve Chappelle, and to push as far forward as possible to the east of the village.

The success of the plan demanded absolute secrecy, and surprise was necessary. The British here had the advantage, as they had supremacy of the air, and through this found that Neuve Chappelle was very weakly held.

On March 8th, Sir John French assembled his Corps commanders and gave them his plan of attack. It was to be made by the First Army. The Fourth Army Corps was to operate on the northern part of the sector and the Indian Corps on the southern part. An attack on each flank was to be made at the same time as the main attack on Neuve Chappelle, with the First Corps attacking from Givenchy and the Second Army just south of Armentieres.

The Second Division of Cavalry was to be held in reserve, in case a break-through was effected.

BRITISH TROOPS.

The Allied front in Flanders during the winter months had changed very little, so that, in March it was quite the same as the line held in November.

The British forces then consisted of two armies, the First Army under the command of Sir Douglas Haig, comprising of the First, Fourth and Indian Corps, and holding the line from LaBassee to Estairs. The Second Army was commanded by General Sir Horace Smith-Dorrien, having the line from Estairs to the Ypres salient. It contained the Second, Third and Fifth Corps.

The strength of the British was about 48 Batalions or about 45,000 men.

GERMAN TROOPS.

The German trenches were held by troops of the Seventh Corps, at the time of the attack numbering only a few battalions. The reserves were either Saxons of Bavarians and all were under the command of Prince Ruppreche of Bavaria.

PREPARATION FOR THE ATTACK, BY AIR.

The British aviators were ordered to hinder the reinforcements of the Germans, who would come from the towns to the north. This was accomplished by the attacks on the junctions at the following cities: Menin, Don, Douai and Courtrai.

BRITISH CONCENTRATION.

On March 8th and 9th the British artillery assembled in a small area to the west of Neuve Chappelle. The guns were of many types, having among them the 60-pounder, coast defense gun and the new 15-inch howitzer. The heavy gun position was in the neighborhood of LaCoultre and Vielle Chappelle and the main position for the field artillery was west of Richebourg.

During the night of the 9th the troops assembled, filling every trench and ditch, and all were anxious for the long delayed order to advance.

THE ARTILLERY BOMBARDMENT.

March 10th Dawn. Dawn of March 10 showed the weather to be misty, with low clouds in the sky and with the coming of day the Germans seemed to sense an unusual procedure in the British lines. The Boom of great guns indicated that the British artillery was raging. This finished, silence ensued and the line along which the attack was to be made—from Armentieres to Givenchy—waited.

March 10th 7:30 A. M. At 7:30 A. M. to the second the tension was broken by a terrific sound and within a few minutes three hundred guns were firing their maximum, with their attending gunners striving to shoot as many rounds as they possibly could. The British troops in their trenches, crouching under cover, were stupified by the awful concussions. The firing was so incessant that it seemed as if a supernatural machine gun was in action and the earth shook as if pounded by an immense sledge hammer. Shells of all caliber screeched through the air, and those with low trajectory passed quite closed to the heads of the waiting troops.

The shells that hit the German positions, tore up the earth, gouged up the stakes of the barbed wire entanglements and threw them high into the air. Mushrooms of red earth spouted from the earth as the shells struck. The German parapets, which they had been building for months were wiped away or distorted beyond recognition. The bodies of German soldiers were blown to fragments and hurled into the air, which was hazy with the greenish fumes of the lyddite. This was the preparation, which numbered four shells to the yard, and at the end the German trenches were obliterated and only the pock-marked earth and the mangled bodies of the dead Germans remained. This the most destructive, withering and Concentrated fire the war had seen.

March 10th At 8:05 A. M. in accordance to schedules, the range of the British guns was lengthened
8:05 A.M. and the destruction of the village began.

ADVANCE OF THE BRITISH INFANTRY.

Then whistles blew along the line for the time had come for the Infantry to advance.

Due west of Neuve Chappelle there were two brigades of the 8th Division the 23rd being on the left of the sector and the 25th on the right.

To their south was the Meerhut Division, occupying a sector a mile and a half long, having the Garhwal Brigade on the left and the Dehra Brigade on the right. These Brigades were supported by the Lahore Division.

The 23rd Brigade attacked against the north-east corner of the village of Neuve Chapelle, the 25th against the village proper while the attack against the south-west corner was launched by the Garhwal Brigade and the Dehra Dun Brigade.

The only enemy left were for the most part dazed and dying Germans, though there was much sniping and some officers who had remained alone in a trench were operating a machine-gun.

The 2nd Royal Berkshires and the 2nd Lincolns assaulted the first line trenches, and opening out, were passed through by the 2nd Rifle Brigade and the 1st Irish Rifles, who were to take the village.

HELD UP BY UNBROKEN WIRE ENTANGLEMENTS.

The 23rd Brigade advanced, having the 2nd Devons, the 2nd West Yorkshires and the 2nd Middlesex Regiment. The artillery had failed to destroy the trenches and barbed wire entanglements in this section—in the northern corner of Neuve Chappelle—and here, where there is a slight hollow the Scottish Rifles met with strong resistance from German machine guns. However their effort was determined and they attempted to break through the wire with their bare hands, but they had to fall back and lay in the open until one company made its way forward through a gap and broke down the resistance. This was company B.

The 2nd Middlesex Regiment on the right also ran up against unbroken wire and were under heavy fire from machine-guns. A message was sent back to the artillery and there the men waited until the artillery had destroyed the obstacles.

The Garhwal Brigade in their initial attack were successful in carrying the first line trenches.

March 10th The British artillery "preparation" continued until 8:35 A. M. on the village and at that
8:35 A. M. time again lifted and put a curtain of fire between Neuve Chappelle and the German sup-
ports. Then two of the Battalions of the 25th Brigade entered the village and soon every German was
either dead or captured.

What remained of the village presented a gruesome sight. The ground was yellow with lyddite, and the dead, buried in the churchyard, were torn from their graves.

The only things that remained were two great crucifixes, one in the churchyard and the other against the chateau.

The 3rd Gurkhas met the 2nd Rifle Brigade at the southern end of Neuve Chappelle and then continued to the Bois du Biet.

The advance of the 25th Brigade had turned the flank of the German line to the north of the village in front of the 23rd Brigade, and this movement, and the powerful artillery support that was given, permitted the 23rd Brigade to get forward between 10:00 and 11:00 A. M. so that, at that hour the Brigade had reach-

ed the line of the orchard north-east of Neuve Chappelle, and there met the 24th Brigade who had attacked from the Neuve Chappelle-Armentieres road on their left. This Brigade had the 1st Worcesters, 2nd East Lancashires, the 1st Sherwood Foresters and the 2nd Northamptons.

March 10th At 11:00 A. M. Neuve Chappelle and the roads leading to the northward and to the south-
11:00 A M. west from the eastern side of the village were in the hands of the British. During the advance the German artillery had kept up a heavy fire, which nearly equaled that of the British in volume and the telephone lines were continually cut.

March 10th At mid-day the British artillery still had Neuve Chappelle surrounded by a curtain of
Noon. Shrapnel fire, so that German counter attacks were not possible, and the British Infantry had time to secure the ground they had won.

The Germans seemed to be stunned from the sudden attack, for their artillery fire had died down to such an extent that the units on the right of the British line formed for further attack, in the open and were not molested.

The units of the British were badly mixed and it was necessary to straighten them out. The 25th Brigade had been defected in coming to the assistance of the 23rd Brigade. It was necessary to bring in reserves to take the place of the regiment that had suffered reserve losses.

There was an unusually long delay, that can not be accounted for, in bringing the reserves of the Fourth Corps into action. Sir John French in his dispatch of April, 1915, states as follows:

"I am of the opinion that this delay would not have occurred had the clearly expressed orders of the General Officer commanding the First Army been more carefully observed. The difficulties above enumerated might have been overcome at an earlier period if the General Officer Commanding the Fourth Corps had been able to bring his reserves more speedily into action. As it was further advance did not commence before 3:30 P. M."

March 10th At 3:30 P. M. there was formed on the left of the 24th Brigade, three brigades of the 7th
3:30 P. M. Division—the 21st, 20th and 22nd. The left at that hour swung toward the south moving toward Aubers Via Pietre. The troops at the right—the Gahrwal and Dehra Brigades of the Indian Corps—attacked toward the ridge.

The 39th Gannwallis and the 2nd Leicesters, both of the Gahrwal Brigade, met with serious resistance at a position unbroken by the artillery fire, but it was taken with desperate losses. It established on this new line. The Dehra Dun Brigade had for support, the Fullundur Brigade of the Lahore Division, and attacked on the right of the Indian line but were stopped by a German outpost at the bridge.

This immediately assumed considerable importance and artillery, as far as circumstances would permit was directed on the spot.

The 1st Brigade of the 1st Corps were brought up for support but they arrived too late in the day to be of use.

In the advance of the 25, Brigade, another fortified bridge across the Des Layes was encountered, which stopped its progress, while the 24th Brigade on the left was halted by the fire from machine guns from the cross-roads northwest of the village of Pietre. The elements of the 7th Division were halted on the line of the Des Layes river and the strong point at Pietre Mill. The 21st Brigade at first made good progress toward Pietre Mill, but were stopped by machine guns in houses forming another strong Point. The Germans very speedily assembled at these three strong points and the casualties in the British ranks were terrific. In the neighborhood of the Des Layes and the Pietre Mill were strong positions that had not been damaged by the British artillery.

Night As darkness fell the British dug in on the ground they had won during the day. During
March 10-11 the day of the 10th the British had taken the German Positions around Neuve Chappelle. they had taken the immense mesh of trenches and obstructions and had pushed forward and consolidated their line about 1,200 yards into the German position, on a front of 4,000 yards, or about two and one-half miles.

DESPERATE FIGHTING OF MARCH 11th and 12th.

March 11th. The morning of March 11th was very misty and this condition lasted the entire day. The operation of aircraft and the observation of artillery were therefore seriously handicapped. The Germans were thus able to pull themselves together: their line was reinforced and they prepared for further attack.

The Fourth Corps and the Indian Corps renewed the attack but were held up along the line by fortified houses and strong points. Efforts were made to destroy these places, but as the telephone communications had been destroyed and due to the poor weather, proper observation was impossible and the fire was not effective. The British troops made some gains, and occupied several of the houses, but their own artillery fire on them could not be stopped and they were necessarily withdrawn.

At various points the Germans made counter-attacks as they had now fully recovered from the surprise. Small unimportant gains were made by the British, and their artillery was almost silent.

The British could not make any progress against the strong point at the Pietre mill in the northern part of their sector, and the troops in the south facing the Bois du Bies, without proper artillery support and this was not to be had. The German artillery however was murderous and the British had many casualties in their ranks.

Night of March 11-12 The Germans on the night of March 11-12 heavily reinforced their line with Bavarian and Sax-Morning Bies, in dense formation of waves, and British artillery which had previously registered on March 12th. this cality, slaughtered them as they emerged. In other parts of the line the British waited until they were within about fifty yards and then commenced firing with deadly and accurate fire, so that they dropped like grass before a sythe.

The 7th Division on the left of the line made vain efforts to carry the Pietre strong point all day long, while the troops to the south were resisted equally well at the bridges over the Des Layes and the German second line trenches in the Bois du Biez.

The 20th Brigade, consisting of the 1st Grenadiers, the 2nd Scottish and the 6th Gordons, took position after position in the vicinity of Pietre Mill, but they could not keep them.

March 12th 4:00 P. M. The British 6th Cavalry came up in support at 4:00 P. M. but the German positions were still intact and they withdrew.

During the day the loses in the British ranks were very heavy, but they did not compare with those of the Germans. In this conflict the loses in such a short time and space are placed among the greatest of the war, especially where the dense formations of Germans were caught in the converging fire of machine guns and rifles.

THE LINE STABILIZED.

Nightfall March 12th. By nightfall of the 12th of March it was evident that the troops of both sides had come to a standstill. The British could not get through to the ridge, nor could the Germans dislodge the British from Neuve Chappelle.

Sir John French wrote,

"As most of the objects for which the operation had been undertaken had been attained, and as there were reasons why I considered it inadvisable to continue the attack at that time, I directed Sir Douglas Haig on the night of the 12th to hold and consolidate the ground which had been gained by the Fourth and Indian Corps, and to suspend further operations for the present."

LOSSES OF BOTH SIDES.

During the battle of Neuve Chappelle, March 10-11, 12, 1915, the losses of the British exceeded 12,000 out of 48 battalions engaged. 190 officers and 2,357 men were killed. 359 officers and 8,174 men were wounded and 23 officers and 1,723 men of other ranks were missing.

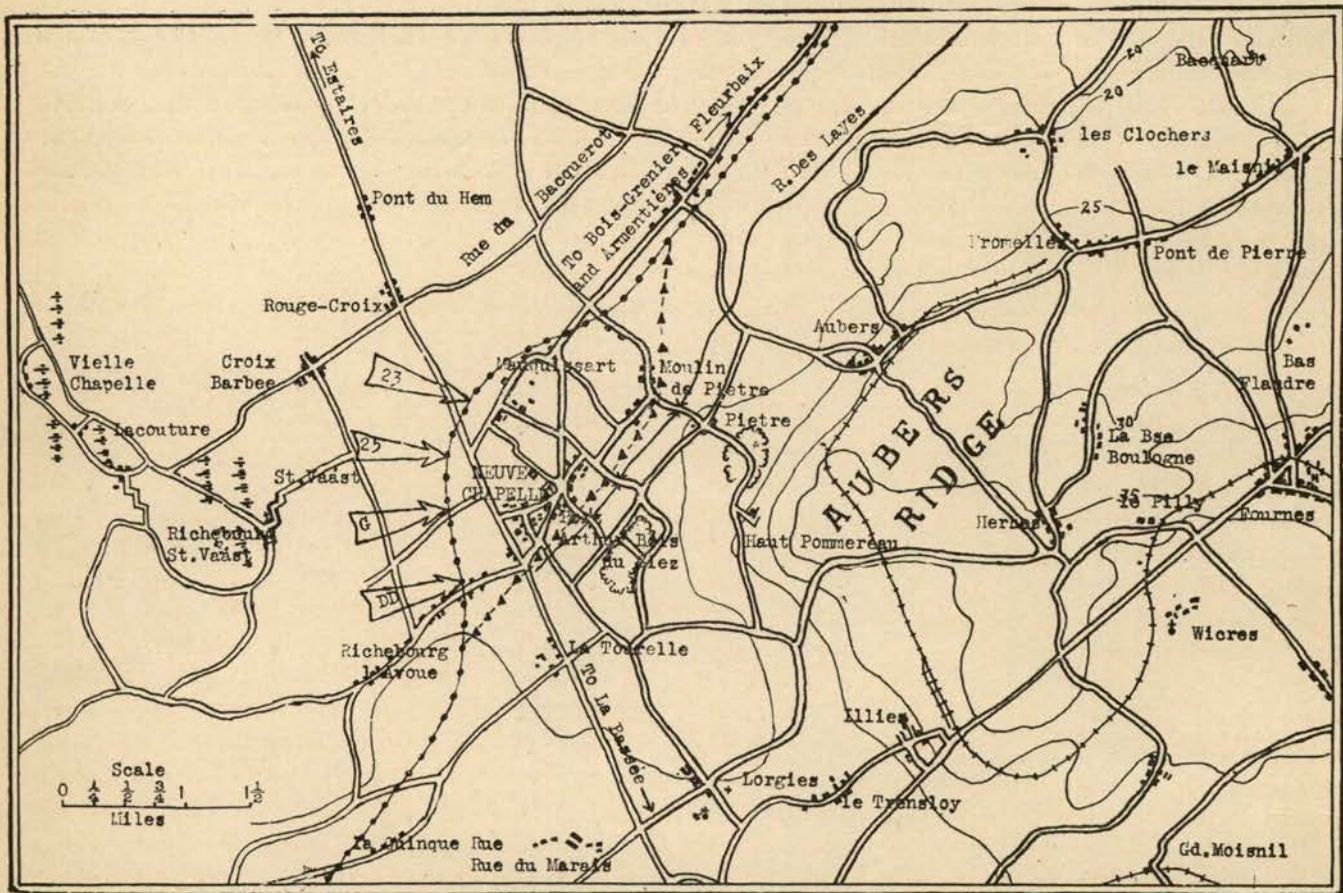
The Germans left several thousand dead on the field and more than 12,000 wounded were removed by trains. 30 officers and 1,657 other ranks were captured by the British.

THE TACTICAL QUESTION.

The attack of the British was well planned. It must be borne in mind that the offensives of this nature were new. The Infantry performed well after it was committed to action and carried out its mission in each case as far as was humanly possible. The Air Force and the Artillery did as well as might be expected of them considering the weather, though the loss of a great opportunity occurred in the failure of the Artillery to clear away the entanglements. Even then, if the reserves of the Fourth Corps had been brought into action, there was a possibility of having a decisive victory for the British. As it was the Germans rallied to their prepared positions and on these lines the British came to a stop.

The Germans took speedy action in rushing troops to these strong points after a surprise attack, and there successfully defended their line. Their formation in the counter attacks, was too dense, could not hope to accomplish its mission and resulted in a tragic loss of life.

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LEGEND: —•—•—•—•— Front line March 10, 1915
 ▲-▲-▲-▲-▲-▲-▲-▲ Front line March 12, 1915

NEUVE CHAPELLE

THE VERDUN OPERATIONS FROM JANUARY 1st-JULY 1st 1916.

—BY—

Capt. Lester L. Lampert, Infantry.

GENERAL SITUATION ON EVE OF VERDUN.

The end of 1915 saw Germany no nearer to a victory than before her efforts of that year. It is true that she severely pummeled the Russian bear in East Prussia and Poland, as well as sorely tried the Entente Allies on the Western Front, yet her peace overtures met with quick rebuffs. Her people were growing impatient for a decision. Her comparative superiority in man power and material was being rapidly diminished as English efforts to organize and train a large army, as well as the great increase in munitions and war supplies in both England and France, were beginning to be evident.

December 6th. 1915 the allied commanders met in conference at Chantilly, France, to consider the problem of united action on the various fronts. The conference was presided over by General Joffre; while Sir Douglas Haig (Great Britain), General AlexiEFF (Russia), and General Cadorna (Italy), represented their respective governments. It was decided to inaugurate a simultaneous offensive on all the fronts as soon as Great Britain received expected reinforcements, Russia could reorganize and equip her severely tried army, and France could complete her reserves of artillery and munitions.

On February 18th General Joffre decided on the Somme as the theatre for the Franco-British offensive which was to take place about July 1st.

While the allies were planning an offensive for the ensuing year the Germans in turn were busy planning a campaign. Because the Entente Allies were steadily gaining in comparative military strength Germany could lose no time and consequently decided to inaugurate a winter campaign, conceived by General von Falkenhayn who was then Commander-in-Chief of the Armies in the field, having relieved General Von Molke, and was in reality Generalissimo of the Central Powers. In a letter to the Kaiser at the end of December 1915, Falkenhayn reviewed the situation as follows: He said that England was the soul of the Entente and that therefore it was necessary to strike England. But where was the blow to be struck? The marshy soils of Flanders, he stated, were an obstacle up to the middle of spring and the English position further south had too distant objectives and necessitated the employment of a larger force than Germany had available at that time. Therefore since England was out of reach it was necessary to deprive her of her principle weapon, the Allied Armies. "Obviously this is a pity from the point of view of our feelings towards our principle enemy", continued Falkenhayn. "Above all the enemy must be struck through submarine warfare and there is no imprudence in risking hostility with America because of the strong undercurrent of political opinion favorable to Germany in that Country." He stated further that to attack Italy would only gain advantage for Austria and that the defeat of Italy would have no strong influence on the War. He saw no possibility of gaining a decision by an offensive against Russia, and besides a winter campaign against that country was impracticable. He seems to have remembered Napoleon's disastrous attempt. Besides, Falkenhayn considered that both Italy and Russia would soon be paralyzed by internal troubles.

Having eliminated all the Allies only France remained. "France", continues Falkenhayn, "has arrived at the end of her military resources. Her people can be made to understand that nothing can be hoped from a continuation of the struggle and the worst will be over and England deprived of her best sword." He adds that a break through in mass was probably doubtful of attainment and possibly beyond the resources of German forces and further not necessary. Two objectives presented themselves, Belfort and Verdun. Falkenhayn chose Verdun.

Thus Falkenhayn decided to inaugurate against France a terrible war of attrition.

There are many reasons advanced for selecting Verdun for the objective of the offensive. Germany did not expect to break through in the ordinary sense but desired to strike France at a sensitive point.

Quoting Ludendorf: "Had we only been able to reach the defenses on the right side of the Meuse we would have been completely successful. Our strategic position on the Western Front as well as the tactical situation of our troops in the St. Mihiel Salient, would have been materially improved."

Hindenburg stated: "With Verdun in our hands our position on the Western Front would have been materially strengthened. It would remove a salient at a most sensitive point."

At Verdun the German line of communications ran within 20 kilometers of the French lines. Verdun was always the most powerful point d'appui in every attempt of the French to make untenable the German position in France. Besides the important tactical and strategic reasons advanced for its selection for the point of attack, Verdun had a moral value because it previously had been the theatre of a severe struggle and its capture would for a time satisfy the German people who were growing impatient for a victory. Also, the limited front and comparatively shallow depth of the Verdun Salient offered the possibility of a success with the employment of fewer effectives than an attack with decisive prospects, on any other point on the Western Front. Falkenhayn thought that in Verdun he had chosen an objective for which France would fight to the last man. He hoped here to bleed France white, win a moral victory over the French people and possibly succeed in declaring a separate peace.

THE GERMAN PLAN.

It was decided to initiate the offensive before spring with the hope of inducing the allies to make a premature counter-attack which would result in the planned Franco-British offensive going off half-cocked. Falkenhayn planned to take Verdun speedily with 15 divisions, and a great concentration of Artillery. In fact so great reliance was placed upon the artillery that it was expected that the infantry would play a minor role. He remembered how easy it had been to reduce the Fortresses of Liege, Namur, Mauberge, and Antwerp, which before the World War, were considered impregnable. While preparations were made for the attack on Verdun it was planned to puzzle and distract the allies by diverting actions at different points along the Western Front.

DESCRIPTION OF BATTLEFIELD.

The city of Verdun lies on both sides of the Meuse River. East and north on the left bank of the river low hills extend for some distance. The nearest and most conspicuous is the ridge of Charny. On the right bank of the river are the famous Heights of the Meuse, rising steeply out of the water to about 500 feet. These heights follow the general contour of the river and are about six or seven miles broad. In the east the Heights break down sharply to the broad clay flats of the Woevre. They are not a range of hills but a plateau. Ravines descending to the Meuse and Woevre plain cut deeply into the Heights, and are filled with dense undergrowth. Villages and farms are scattered over the tableland and the Woevre.

The Woevre is a flat low plain lying between the Heights of the Meuse in the west and the Heights of the Moselle in the east. In the winter the Woevre becomes a mass of swamps and brimming ponds, a stretch of country similar to the Masurian Lake District where the Russians were bogged in and so severely mauled by Hindenburg. The only routes across it available for heavy transport are causewayed roads and railways.

Several roads and railroads converge at Verdun. Some were destined to play a vital part in the great battle. The Metz Railway tunnels the range to Eix. A little line crosses by the Gorge of Vaux on the East side of the Hills to Damvillers. The main line to Sedan and north follows the western side of the Meuse valley. Besides the Metz-Damvillers Railroad there are from Vaux southward to Fresnes four wagon roads which run up to the edge of the hills; the Vaux-Dieppe road, main Verdun-Longuyon highway through Etain, the little road from Chatillon, and the great Paris-Metz highway through Manhuelles. There is also the Verdun Ste Menchould Railway and the famous wagon road, the Sacred Way, from Bar le Duc to Verdun which was destined to become the vital artery of the French supply.

FRENCH PREPARATIONS AT VERDUN.

Since the days of the Romans Verdun has been a famous city. Vauban fortified it by a system of bastions, revelines, and ditches, under Louis XIV. Its location at one of the natural gateways to France from the east has caused it to be the scene of many historical conflicts where the French have barred the way to the invader. In 1792 Verdun surrendered to the Duke of Brunswick and became, consequently, the indirect cause for the September Massacres in Paris. Verdun made a stout resistance in 1870, and fell after a ten weeks siege, only when completely invested. After the loss of Alsace and Lorraine, it became along with Toul, Belfort, and Epinal, one of the Eastern Bulwarks of France.

In 1875 the entrenched camp of Verdun formed the left wing of the fortifications of the Heights of the Meuse. Verdun barred the crossing of the Meuse on the main line of advance from Metz to the passes of the Argonne and the upper Marne Valley. Verdun was fortified by two general lines of fortresses and redoubts, thirty-six miles in all. (The outer line of fortifications extended some thirty miles with the greatest diameter of nine miles. Verdun was the last word in old fortifications and was brought up to date just before the war.) The junction of five railroads and only a days march from the German frontier, Verdun was naturally made the strongest of the four entrenched camps. In the first battle Verdun was in dire jeopardy being almost invested when the Germans were forced to retreat on the Marne in 1914.

After the capture of Liege, Namur, and Mauberge, the French were forced to the conclusion that permanent fortifications had had their day. A decree in August 1915, suppressed permanent fortifications with their enclosed perimeter where they implied the necessity of an isolated defense. Verdun was transformed into a fortified region, a chain defense instead of a closed ring. The exposed salient on the right bank of the Meuse necessitated the establishment of a second line on the left should the right bank be abandoned. The manual labor and supplies for this change were lacking because the requirements of General Herr who commanded the Verdun sector were met with very sparingly.

General Joffre and even General Herr believed that should a German attack materialize at Verdun that it would be made on each flank of the salient rather than be limited to a front crowded with powerful fortifications. Herr consequently dispersed his efforts over the entire defensive area.

The only standard gauge railway for the French Supply of the Verdun region was the Verdun-St. Menehould Railroad and this route, running close to the German line, was expected to be cut in case of attack. The Verdun-Bar-le-Duc road, which was destined to become famous was widened to eight meters to allow a continuous passage of two files of vehicles.

The general effect of the measures taken by the enemy made it clear that attacks would materialize on the right bank of the Meuse between the village of Ornes and the Meuse. Four corps and a considerable amount of artillery was concentrated in rear of the threatened region. However, because the German threat on the Champagne front was not yet dispelled, these reserves were not definitely committed.

FRENCH STRENGTH, ORGANIZATION AND DISPOSITION.

On February 20, 1916, the French salient at Verdun, lying between the Argonne and St. Mihiel, presented a front which was approximately thirty miles long, and was of the average depth of nine miles. In the Verdun area General Herr had nine divisions and six regiments of artillery disposed on both sides of the Meuse.

Northeastward from the Argonne the French line ran through Forges, and crossed the Meuse. It covered Brabant and Haumont and the wood of Caures. Passing along the eastern Heights of Herbebois and Ornes it then ran out on the Woivre covering Fromezey and coming within a mile of Etain, running south it covered Fresnes and bent back recrossing the Meuse at St. Mihiel.

Second and third lines were also prepared, the second position passing through Samogneux, Hill 344, Beaumont, Wood of Fasses, Les Courieres, Bezonvaux, and Deippe. The third line roughly ran through Douaumont, Hardaumont, Vaux and Eix. Intermediate lines were prepared on the Cote de Talon, Cote du Poivre, south of Louvemont and Douaumont and the farm of Hardaumont.

Like Ypres Verdun can be likened to the neck of a bottle. Many railroads and roads converge at the city. The French position was in fact a bridgehead. The position of the French, though the area was

strongly fortified and the natural barriers presented serious obstacles to the enemy, was weak in that the troops on the right bank of the Meuse had their backs against the river. Should they meet with a serious reverse a withdrawal across the bridges under enemy fire would no doubt have resulted in serious losses in men and artillery.

GERMAN STRENGTH AND PREPARATIONS AT VERDUN.

The Germans committed 14 to 19 divisions to the Verdun attack, a total of about 230,000 bayonets and a concentration of artillery hitherto unprecedented. They had made extensive preparations in rear having constructed a network of railways, 14 standard gauge and 3 meter gauge. They did not follow the old custom, of constructing approaches and parallels to bring their lines closer, and consequently in many places their front trenches were about half a mile from the French line. They expected that there would be little left for the infantry after the artillery had completed its work and consequently devoted their main efforts to the concentration of artillery and the problem of munition supply.

THE BATTLE. FIRST STAGE.

February 21, 1916, at 7:15 A. M. the German bombardment commenced along a 22 kilometer front in the Verdun Salient. The fire was terrific and rapidly wiped out the French trenches and communications. The medium guns played on the French second positions while the heavies registered on the permanent fortifications. About 4:00 P. M. the German Infantry left their trenches on a four kilometer front between Haumont Wood and Herbebois. In many cases their arms were slung, they had been told that there would be no work for them except to march to Verdun, where they planned to arrive in four days. Detachments of wire cutters and pioneers preceded the assault waves which followed one another at eighty to one hundred paces. The French resistance at first was feeble, here and there small groups appeared and some machine guns which had withstood the German tornado of shells, and inflicted some losses on the German infantry. The French heavy artillery was of little assistance. The French front line was captured and on the 22nd the Germans renewed the attack pushing Chretien's hard-pressed Thirtieth Corps back from Haumont and Caures Wood. Chretien used up 8 to 14 reserve battalions but reinforcements made up these losses. On the 23rd the French, threatened in the rear evacuated Brabant, and Wavrille. The French line, really their second line, now ran as follows: Samogneux-Fasse Wood-Beaumont Village-Herbebois, connecting with the first position at Ornes. The French were fighting chiefly in the open. Their artillery was now beginning to play with serious effect on the enemy infantry. The French position on Woevre was now becoming precarious.

During the night of the 23rd-24th, the French practically evacuated Samogneux and brought their line on the Woevre in close to the Heights of the Meuse.

On the 24th the struggle continued. The French counter-attacked toward Wavrille. The French line gradually crumbled and before night Samogneux, Fosses Wood and Ornes fell, and Beaumont during the night. The French lost heavily in the fighting at Ornes. At nightfall the Germans attacked just east of Louvemont, getting very near the final French position, having reached the Heights of Talon and were approaching Douaumont.

The situation was grave. General Langle de Carey, commanding the army group, thinking that the evacuation of the right bank of the Meuse was imperative, so wired Joffre, and even went so far as to stop the march of the Twentieth Corps which was on its way to reinforce the hard pressed Thirtieth. Joffre with characteristic tenacity of purpose, directed that the French resist on the right bank to the last extremity and to hasten the march of the Twentieth Corps. "Every commander", Joffre stated, "who under these circumstances, gives orders to retreat will be arraigned before a council of War."

On the 25th the Twentieth Corps arrived and relieved the Thirtieth which had lost 16,000 out of 26,000 effectives in their four days struggle against far superior numbers and guns. The 1st Corps was moved to the right of the Twentieth. Petain arrived and assumed command of the situation which was getting beyond the limited capacity of the small staff in the region. He strengthened the defenses where they had been neglected, divided the area into sections, assigning artillery to each and set a force to work on maintenance of the Verdun Bar le Duc Road. General Joffre also sent his chief of Staff De Castelnau to Verdun to report on the situation.

In the fighting for the day the French were forced to evacuate the heights of Talon and the Poivre, withdrawing to Belleville heights, but the enemy was finally stopped by an artillery barrage and a counter-attack by the 39th Division regained most of the lost ground. On the 25th the French line ran as follows: Vacherville-Poivre Hill Bois La Vauche-Bois d'Hardanmont, and Gorge of Vaux. The German attack was limited to the front from Poivre Hill to the spur of Hardanmont. The attack on Poivre was a failure, the German Infantry finding it hard going on the steep slopes and were cut to pieces by the devastating fire of the French artillery which was located across the river on Charny ridge. There was also fierce fighting about Douaumont which in the evening reached its height. The Kaiser was a witness of this struggle and seems to have made a special plea to troops to take Douaumont. The 24th Brandenburgers finally succeeded in taking the old Fortress and even got beyond the crest of the position, The French still holding the village of Vaux.

On the morning of the 26th, Petain sent the 20th Corps under Mangin in to counter-attack, and not only stopped the Germans at Douaumont but drove them back with exception of a handful who clung on to the ruins of the old Fort.

Vigorous counter-attacks now effectively stopped the German advance and the 1st Phase of the great fight was brought to a close, with the Germans far from their objective, the city of Verdun, where they expected to arrive on the 26th.

SECOND PHASE OF THE FIRST BATTLE.

The German attempt to take Verdun on a narrow front by frontal attack failed and they began to revise their plans. The Crown Prince decided to broaden his attack. Consequently after a lull, on March 4th, he renewed activities on both sides of the Meuse, striking on each flank of the salient. The attacks were coordinated like clock work, the plan seeming to follow Napoleon's method of striking both flanks and then, at the opportune moment, to smash through the center.

For this new attack the Germans moved some mobile batteries across the river to the Woods of Sept-Sarges east of Montfaucon. The main German route of supply was Metz-Conflans-Spincourt, from where a line ran to Dunn in the Meuse Valley and from there a branch was built to Montfaucon.

On the west bank of the Meuse, the French line covered Avocourt-Malancourt, then gradually paralleling Forges Stream it passed along the ridge north of Bethincourt and then passed between Forges and Bois des Forges to the Meuse.

The ground inside the French line on the west bank should be examined closely. The Brook of Forges running in a well defined valley is split at Bethincourt, one branch skirting on the west and north the destined to be famous ridge known as the Goose's Crest on the western end of which is Mort Homme. If the French lost this famous ridge it would be necessary for them to fall back no less than four miles to the Heights of Charny and they would lose important artillery positions which controlled Poivre Hill on the opposite bank of the river.

Soon after activities started on the right bank it was necessary for the French to abandon the Verdun Ste. Menchould Railway which ran parallel and close to the line, enemy long range artillery registering on it. The route of supply for the entire French Army at Verdun was now over the famous Verdun-Bar-le-Duc road by motor lorries supplemented by a narrow gauge railroad running also from Bar le Duc.

A word can well be said here, in regard to this famous road. In spite of the constant stream of traffic an average of one vehicle every 25 seconds, it was necessary to constantly repair the road. Working detachments were spread along the entire length, each man having a foot or two of the road to maintain, standing ready constantly with shovels. These men would jump in and work a few seconds and then jump out before the arrival of the next vehicle. The equivalent to seven feet of stone was worn out on this road during the Verdun Battle. Difficulty of defending Verdun was enormously augmented by the necessity of falling back on one road as the only artery of supply. An average of 6,000 auto vehicles, 90,000 men and 50,000 tons of freight passed over this road daily, and assigned to the task of maintaining it and the supply system were 30 officers and 30,000 men.

The bombardments reopened March 2nd. To prevent reinforcements on the west bank a vigorous attack was made by the Germans in the vicinity of Douaumont. On March 6th two German Divisions of the 7th Reserves made an attack upon Forges Glen causing the French to fall back on a prepared position behind Goose's Crest. This withdrawal of the French was caused chiefly by the fact that their right flank was in the air, for on the opposite side of the river the Germans held the banks down to Talou Hill. This hill, swept by fire from both sides, was no man's land. Forges fell at midday and the Germans later took Regneville and advancing west up the steep slopes of Goose's Crest gained a footing in the Bois des Corbeaux. The French line now connected with the Meuse between Regneville and Cumieres, running through the Bois de Cumieres.

On March 7th most of the fighting was on Goose's Crest, a counter-attack by the French regaining most of the Bois de Corbeaux, on the east bank the Germans were more successful. An attack on Fresnes netted them several hundred prisoners and a successful assault in Bois d'Hardaumont gave them a position against Vaux.

On March 8th the French resisted at Bethincourt and made a slight gain in the Bois de Corbeaux, however, on the east bank the Germans drove their main attack up the ravine of Vaux. On the night of the 8th-9th the 3rd Branderburgers, a brigade of the 9th Reserve Infantry Division, and the 6th and 9th Posen Regiments attacked up the Vaux Ravine. They succeeded in gaining the village of Vaux but were driven out by the French at the point of the bayonet. They returned again and again but were repulsed. In the final effort they took the eastern edge of the village and advanced up the steep slopes to the left in the direction of the old Fort. Losing heavily on the slopes they were finally stayed by the wire about Fort Vaux.

On the night of the 14th the Germans made another attempt for Mort Homme, at that time the line on Goose's Crest made a salient with Bethincourt as the apex. Basing their attack on the Bois des Corbeaux, they attacked with 25,000 men in five successive waves, pushing the French behind the Bethincourt-Cumieres Road. The attack was checked by flanking artillery fire but the Germans gained possession of the spur, 265, and the ground between that point and the Bois des Corbeaux. On the 16th after a artillery preparation which began the previous day, the Germans launched an attack at 3:00 A. M., but were effectively stopped and driven back in disorder by French Artillery and machine gun fire. On the night of March 16th the attack was promptly switched to the other bank, and attempt being made to scale the heights to Fort Vaux. French searchlights were effective in spotting the attacking troops and the efforts were all repulsed.

The German alternate strokes on either flank were like the strokes of a woodman's axe whose blows sinking in slightly are deflected by an adamantine core. By the middle of March the Germans had not less than 30 divisions on the front between the Argonne and St. Mihiel. Eight divisions were on the left bank and 22 on the right. In all some half million Germans had been or were being engaged.

The next move of the Germans was an effort to take Mort Homme in the flank from the west. On the afternoon of March 20th a Bavarian Division supported with liquid fire gained a foothold in Bois d'Avocourt. Fresh troops were thrown in and in spite of the deadly work of the French batteries located at Esnes, they pushed forward to the eastern edge of the woods. On the 21st of March the Germans put a barrage down behind hill 304 and struck the Malancourt salient. They had built a redoubt in Bois d'Avocourt using this woods as a base for their assault on 304 which was now gravely threatened. On the 27th the German bombardment grew to such an intensity that it heralded another attack. On March 28th they attacked the French at Malancourt. Wave after wave were terribly shattered by the French heavies as they came down the slopes into Forges Glen. As in previous attacks Petain's merciless usury was costing the Germans heavily, however, they were approaching one of those vital positions which the French could not well afford to lose, Mort Homme. Consequently Petain made a determined counter-attack. The Germans were driven out of Bois d'Avocourt and the redoubt they had constructed there was captured. From the 29th to the 31st there was severe fighting at Malancourt which had become the apex of a badly pinched salient. The French finally withdrew to Haucourt and to the lower slopes of 304.

The slumbering volcano awakened again on the east bank the bloody Ravine of Vaux furnishing the stage for the terrible drama. The German attack came from both Bois d'Hardaumont and up the Ravine.

ing the Nethe had been won.

On October 6th the Belgians were back on the old line of fortifications, but these antiquated strongholds could scarcely check the big guns of the enemy and the doom of the city was sealed. The Government officials began making preparations for the evacuation. Former German craft lying in the harbor were dismantled and the oil tanks were set on fire. That night the seat of government was moved to Ostend. The inhabitants began fleeing the city in great disorder on the 7th when the impending bombardment was officially announced. The army had begun its withdrawal on the 6th, Von Beseler making no effort at the time to prevent the movement, although he could easily have bottled up the army in the city. On the 7th Von Beseler made an effort to cut off the Belgians, but it was too late. The Belgian flank guard encountered and desperate fighting took place along the Scheldt, the Germans being held along the Lakern Railway line.

The bombardment of Antwerp proper began on the 7th at midnight. Throughout the 8th there was fierce fighting on the line of inner forts while the troops were being rapidly evacuated. By this time nearly all the troops were clear of the city, but a staff slip up caused three battalions of a British Brigade to arrive at the river after the bridges were destroyed. They finally crossed by various methods but were finally forced into Holland or captured by the Germans.

On the tenth Admiral Von Shroeder, the new German Governor, made his triumphant entry into the deserted city.

The Germans pursued the retreating forces and effected the occupation of Ghent, Ostend, Zeebrug and Bruges and established lines of communication for future movements.

ALLIED AND GERMAN PLANS FOR THE FLANDERS CAMPAIGN.

The allied plan of operations at this time was as follows:

The Belgian Army covered by Rawlinson's Command would retire to a line on the Yser to protect the allied left flank. French reinforcements were to be given them. Lille and LaBassée were to be held at all costs. The British plan was to swing southeastward from the latter points and isolate Von Beseler's Army. In case this plan did not succeed an enveloping attack could be attempted from the line of the Lys against the right of the main German Army.

If the German flank extension could be overlapped the allies would be in a position favorable to deliver a telling blow. A German connection with the sea would prevent an attack on the enemy line of communications, but would also prevent a German enveloping attack.

Joffre's plans were divined by Falkenhayn and the latter was determined to force an opening through to the channel ports. He had the advantage in numerical superiority of men, artillery and cavalry, besides his cohorts were fresh and eager, representing the best of his entire army. Once the allied position was pierced several arteries for an advance to Paris would be opened up after the channel ports were occupied.

On October 8th Sir John French visited Marshal Foch, who was in command of all the French forces in the region, and they decided upon the following dispositions and plans:

The road between Bethune and Lille was fixed as a dividing line between the allied forces. If possible the advance would be eastward, the British right and the French left being directed on Lille. To the north the British 2nd Corps would take position on Maud'huy's left with cavalry protecting its own left pending the arrival of the 3rd Corps. The 1st Corps under Haig would upon its arrival take position on the north of the 3rd Corps with cavalry protecting the left flank. Rawlinson's forces were not included in these plans as they had not yet been placed under Marshal French's orders.

The allied front north of Soissons was now held as follows:

Castelnau was west of Roye and Lihons, while Maud'huy occupied the ground from the north end of the Somme plateau to Lens. A Territorian Division was placed in Lille as a preparatory measure in case the Tenth Army moved towards Valenciennes. Arras, a place of great importance, was in the center of the allied front. It was an important railway center and otherwise strategically valuable. On October 11th Smith-Dorrien's 2nd Corps had reached the line of the canal between Aire and Bethune. Conneau's cavalry connected his right with Maud'huy, while Gough's cavalry was operating on his left.

Maud'huy reached Arras on October 1st and began pushing towards Douai, but he was soon engaged with the German IV Army. He was forced back but aided by Castelnau he managed to hold the Germans in check until the 19th when the allied extension was complete. The situation had been very trying for him at times but his ingenuity always saved the day.

Sir John French planned an offensive against LaBassee and Lille by the 2nd Corps. Smith-Dorrien found his way blocked and on the 13th began a wheel movement in an effort to get on the enemy's flank. Fierce fighting ensued and on the seventeenth his troops had advanced as far as Aubers, capturing this village at the point of the bayonet. The 2nd Corps made no further forward progress as they were up against the IV Army, a part of the main wall of the German line.

On the 19th and 20th the Indian Corps arrived west of Bethune and was ordered to reinforce the 2nd Corps. The 3rd Corps under Pulteney had detrained at St. Omer on the night of the 11th. His plans were to get east of Armentieres astride the Lys and join up the Ypres and LaBassee sections of the front, taking his place on the left of the 2nd Corps. Allenby's cavalry was operating on his left and Conneau's cavalry on his right. He encountered the Germans at Metern. On the 15th he was ordered to take up a line along the Lys from Armentieres to Sailly which was accomplished by nightfall. Armentieres was entered on the following day, and on the 17th he pushed beyond it to the line Bois Grenier-La Gheir.

The Germans were found holding the line Radingham Perenchies to Frelinghem on the Lys, while the right bank below the point of the canal was held as far as Wervicq. On the 18th an effort was made to clear the right bank of the Lys but the attempt was unsuccessful. Both Smith-Dorrien and Pulteney realized that they were up against the main German position.

By the nineteenth the British front was extended to its farthest forward position between LeGheir and Radingham. This line constituted the right center of the front in the oncoming battle and resulted in an awkward and perilous position. Two divisions of Allenby's cavalry connected the 3rd Corps with the Infantry to the north. They performed valuable service in clearing the country of small detachments of the enemy. Their sector on the line lay between LeGheir and Hollebacke.

Rawlinson, who had been placed under French's orders, was in position on the 16th east of Ypres on the line Zandvoorde-Gheleuvelt-Zonnebeke. To the north the weary and broken Belgian Army lay on the line of the Yser between Dixmude and Nieuport.

On October 18th the four reserve corps constituting the main strength of the IV German Army were on the Roulers-Menim line with the 3rd Reserve corps on its right.

The Belgians were driven from the forest of Houthulst on the 16th, forcing them to fall back behind the Hazebrouck-Dixmude Railway thereby uncovering the British left. However, DeMitry's cavalry counter-attacked the following day and re-established the line.

Sir John French decided to put in effect a flanking movement on the 17th against Courtrai, pivoting on Menim. The following day he ordered Rawlinson to seize Menim and there await the arrival of the 1st British Corps, scheduled to arrive in two days. The task of advancing on a 201 mile front was a difficult one, for Rawlinson was cognizant of the newly arrived German Army. The advance started on the 19th, protected on the flanks by cavalry. The British cavalry on the left captured Ledeghem and Rollegem Cappelle, but they were then forced back on Poelcappelle and Zonnebeke. The French cavalry held Passchendaele, a mile to the front. The Infantry after fierce fighting got within three miles of Menim, but the German fire was so hot that the Division fell back and entrenched on an eight mile front east of Gheluvelt.

Haig's 1st Corps arrived at Hazebrouck on the 19th, and he was immediately ordered to advance to Thourout through Ypres with the intention of later moving on Bruges and Ghent.

Marshal French had been in a quandary as to what disposition to make of Haig's Corps, as they were so badly needed along the front. He decided that the line was weakest in the north where it was so thinly held by the Belgians and French. Hence the above move.

French instructed Haig to use his own initiative should an unforeseen situation develop, and one was not long in appearing. A stumbling block was encountered in front of Ypres, and there he remained—forming the left wing of the British Army in the Battle of Ypres.

GENERAL SITUATION.

Let us now examine the allied positions on the eve of the great struggle. Maud'huy's Tenth Army was on the line Albert-Arras-Lens to slightly west of the Vermelles Chateau, south of the Bethune-LeBassee Railway. The Second Corps under Smith-Dorrien held the line Givenchy-Herlies-Aubers-Laventie. Conneau's cavalry Corps supported his left. Pulteney's 3rd Corps was astride of the Lys. To the north Allenby's Cavalry Corps lay on the general line Messines-Zandvoorde. The 7th Division under Rawlinson occupied a line east of the Gheluvelt Cross-roads, forming the point of the Ypres salient. Byng's cavalry was on Rawlinson's left between Poelcappelle and Zonnebecke. Haig's 1st Corps was coming in position between Zonnebecke and Bixschoote. Immediately to the North was the new French VIII Army, formed from independent units and under command of D'Urbal. The remaining front to the sea was held by the Belgians with only six divisions—approximately 50,000 men. However, the allied fleets were lying off the coast ready to give aid in case of a German attack near the coast. The line of battle stretched almost a hundred miles. The allied strength numbered eight and one-half army corps, and opposed to them were eleven German corps, fresh, eager, well trained and with a preponderance of cavalry and artillery.

For the most part the manœuvre ground lay in the Plain of the Scheldt. The heights about Albert and Arras and a few low ridges dotting the front were the few exceptions. Rivers and canals crisscrossed the low country, and all the area near the coast could be easily inundated.

The logical points for a German attack were Arras, LeBassee, Ypres and Nieuport. The importance of Arras has already been mentioned. LaBassee offered a straight route to Calais and Boulogne as did Ypres, while the fall of Nieuport would lay Dunkirk and Calais open to German occupation, thereby cutting the line of the British supply and affording a base for an advance towards the south.

Falkenhayn realized the importance of an offensive against LaBassee and Arras. They also offered the shortest and best lines of communication but he still held to the hope of turning the allied left flank—so Nieuport was selected as the first point of attack.

BATTLE OF THE YSER.

The Belgians under King Albert took a determined stand on the line of the Yser in a low marsh country below the sea level and ill fitted for troops and artillery movements. They had been reinforced by the French and could only hold out a little more than a division as a reserve.

On October 18th Von Beseler endeavored to seize the Nieuport Bridge, and the attack would have been successful but for the sudden surprise enfilade fire on the exposed German flank from the monitors lying close in to the channel shore. The enemy soon realized that if an attack was successful it would have to be launched out of range of the warships. Consequently the Duke of Wurtemberg directed his move towards Dixmude. Joffre tried to stave this off by launching a counter-offensive under Grosetti on the extreme left. The French pushed as far as Wastende but were hurriedly recalled to reinforce the Belgian center, so that the effort went for naught.

The Germans fighting desperately forced a passage of the Yser on October 22nd in the Tervate loop and at the Schoorbakke bridgehead. The day following they crossed at St. Georges and fought their way almost to Tamscapeelle when a Belgian counter-attack drove them back.

A desperate attempt had been made to force Dixmude. On the night of the 24th no less than fourteen attacks had been made on the city, but the gallant French marines had repulsed the enemy with heavy losses.

On the 24th a crossing at Schoorbakke by the Pervyse road bridge was effected and a foothold was gained at a point south of the loop. The following day a crossing in force was made and the Yser was lost.

The Germans were unable to rapidly follow up their success owing to the miry condition of the ground leading to the dikes behind which the Belgians and French were entrenched. By vastly superior numbers the Germans advanced foot by foot suffering heavy losses, gradually forcing the Belgians back almost to the Dixmude-Nieuport Railway, one of the highest spots of ground in that low country. At this time the Germans were confident of success. The Emperor had arrived to witness the final triumph. However, the High Command had not reckoned with the destructive inundation let loose on the 28th—the trump card in King Albert's hand.

On October 30 Duke Albrecht, determined to gain the railway line before the Belgians could let loose more water, launched a powerful attack seizing Pervyès and Rams Coppelle on the line of the objective. But the Belgians and French were not to be denied. Characteristic of their undying spirit in an hour of disaster, they launched a furious counter-attack on the 31st driving the Germans back into the lagoons, where they were caught in the flood that had been let loose. The Germans drowned in masses while they were being shelled from the allied positions at Nieuport and Rams Coppelle. Instead of witnessing a glorious victory the German Emperor was forced to look upon the destruction of a large part of his most favored corps.

The Germans evacuated the west bank of the Yser, checked the Belgian counter-offensive in the north, and on November 7th retook Lombartzyde. A concentrated effort was now launched at Dixmude, but the enemy was successfully held off until November 10th—when the fall of the town was no longer vital to the main issue.

ASSAULTS ON LA BASSEE AND NEUVE CHAPPELLE.

Smith-Dorrien's 2nd Corps on October 19th held a line running east of Givency, keeping north of the LaBasse-Lille road to Herlies, then west of Aubers, connecting with Conneau's cavalry near the LaBasse-Armentieres highway. He was opposed by the Crown Prince of Bavaria's command, occupying the line of the LaBasse-Lille canal and all the country to the south and east. Smith-Dorrien, working in conjunction with the French Tenth Army, had aimed to strike the line near Fownes in an effort to isolate the LaBasse position. But instead of carrying on an offensive he had all he could do to hold his own position after the month of October. The German main attack lasted from October 22nd to November 2nd, when they turned on Ypres. On the first day Violannes was lost and Smith-Dorrien withdrew to the line Givency-Neuve Chappelle-Fauquissort, south of Lavintie. Here the Germans attacked again on the 24th, but the British artillery held up their advance. The 2nd Corps was in an exhausted condition due to ten days' continuous fighting, and the Lahore Division of India came to their relief in the manner of time.

Neuve-Chappelle was occupied by the Germans on October 27th, but the following day the British and Indians counter-attacked. A desperate conflict ensued and line moved back and forth as counter-attack met counter-attack. The loss was severe on both sides.

Toward the end of the month the remaining Indian Division joined and the "Indian Corps" was formed under General Willcox. The 2nd Corps was withdrawn for a much needed rest. The attack against the sector continued for the next twenty days and the Indians acquitted themselves in a praiseworthy. The allies were, however, gradually forced back to the line Givency-Festubert-Estaires. The German attack on Givency November 7th was repulsed and an artillery duel then ensued for two weeks, giving the infantry a chance to repair and add to their trench system.

BATTLE OF ARRAS.

The fighting around Arras had been waging on Maud'huy's left center. The Germans were endeavoring to extend their lines to Bethune, attack the British right rear and tie them up against the channel. Rupprecht changed his plans and centered his main attack on Arras in an endeavor to split the allied lines. The German High Command would not give him reinforcements, consequently his attack from the 20th to the 26th of October was not strong enough to drive the French from their positions. The city, however, was practically destroyed by artillery fire. The French counter-attacks were furious in the extreme. The circle around the city was slowly widened until the enemy line lay in a loop about Arras. Prince Rupprecht's scheme had dismally failed, and Von Falkenhayn had overlooked one of his best chances to split the allied front.

THE FIRST BATTLE OF YPRES.

The scene of action had now changed to the Ypres sector. Haig's 1st Corps had on October 20th advanced to a line extending from Bixschoote to the cross roads one and one-half miles n. w. of Zonnebeke. He was supported on the left by Bidon's Territorials and Mitry's cavalry. To his right was Rawlinson's 4th Corps composed of Byng's cavalry and the 7th Division. The cavalry patrolled to the front of the flanks a

good distance, but the French were driven from Poelcappelle that afternoon while Byng fell back on Langemarck.

On the 21st the lines extended from north-east of Ypres to Bixschoote and Langemarch, thence to Zonnebeke and Gheluvelt cross roads. Allenby was in front of Messines and the 3rd Corps' line extended ten miles through Armentieres. That day Haig pushed forward against the Germans until the middle of the afternoon when he learned that his flanks were in danger. He, therefore, halted on the line Bixschoote-Langemarck-St. Julien. Here the British offensive stopped, for Haig realized that Thorout and Bruges could never be reached.

The left wing of the German IV Army had been thrown against Rawlinson's front on the 21st and part of his command was enfiladed in the German movement against Zonnebeke. Consequently Haig's right had difficulty in linking up with Rawlinson's left at the Ypres-Roulers Railway. This was an important danger point and had to be safeguarded at all costs. At Belleclair the enemy temporarily pierced the British lines. At the same time he was assaulting Haig's right in a fierce manner, but help came and the ground was held. By that evening Byng's Cavalry had connected with Gough between Hollebeke and Wytchaete.

Sir John French feared for the safety of the salient and held a consultation in Ypres on the night of the 23rd with Haig, Rawlinson, Mitry and Bidon. Nothing could be done, however, but hold to the thirty-mile front until reinforcements could arrive. The congestion in Ypres was relieved by removing the French Territorials to the sector left of Haig's Corps.

Haig threw the Germans back from his ramparts on the 22nd inflicting great losses. Rawlinson's left had suffered a slight set back, while the thin line of Byng's Cavalry manning the trenches on his right heroically held their ground. The sector further south held by Pulteney had likewise seen a good deal of action. The Germans took Le Gheir on the 20th, but they were driven out by a counter-attack on the following day. The enemy again attempted to pierce the line at the Lys on the 22nd but they were unsuccessful.

The failure of the German 23rd Reserve Corps convinced Falkenhayn that he could not break through that part of the line held by Pulteney, so he formed a new corps under Von Fabeck to operate between his IV and VI Armies. Its number alone almost equaled the entire strength of the British.

A sharp salient existed in Rawlinson's front of the 23rd due to reverses by one side of his line, and there was a bad dent in Haig's sector. The latter was straightened out that day and a German attack near Langemarck was beaten off. The enemy also made a vigorous drive on Rawlinson's front but the British managed to hold their ground. Luckily the French Ninth Corps and an extra division arrived that evening to relieve the hard pressed Seventh.

Troop adjustments were made to afford relief to as many of the battle-fagged troops as possible. The newly arrived French advanced on the 24th and won quite a bit of ground. However, that same day the point of the salient gave way at Reutel and the Germans entered Polygon Woods. The French failed, however, to press the attack at this point. The French left again advanced on the 25th and this temporarily relieved the pressure in the center of the line. At dawn on the 26th the Germans renewed an enveloping attack against Kruseik begun the night before and all morning the battle raged fiercely. The day was saved for the allies by a brilliant counter-attack launched by Byng's cavalry from the trenches at Zandvoorde. Pulteney's front had been continually under heavy pressure and to relieve this he shortened his line south of the Lys.

On the 27th the front was held as follows: The 87th French Territorials were on the extreme left north of Bixschoote. Demitry's cavalry and part of the 9th and 16th French Corps were between Bixschoote and Zonnebeke. The 1st Corps from Zonnebeke to Gheluvelt cross roads. Byng's Cavalry held the line from Zandvoorde to Klein Zillebeke. Allenby's Corps lay from Byng's right to east of Messines. Pulteney's 3rd Corps held the sector to the south.

On October 27th French had relieved Rawlinson's Corps from the trenches and attached them to the 1st Corps. Rawlinson was then sent to England to supervise the formation of his new division.

Falkenhayn launched his great offensive against Ypres on October 29th. The first wave broke against the Gheluvelt Cross Roads. Part of Haig's command were driven from the trenches and the battle swayed to

and fro. That night the British were again in possession of Kruseik and the first line reestablished. Byng's cavalry suffered a fierce attack and the Germans also moved against LeGheir on Pulteney's front. The following morning at dawn the Duke of Wurtemberg moved against Bixschoote and Langemarck. The left of the 27th Reserve Corps was directed on Gheluvelt, while Von Fabeck attacked Messines Ridge along the Menin Road. Wurtemberg captured Bixschoote but could not drive the French from Langemarck. Von Fabeck blew the British trenches to pieces with his artillery forcing Byng's Corps back. Allenby sent supports and the line held until relieved that night by a fresh brigade. It was decided to strengthen the gaps and hold the salient from the Cross Roads to the angle of the canal south of Klein Zillebeke at all costs, for if this fell Ypres was lost.

Further south the 2nd Cavalry Division had been forced back on St. Eloi. The First Division sent help but were themselves soon under the heavy fire from the enemy howitzers.

Pulteney's line was pierced but a spirited counter-attack saved the situation. North of Zandvoorde the line suffered severely and the Allied front was retired to just east of Gheluvelt.

The Germans launched an attack in great force against Gheluvelt on the 31st, throwing the line back between Hooge and Feldback. This in turn exposed the flanks of both divisions on the right and left. The French 9th Corps on the right saved the situation for the British. Mussy had shown great fortitude and initiative in keeping his line intact. At one time he gathered a detachment of non-descript non-combatants, threw them into a breach and stemmed the tide.

Allenby's long line was menaced time and time again and the only assistance he could get was two exhausted Indian Battalions and two depleted brigades sent by Byng. In this condition Allenby had to withstand the attack of two fresh German Corps. Hullebeke and Messines ridge were lost and Allenby's position rendered desperate.

By two o'clock Saturday the 31st the situation was critical for the allies. The line had been forced back to the Klein Zillebecke ridge. The French were barely holding out and any minute was likely to see the end of Allenby's defense. The Germans were pouring through the Gheluvelt gap and they appeared to be the victors.

Haig foresaw the fall of Ypres and ordered a retirement to the west of Hooge, although he knew that this stand could not be for long. However, a near miracle happened the German advance was stopped when all appeared to be lost. General Fitz Clarence stumbled across the 2nd Worcester Battalion intact and with them he advanced to the front between Gheluvelt and the intrenched position of the South Wales Borderers who were holding their ground. The combined enfilade fire of these two battalions surprised the advancing Germans and forced them to dig in.

The 1st Division was immediately reformed and the 7th also got back to its place in the line. The 6th Cavalry Brigade filled the gap between the two commands and the German advance was halted.

Reinforcements reached the British on the morning of the 1st. Fierce artillery fire continued throughout the day. An attack was made on Bulfin's front but it was beaten back. However, the Germans succeeded in breaking through on Allenby's left and captured Wyttschaete, forcing back the British lines to the west of Messines and Wyttschaete.

Artillery duels ensued during the next few days. Troops readjustments were made on November 6th and reinforcements moved in on the side of the 7th Division.

Falkenhayn decided to strengthen Fabeck's group with men and guns, and an additional group composed of the 15th Corps and a picked corps of Prussian Guard was formed under Lensigne.

On Friday November 6th the Klein Zillebeke position was assaulted. That afternoon the French on the right were driven back leaving Conneau's 4th Brigade isolated. Kavanaugh's Life Guards helped the French retake their trenches, but the Germans attack was being pressed in such force that the French were forced back upon the Household Cavalry who had been deployed across the road to stem the advance. Major Hugh Downay's gallant charge stopped the advance, but he lost his life in the attempt.

Nothing but desultory shelling happened on the 8th, 9th and 10th, but it was the lull before the storm. The German Emperor made his supreme effort Wednesday, the 11th. The Prussian Guards, the flower of

the German Army attacked on both sides of the main road in parade formation. Despite the terrific slaughter they pierced the British front in several places, but they were finally driven back with great losses. The failure of the Guard ended the fierce German onslaught against Ypres.

On the left of the salient the enemy tried his new Corps against the Zonnebeke-Bixschoote line but failed, and by November 15th the attack was ebbing.

On November 12th the Germans had assaulted the Klein Zillebeke positions and all along the line to Malines, but little or no success was gained. On the 16th another attempt against the southern reentrant failed. Still another try was made on the 17th but was repulsed. The Germans continued to shell Ypres until the town was in ruins. Fresh French troops soon arrived and the battered British battalions were relieved after holding the trenches four trying weeks. By November 21st the Battle of Ypres was at an end.

The allied victory at Ypres had truly been a magnificent one. At all points the line had held against great odds. The losses on both sides were extremely heavy due to the determined attack of the enemy and dogged heroic resistance by the defenders. The allies had prevented the Germans from reaching their objective and for this reason the First Battle of Ypres will always be ranked as one of the greatest victories of the war.

The attack all along the allied front had subsided by November 20th. The British army had been drawn into the reserve and two French Armies held the line from Albert to the Sea. Several of the German corps were withdrawn and dispatched to the eastern front.

THE WINTER STALEMATE.

Sir John French began making plans of an offensive along the coast towards Zeebrugge, but Joffre disapproved the proposition, as it was his idea to launch an offensive against the German front south of Rheims.

The winter routine then began. Frequent raids and local attacks were made by either side. The allies held the general line Nieuport-Ypres-Messines-Armentieres-Neuve-Chappelle-Givenchy-Arras-Albert-Noyon-Soissons-Rheims-Varennes-Verdun-St. Mihiel-Point a Mousson-Luneville--St. Die-Cal du Bonhomme—to Belfort—approximately 500 miles in length.

Neither side was in position to carry on a prolonged offensive had the weather permitted. The cold and rain made trench life very disagreeable. Each side was busy recuperating losses suffered and the manufacture of heavy guns for trench warfare was pushed with all haste. A few local engagements occurred worthy of mention. The British made attacks on Wytshaete Ridge and Givenchy. Maud'huy thrust once or twice against the enemy at Vermelles. Further to the south intermittent engagements had been going on countless raids and small attacks resulting in no appreciable gain for either side. For the most part artillery duels were the order of the day, while the repair and improvement of trenches went steadily onward in an effort to make them drier and more livable.

CRITICISMS.

Sir John French was hampered in many of his plans and policies by the constant interference of the Home Office. This often led to serious misunderstandings and non-cooperation between Lord Kitchener and the Commander of the British Forces. On several occasions the Secretary for War wrote French Headquarters with reference to allied policies without giving French the information necessary for him to keep in touch with the situation. Marshal French was not cognizant of the expeditionary force for the relief of the Belgians until it was completed. The troops were not under his authority at all until just a few days previous to Rawlinson's arrival on the Flanders front.

Marshal Joffre was also hampered by similar interference during the Marne campaign, but he managed to put a stop to it and thereafter could carry his policies through.

It has never been understood why the German High Command did not at once begin an offensive against the channel ports after their retreat from the Marne. They reached the entrenched position north of the Aisne on September 12th and for six days failed to display any definite plan of action. Their retreat

had been conducted in an orderly manner and there was apparently no reason why they could not have at once assumed another offensive. They finally woke up to the fact that the allies had begun their flank extension towards the north and events proved that they were then too late to outdistance them. The only thing that can be attributed to this lack of initiative was the fact that the German were so overconfident that the Marne setback had for the moment paralyzed them. They had counted so on their simple plan being carried out successfully that they had failed to have another campaign laid out.

Had the Germans pressed their advantage at St. Mihiel as furious as they attacked Rheims, Sarrail's thin line could not have held out.

Joffre committed a tactical error in trying to turn the entrenched German right flank west of Soissons with an inferior force. His decision to extend his left flank to the sea proved a wise one.

The German Command wasted too much time before Antwerp. They failed also to occupy Ghent, Bruges and the North Sea ports which could have been easily accomplished. Von Beseler also failed to act in time to cut off the Belgian retreat from Antwerp although this could have been effected very easily.

In the Flanders campaign Von Falkenhayn failed to take into consideration the nature of the country around Nieuport and Dixmude. He was obsessed with the idea of turning the allied flank. Had he saved his troops from the slaughter on the Yser and thrown his strength against the thinly held line south of Ypres, or had he given Prince Rupprecht sufficient aid at Arras the final result would probably have been different.

There were only a very few mistakes to be found in the strategy of the allied commanders. They had to hold a long line against great odds. The fact that they did not hold out reserves was not their fault for every available man had to be used in the lines. The allied mission was to hold their ground at all costs, and this they succeeded in doing.

The Western Front

(August-September 1914)

The German Offensive against France

(This map is diagrammatic only)

Arrows indicate wide sweep of the Schlieffen enveloping movement against the Allied left, the attack on the center and the subsequent withdrawal to the Aisne

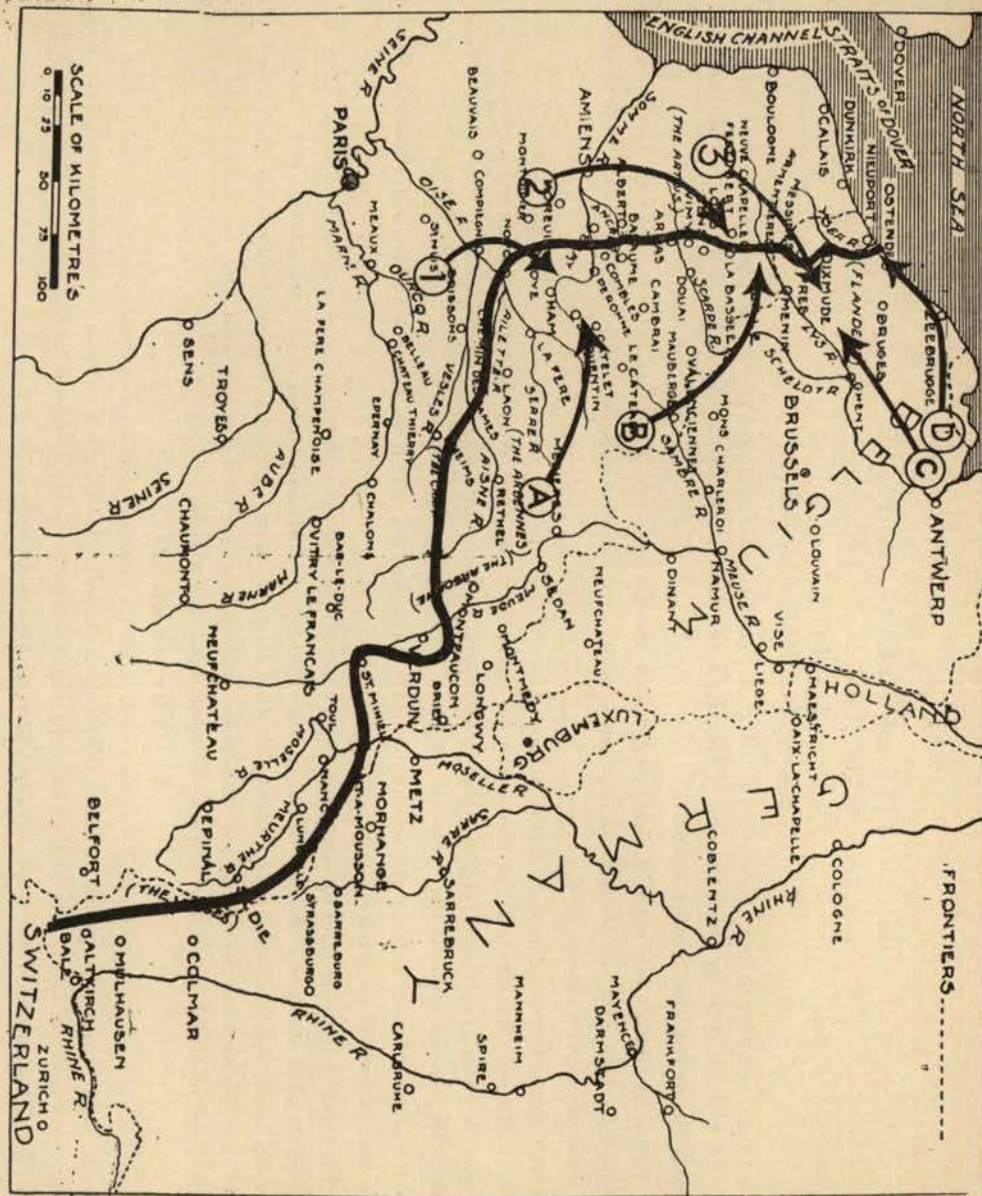
○ → Move of Von Kluck's army to the south east.

— Allied armies in position Sept. 5, 1914, before The Battle of the Marne, (Sept 6 to 10, 1914).

--- German armies in position Sept 5, 1914, before The Battle of the Marne, (Sept 6 to 10, 1914).

xxxxx Line of the Aisne to which the German armies withdrew after the Battle of the Marne.

A Cavalry.



THE BATTLE OF NEUVE-CHAPPELLE
MARCH 10, 11, 12, 1915.

—BY—

Capt. Robert P. Bell, Infantry.

A German counter-attack pushed the British just to the east of Neuve-Chappelle, so that on October 27th 1914 the village was in their hands. The British then took up a line just to the west of the village and remained there for the winter months.

The German lines were west of the village and the British front was as follows:—From Givenchy, past Festubert, just to the east of Richebourg, barely west of Neuve-Chappelle and then to the north-east by Faquissart east of Amentieres.

Neuve Chappelle was located at the junction of severay roads, one of the principal ones going north just past the village to Estairs and to the south of LaBassee; another road left this and led to Fleurbsix and Armentieres. A third road intercepted these, forming a diamond shaped figure, and in this the village of Neuve-Chappelle was located in the western angle.

The houses were set well apart in the western part, having gardens and orchards, but those to the east were small and crowded together.

At the most northern part of the diamond shaped figure a triangle was formed by roads and filled with small plots and hedges. Between the houses and the LaBassee road were meadows and farm lands, and in this meadow were the German trenches, the British being about a hundred yards to the west. The barbed wire entanglements were on an immense scale between the British and the Germans, and on the latter side several of the houses had been converted into a fortress.

THE TERRAIN.

A low, but clearly marked ridge began from a point about two miles south-west of Lille and, in a single plateau, went from that point to the village of Fournes. At Fournes it was divided in two, one branch going in the direction of Illes and LaBassee, and followning the road between those places. The other branch formed the line, Fournes, Haut Pommereau Aubers and Fromelles.

The top of this ridge was a low but commanding plateau, which if in the hands of the British would dominate the approaches to Lille, Roubaix, Tourcoing and to the cities located in the plain of the Scheldt river.

The Des Layes river was small and passed between the village of Neuve Chappelle and the ridge, crossing the La Bassee road at a point to the south known to the British as Port Author. The stream flowed toward the north-east and was crossed by three roads, from Armentieres road: these all led to the ridge.

On the line of the Des Layes were the German second line defenses with strong positions at the bridge heads. Another strong position was at Pietre Mill, a mile north-east of the village.

The Bois du Biez was south-east of Neuve Chappelle and in the same direction from the Des Layes. This was a fair sized wood, though it consisted mainly of the smallies variety of trees.

The breaking of spring (1915) was drying up the water-soaked meadows of the Flanders battlefields.

PLAN OF ATTACK OF THE BRITISH.

Field Marshal Sir John French, decided about the end of February to make an aggressive movement against the Germans. The section chosen for the attack was Neuve Chappelle, north-west of LaBassee at which place there was a slight salient into the British lines. The need of this offensive movement was that of installing an offensive spirit in his comamnd, and to test a new theory of attack.

This theory was, that if an immense amount of artillery could be assembled, and the barbed wire entanglements destroyed by concentrated fire on a definite section of the front, then having accomplished this, to lengthen the range and place a barrage of fire between the enemy and his supporting troops, the infantry could advance without serious resistance.

Sir John French had collected a limited reserve of ammunition and had assembled in the vicinity of Neuve Chappelle, every gun that could be spared from the whole British front for the trial of the new

method of artillery "preparation". This had been tried by the French in Champagne, and it seemed to both him and Marshal Joffre the right tactics to break down the German defenses. The British staff and troops needed practice in this kind of warfare which had the promise of becoming a sound method. A decisive blow was not expected, and the objective was the capture of Neuve Chappelle, and to push as far forward as possible to the east of the village.

The success of the plan demanded absolute secrecy, and surprise was necessary. The British here had the advantage, as they had supremacy of the air, and through this found that Neuve Chappelle was very weakly held.

On March 8th, Sir John French assembled his Corps commanders and gave them his plan of attack. It was to be made by the First Army. The Fourth Army Corps was to operate on the northern part of the sector and the Indian Corps on the southern part. An attack on each flank was to be made at the same time as the main attack on Neuve Chappelle, with the First Corps attacking from Givenchy and the Second Army just south of Armentieres.

The Second Division of Cavalry was to be held in reserve, in case a break-through was effected.

BRITISH TROOPS.

The Allied front in Flanders during the winter months had changed very little, so that, in March it was quite the same as the line held in November.

The British forces then consisted of two armies, the First Army under the command of Sir Douglas Haig, comprising of the First, Fourth and Indian Corps, and holding the line from LaBassee to Estairs. The Second Army was commanded by General Sir Horace Smith-Dorrien, having the line from Estairs to the Ypres salient. It contained the Second, Third and Fifth Corps.

The strength of the British was about 48 Batalions or about 45,000 men.

GERMAN TROOPS.

The German trenches were held by troops of the Seventh Corps, at the time of the attack numbering only a few battalions. The reserves were either Saxons of Bavarians and all were under the command of Prince Ruppreche of Bavaria.

PREPARATION FOR THE ATTACK, BY AIR.

The British aviators were ordered to hinder the reinforcements of the Germans, who would come from the towns to the north. This was accomplished by the attacks on the junctions at the following cities: Menin, Don, Douai and Courtrai.

BRITISH CONCENTRATION.

On March 8th and 9th the British artillery assembled in a small area to the west of Neuve Chappelle. The guns were of many types, having among them the 60-pounder, coast defense gun and the new 15-inch howitzer. The heavy gun position was in the neighborhood of LaCoultre and Vielle Chappelle and the main position for the field artillery was west of Richebourg.

During the night of the 9th the troops assembled, filling every trench and ditch, and all were anxious for the long delayed order to advance.

THE ARTILLERY BOMBARDMENT.

March 10th Dawn. Dawn of March 10 showed the weather to be misty, with low clouds in the sky and with the coming of day the Germans seemed to sense an unusual procedure in the British lines. The Boom of great guns indicated that the British artillery was raging. This finished, silence ensued and the line along which the attack was to be made—from Armentieres to Givenchy—waited.

March 10th 7:30 A. M. At 7:30 A. M. to the second the tension was broken by a terrific sound and within a few minutes three hundred guns were firing their maximum, with their attending gunners striving to shoot as many rounds as they possibly could. The British troops in their trenches, crouching under cover, were stupified by the awful concussions. The firing was so incessant that it seemed as if a supernatural machine gun was in action and the earth shook as if pounded by an immense sledge hammer. Shells of all caliber screeched through the air, and those with low trajectory passed quite closed to the heads of the waiting troops.

The shells that hit the German positions, tore up the earth, gouged up the stakes of the barbed wire entanglements and threw them high into the air. Mushrooms of red earth spouted from the earth as the shells struck. The German parapets, which they had been building for months were wiped away or distorted beyond recognition. The bodies of German soldiers were blown to fragments and hurled into the air, which was hazy with the greenish fumes of the lyddite. This was the preparation, which numbered four shells to the yard, and at the end the German trenches were obliterated and only the pock-marked earth and the mangled bodies of the dead Germans remained. This the most destructive, withering and Concentrated fire the war had seen.

March 10th At 8:05 A. M. in accordance to schedules, the range of the British guns was lengthened
8:05 A.M. and the destruction of the village began.

ADVANCE OF THE BRITISH INFANTRY.

Then whistles blew along the line for the time had come for the Infantry to advance.

Due west of Neuve Chappelle there were two brigades of the 8th Division the 23rd being on the left of the sector and the 25th on the right.

To their south was the Meerhut Division, occupying a sector a mile and a half long, having the Garhwal Brigade on the left and the Dehra Brigade on the right. These Brigades were supported by the Lahore Division.

The 23rd Brigade attacked against the north-east corner of the village of Neuve Chapelle, the 25th against the village proper while the attack against the south-west corner was launched by the Garhwal Brigade and the Dehra Dun Brigade.

The only enemy left were for the most part dazed and dying Germans, though there was much sniping and some officers who had remained alone in a trench were operating a machine-gun.

The 2nd Royal Berkshires and the 2nd Lincolns assaulted the first line trenches, and opening out, were passed through by the 2nd Rifle Brigade and the 1st Irish Rifles, who were to take the village.

HELD UP BY UNBROKEN WIRE ENTANGLEMENTS.

The 23rd Brigade advanced, having the 2nd Devons, the 2nd West Yorkshires and the 2nd Middlesex Regiment. The artillery had failed to destroy the trenches and barbed wire entanglements in this section—in the northern corner of Neuve Chappelle—and here, where there is a slight hollow the Scottish Rifles met with strong resistance from German machine guns. However their effort was determined and they attempted to break through the wire with their bare hands, but they had to fall back and lay in the open until one company made its way forward through a gap and broke down the resistance. This was company B.

The 2nd Middlesex Regiment on the right also ran up against unbroken wire and were under heavy fire from machine-guns. A message was sent back to the artillery and there the men waited until the artillery had destroyed the obstacles.

The Garhwal Brigade in their initial attack were successful in carrying the first line trenches.

March 10th The British artillery "preparation" continued until 8:35 A. M. on the village and at that
8:35 A. M. time again lifted and put a curtain of fire between Neuve Chappelle and the German sup-
ports. Then two of the Battalions of the 25th Brigade entered the village and soon every German was
either dead or captured.

What remained of the village presented a gruesome sight. The ground was yellow with lyddite, and the dead, buried in the churchyard, were torn from their graves.

The only things that remained were two great crucifixes, one in the churchyard and the other against the chateau.

The 3rd Gurkhas met the 2nd Rifle Brigade at the southern end of Neuve Chappelle and then continued to the Bois du Biet.

The advance of the 25th Brigade had turned the flank of the German line to the north of the village in front of the 23rd Brigade, and this movement, and the powerful artillery support that was given, permitted the 23rd Brigade to get forward between 10:00 and 11:00 A. M. so that, at that hour the Brigade had reach-

ed the line of the orchard north-east of Neuve Chappelle, and there met the 24th Brigade who had attacked from the Neuve Chappelle-Armentieres road on their left. This Brigade had the 1st Worcesters, 2nd East Lancashires, the 1st Sherwood Foresters and the 2nd Northamptons.

March 10th At 11:00 A. M. Neuve Chappelle and the roads leading to the northward and to the south-
11:00 A M. west from the eastern side of the village were in the hands of the British. During the advance the German artillery had kept up a heavy fire, which nearly equaled that of the British in volume and the telephone lines were continually cut.

March 10th At mid-day the British artillery still had Neuve Chappelle surrounded by a curtain of
Noon. Shrapnel fire, so that German counter attacks were not possible, and the British Infantry had time to secure the ground they had won.

The Germans seemed to be stunned from the sudden attack, for their artillery fire had died down to such an extent that the units on the right of the British line formed for further attack, in the open and were not molested.

The units of the British were badly mixed and it was necessary to straighten them out. The 25th Brigade had been defected in coming to the assistance of the 23rd Brigade. It was necessary to bring in reserves to take the place of the regiment that had suffered reserve losses.

There was an unusually long delay, that can not be accounted for, in bringing the reserves of the Fourth Corps into action. Sir John French in his dispatch of April, 1915, states as follows:

"I am of the opinion that this delay would not have occurred had the clearly expressed orders of the General Officer commanding the First Army been more carefully observed. The difficulties above enumerated might have been overcome at an earlier period if the General Officer Commanding the Fourth Corps had been able to bring his reserves more speedily into action. As it was further advance did not commence before 3:30 P. M."

March 10th At 3:30 P. M. there was formed on the left of the 24th Brigade, three brigades of the 7th
3:30 P. M. Division—the 21st, 20th and 22nd. The left at that hour swung toward the south moving toward Aubers Via Pietre. The troops at the right—the Gahrwal and Dehra Brigades of the Indian Corps—attacked toward the ridge.

The 39th Gannwallis and the 2nd Leicesters, both of the Gahrwal Brigade, met with serious resistance at a position unbroken by the artillery fire, but it was taken with desperate losses. It established on this new line. The Dehra Dun Brigade had for support, the Fullundur Brigade of the Lahore Division, and attacked on the right of the Indian line but were stopped by a German outpost at the bridge.

This immediately assumed considerable importance and artillery, as far as circumstances would permit was directed on the spot.

The 1st Brigade of the 1st Corps were brought up for support but they arrived too late in the day to be of use.

In the advance of the 25th Brigade, another fortified bridge across the Des Layes was encountered, which stopped its progress, while the 24th Brigade on the left was halted by the fire from machine guns from the cross-roads northwest of the village of Pietre. The elements of the 7th Division were halted on the line of the Des Layes river and the strong point at Pietre Mill. The 21st Brigade at first made good progress toward Pietre Mill, but were stopped by machine guns in houses forming another strong point. The Germans very speedily assembled at these three strong points and the casualties in the British ranks were terrific. In the neighborhood of the Des Layes and the Pietre Mill were strong positions that had not been damaged by the British artillery.

Night As darkness fell the British dug in on the ground they had won during the day. During
March 10-11 the day of the 10th the British had taken the German Positions around Neuve Chappelle. they had taken the immense mesh of trenches and obstructions and had pushed forward and consolidated their line about 1,200 yards into the German position, on a front of 4,000 yards, or about two and one-half miles.

DESPERATE FIGHTING OF MARCH 11th and 12th.

March 11th. The morning of March 11th was very misty and this condition lasted the entire day. The operation of aircraft and the observation of artillery were therefore seriously handicapped. The Germans were thus able to pull themselves together: their line was reinforced and they prepared for further attack.

The Fourth Corps and the Indian Corps renewed the attack but were held up along the line by fortified houses and strong points. Efforts were made to destroy these places, but as the telephone communications had been destroyed and due to the poor weather, proper observation was impossible and the fire was not effective. The British troops made some gains, and occupied several of the houses, but their own artillery fire on them could not be stopped and they were necessarily withdrawn.

At various points the Germans made counter-attacks as they had now fully recovered from the surprise. Small unimportant gains were made by the British, and their artillery was almost silent.

The British could not make any progress against the strong point at the Pietre mill in the northern part of their sector, and the troops in the south facing the Bois du Bies, without proper artillery support and this was not to be had. The German artillery however was murderous and the British had many casualties in their ranks.

Night of March 11-12 The Germans on the night of March 11-12 heavily reinforced their line with Bavarian and Sax-Morning Bies, in dense formation of waves, and British artillery which had previously registered on March 12th. this cality, slaughtered them as they emerged. In other parts of the line the British waited until they were within about fifty yards and then commenced firing with deadly and accurate fire, so that they dropped like grass before a sythe.

The 7th Division on the left of the line made vain efforts to carry the Pietre strong point all day long, while the troops to the south were resisted equally well at the bridges over the Des Layes and the German second line trenches in the Bois du Biez.

The 20th Brigade, consisting of the 1st Grenadiers, the 2nd Scottish and the 6th Gordons, took position after position in the vicinity of Pietre Mill, but they could not keep them.

March 12th 4:00 P. M. The British 6th Cavalry came up in support at 4:00 P. M. but the German positions were still intact and they withdrew.

During the day the loses in the British ranks were very heavy, but they did not compare with those of the Germans. In this conflict the loses in such a short time and space are placed among the greatest of the war, especially where the dense formations of Germans were caught in the converging fire of machine guns and rifles.

THE LINE STABILIZED.

Nightfall March 12th. By nightfall of the 12th of March it was evident that the troops of both sides had come to a standstill. The British could not get through to the ridge, nor could the Germans dislodge the British from Neuve Chappelle.

Sir John French wrote,

“As most of the objects for which the operation had been undertaken had been attained, and as there were reasons why I considered it inadvisable to continue the attack at that time, I directed Sir Douglas Haig on the night of the 12th to hold and consolidate the ground which had been gained by the Fourth and Indian Corps, and to suspend further operations for the present.”

LOSSES OF BOTH SIDES.

During the battle of Neuve Chappelle, March 10-11, 12, 1915, the losses of the British exceeded 12,000 out of 48 battalions engaged. 190 officers and 2,357 men were killed. 359 officers and 8,174 men were wounded and 23 officers and 1,723 men of other ranks were missing.

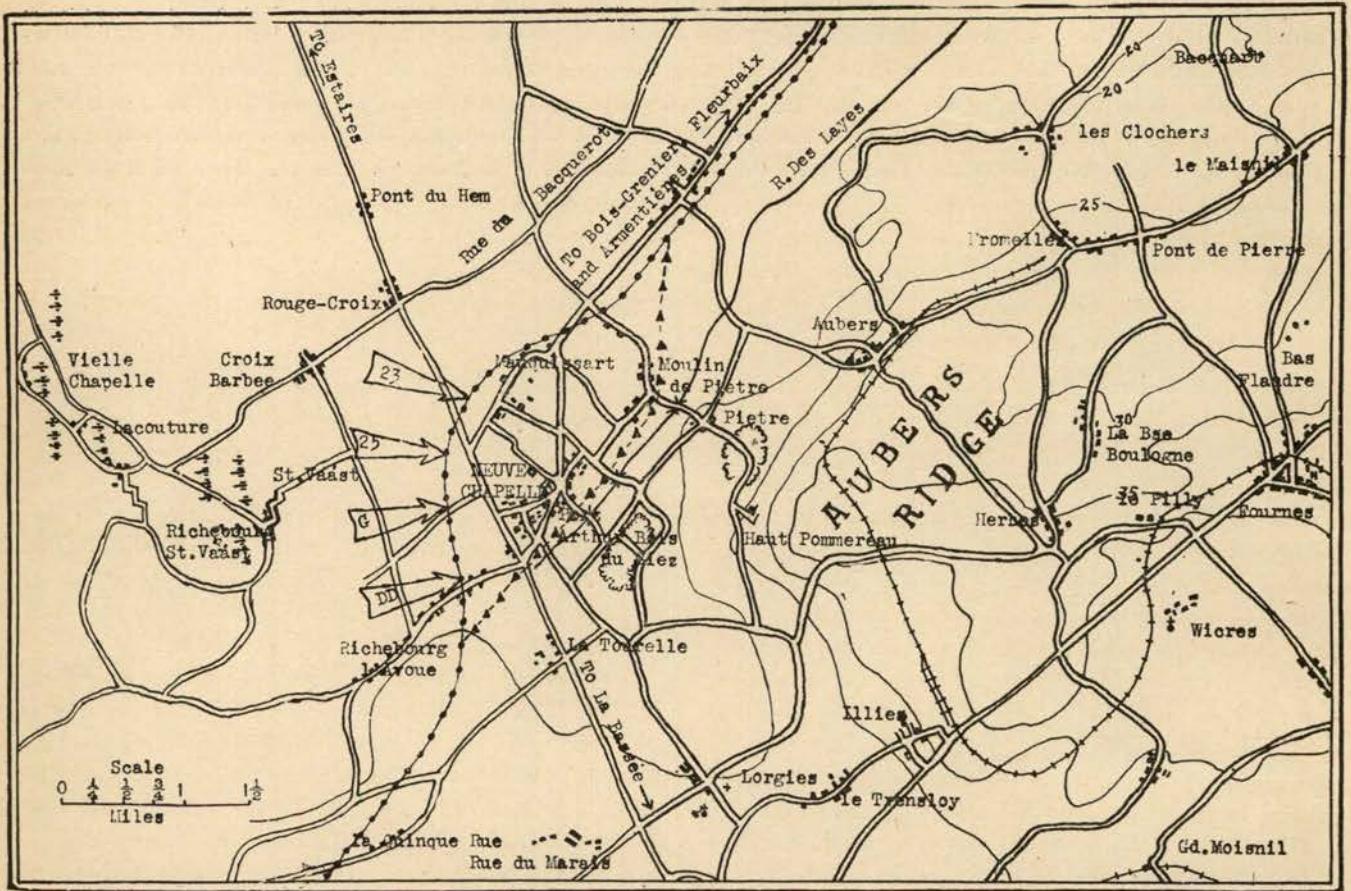
The Germans left several thousand dead on the field and more than 12,000 wounded were removed by trains. 30 officers and 1,657 other ranks were captured by the British.

THE TACTICAL QUESTION.

The attack of the British was well planned. It must be borne in mind that the offensives of this nature were new. The Infantry performed well after it was committed to action and carried out its mission in each case as far as was humanly possible. The Air Force and the Artillery did as well as might be expected of them considering the weather, though the loss of a great opportunity occurred in the failure of the Artillery to clear away the entanglements. Even then, if the reserves of the Fourth Corps had been brought into action, there was a possibility of having a decisive victory for the British. As it was the Germans rallied to their prepared positions and on these lines the British came to a stop.

The Germans took speedy action in rushing troops to these strong points after a surprise attack, and there successfully defended their line. Their formation in the counter attacks, was too dense, could not hope to accomplish its mission and resulted in a tragic loss of life.

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LEGEND: —●—●—●— Front line March 10, 1915
 ▲-▲-▲-▲-▲ Front line March 12, 1915

NEUVE CHAPELLE

THE VERDUN OPERATIONS FROM JANUARY 1st-JULY 1st 1916.

—BY—

Capt. Lester L. Lampert, Infantry.

GENERAL SITUATION ON EVE OF VERDUN.

The end of 1915 saw Germany no nearer to a victory than before her efforts of that year. It is true that she severely pummeled the Russian bear in East Prussia and Poland, as well as sorely tried the Entente Allies on the Western Front, yet her peace overtures met with quick rebuffs. Her people were growing impatient for a decision. Her comparative superiority in man power and material was being rapidly diminished as English efforts to organize and train a large army, as well as the great increase in munitions and war supplies in both England and France, were beginning to be evident.

December 6th. 1915 the allied commanders met in conference at Chantilly, France, to consider the problem of united action on the various fronts. The conference was presided over by General Joffre; while Sir Douglas Haig (Great Britain), General Alexieff (Russia), and General Cadorna (Italy), represented their respective governments. It was decided to inaugurate a simultaneous offensive on all the fronts as soon as Great Britain received expected reinforcements, Russia could reorganize and equip her severely tried army, and France could complete her reserves of artillery and munitions.

On February 18th General Joffre decided on the Somme as the theatre for the Franco-British offensive which was to take place about July 1st.

While the allies were planning an offensive for the ensuing year the Germans in turn were busy planning a campaign. Because the Entente Allies were steadily gaining in comparative military strength Germany could lose no time and consequently decided to inaugurate a winter campaign, conceived by General von Falkenhayn who was then Commander-in-Chief of the Armies in the field, having relieved General Von Molke, and was in reality Generalissimo of the Central Powers. In a letter to the Kaiser at the end of December 1915, Falkenhayn reviewed the situation as follows: He said that England was the soul of the Entente and that therefore it was necessary to strike England. But where was the blow to be struck? The marshy soils of Flanders, he stated, were an obstacle up to the middle of spring and the English position further south had too distant objectives and necessitated the employment of a larger force than Germany had available at that time. Therefore since England was out of reach it was necessary to deprive her of her principle weapon, the Allied Armies. "Obviously this is a pity from the point of view of our feelings towards our principle enemy", continued Falkenhayn. "Above all the enemy must be struck through submarine warfare and there is no imprudence in risking hostility with America because of the strong undercurrent of political opinion favorable to Germany in that Country." He stated further that to attack Italy would only gain advantage for Austria and that the defeat of Italy would have no strong influence on the War. He saw no possibility of gaining a decision by an offensive against Russia, and besides a winter campaign against that country was impracticable. He seems to have remembered Napoleon's disastrous attempt. Besides, Falkenhayn considered that both Italy and Russia would soon be paralyzed by internal troubles.

Having eliminated all the Allies only France remained. "France", continues Falkenhayn, "has arrived at the end of her military resources. Her people can be made to understand that nothing can be hoped from a continuation of the struggle and the worst will be over and England deprived of her best sword." He adds that a break through in mass was probably doubtful of attainment and possibly beyond the resources of German forces and further not necessary. Two objectives presented themselves, Belfort and Verdun. Falkenhayn chose Verdun.

Thus Falkenhayn decided to inaugurate against France a terrible war of attrition.

There are many reasons advanced for selecting Verdun for the objective of the offensive. Germany did not expect to break through in the ordinary sense but desired to strike France at a sensitive point.

Quoting Ludendorf: "Had we only been able to reach the defenses on the right side of the Meuse we would have been completely successful. Our strategic position on the Western Front as well as the tactical situation of our troops in the St. Mihiel Salient, would have been materially improved."

Hindenburg stated: "With Verdun in our hands our position on the Western Front would have been materially strengthened. It would remove a salient at a most sensitive point."

At Verdun the German line of communications ran within 20 kilometers of the French lines. Verdun was always the most powerful point d'appui in every attempt of the French to make untenable the German position in France. Besides the important tactical and strategic reasons advanced for its selection for the point of attack, Verdun had a moral value because it previously had been the theatre of a severe struggle and its capture would for a time satisfy the German people who were growing impatient for a victory. Also, the limited front and comparatively shallow depth of the Verdun Salient offered the possibility of a success with the employment of fewer effectives than an attack with decisive prospects, on any other point on the Western Front. Falkenhayn thought that in Verdun he had chosen an objective for which France would fight to the last man. He hoped here to bleed France white, win a moral victory over the French people and possibly succeed in declaring a separate peace.

THE GERMAN PLAN.

It was decided to initiate the offensive before spring with the hope of inducing the allies to make a premature counter-attack which would result in the planned Franco-British offensive going off half-cocked. Falkenhayn planned to take Verdun speedily with 15 divisions, and a great concentration of Artillery. In fact so great reliance was placed upon the artillery that it was expected that the infantry would play a minor role. He remembered how easy it had been to reduce the Fortresses of Liege, Namur, Mauberge, and Antwerp, which before the World War, were considered impregnable. While preparations were made for the attack on Verdun it was planned to puzzle and distract the allies by diverting actions at different points along the Western Front.

DESCRIPTION OF BATTLEFIELD.

The city of Verdun lies on both sides of the Meuse River. East and north on the left bank of the river low hills extend for some distance. The nearest and most conspicuous is the ridge of Charny. On the right bank of the river are the famous Heights of the Meuse, rising steeply out of the water to about 500 feet. These heights follow the general contour of the river and are about six or seven miles broad. In the east the Heights break down sharply to the broad clay flats of the Woevre. They are not a range of hills but a plateau. Ravines descending to the Meuse and Woevre plain cut deeply into the Heights, and are filled with dense undergrowth. Villages and farms are scattered over the tableland and the Woevre.

The Woevre is a flat low plain lying between the Heights of the Meuse in the west and the Heights of the Moselle in the east. In the winter the Woevre becomes a mass of swamps and brimming ponds, a stretch of country similar to the Masurian Lake District where the Russians were bogged in and so severely mauled by Hindenburg. The only routes across it available for heavy transport are causewayed roads and railways.

Several roads and railroads converge at Verdun. Some were destined to play a vital part in the great battle. The Metz Railway tunnels the range to Eix. A little line crosses by the Gorge of Vaux on the East side of the Hills to Damvillers. The main line to Sedan and north follows the western side of the Meuse valley. Besides the Metz-Damvillers Railroad there are from Vaux southward to Fresnes four wagon roads which run up to the edge of the hills; the Vaux-Dieppe road, main Verdun-Longuyon highway through Etain, the little road from Chatillon, and the great Paris-Metz highway through Manhuelles. There is also the Verdun Ste Menehould Railway and the famous wagon road, the Sacred Way, from Bar le Duc to Verdun which was destined to become the vital artery of the French supply.

FRENCH PREPARATIONS AT VERDUN.

Since the days of the Romans Verdun has been a famous city. Vauban fortified it by a system of bastions, revelines, and ditches, under Louis XIV. Its location at one of the natural gateways to France from the east has caused it to be the scene of many historical conflicts where the French have barred the way to the invader. In 1792 Verdun surrendered to the Duke of Brunswick and became, consequently, the indirect cause for the September Massacres in Paris. Verdun made a stout resistance in 1870, and fell after a ten weeks siege, only when completely invested. After the loss of Alsace and Lorraine, it became along with Toul, Belfort, and Epinal, one of the Eastern Bulwarks of France.

In 1875 the entrenched camp of Verdun formed the left wing of the fortifications of the Heights of the Meuse. Verdun barred the crossing of the Meuse on the main line of advance from Metz to the passes of the Argonne and the upper Marne Valley. Verdun was fortified by two general lines of fortresses and redoubts, thirty-six miles in all. (The outer line of fortifications extended some thirty miles with the greatest diameter of nine miles. Verdun was the last word in old fortifications and was brought up to date just before the war.) The junction of five railroads and only a days march from the German frontier, Verdun was naturally made the strongest of the four entrenched camps. In the first battle Verdun was in dire jeopardy being almost invested when the Germans were forced to retreat on the Marne in 1914.

After the capture of Liege, Namur, and Mauberge, the French were forced to the conclusion that permanent fortifications had had their day. A decree in August 1915, suppressed permanent fortifications with their enclosed perimeter where they implied the necessity of an isolated defense. Verdun was transformed into a fortified region, a chain defense instead of a closed ring. The exposed salient on the right bank of the Meuse necessitated the establishment of a second line on the left should the right bank be abandoned. The manual labor and supplies for this change were lacking because the requirements of General Herr who commanded the Verdun sector were met with very sparingly.

General Joffre and even General Herr believed that should a German attack materialize at Verdun that it would be made on each flank of the salient rather than be limited to a front crowded with powerful fortifications. Herr consequently dispersed his efforts over the entire defensive area.

The only standard guage railway for the French Supply of the Verdun region was the Verdun-St. Menehould Railroad and this route, running close to the German line, was expected to be cut in case of attack. The Verdun-Bar-le-Duc road, which was destined to become famous was widened to eight meters to allow a continuous passage of two files of vehicles.

The general effect of the measures taken by the enemy made it clear that attacks would materialize on the right bank of the Meuse between the village of Ornes and the Meuse. Four corps and a considerable amount of artillery was concentrated in rear of the threatened region. However, because the German threat on the Champagne front was not yet dispelled, these reserves were not definitely committed.

FRENCH STRENGTH, ORGANIZATION AND DISPOSITION.

On February 20, 1916, the French salient at Verdun, lying between the Argonne and St. Mihiel, presented a front which was approximately thirty miles long, and was of the average dept of nine miles. In the Verdun area General Herr had nine divisions and six regiments of artillery disposed on both sides of the Meuse.

Northeastward from the Argonne the French line ran through Forges, and crossed the Meuse. It covered Brabant and Haumont and the wood of Caures. Passing along the eastern Heights of Herbebois and Ornes it then ran out on the Woivre covering Fromezey and coming within a mile of Etain, running south it covered Fresnes and bent back recrossing the Meuse at St. Mihiel.

Second and third lines were also prepared, the second position passing through Samogneux, Hill 344, Beaumont, Wood of Fasses, Les Courieres, Bezonvaux, and Deippe. The third line roughly ran through Douaumont, Hardaumont, Vaux and Eix. Intermediate lines were prepared on the Cote de Talon, Cote du Poivre, south of Louvemont and Douaumont and the farm of Hardaumont.

Like Ypres Verdun can be likened to the neck of a bottle. Many railroads and roads converge at the city. The French position was in fact a bridgehead. The position of the French, though the area was

strongly fortified and the natural barriers presented serious obstacles to the enemy, was weak in that the troops on the right bank of the Meuse had their backs against the river. Should they meet with a serious reverse a withdrawal across the bridges under enemy fire would no doubt have resulted in serious losses in men and artillery.

GERMAN STRENGTH AND PREPARATIONS AT VERDUN.

The Germans committed 14 to 19 divisions to the Verdun attack, a total of about 230,000 bayonets and a concentration of artillery hitherto unprecedented. They had made extensive preparations in rear having constructed a network of railways, 14 standard gauge and 3 meter gauge. They did not follow the old custom, of constructing approaches and parallels to bring their lines closer, and consequently in many places their front trenches were about half a mile from the French line. They expected that there would be little left for the infantry after the artillery had completed its work and consequently devoted their main efforts to the concentration of artillery and the problem of munition supply.

THE BATTLE. FIRST STAGE.

February 21, 1916, at 7:15 A. M. the German bombardment commenced along a 22 kilometer front in the Verdun Salient. The fire was terrific and rapidly wiped out the French trenches and communications. The medium guns played on the French second positions while the heavies registered on the permanent fortifications. About 4:00 P. M. the German Infantry left their trenches on a four kilometer front between Haumont Wood and Herbebois. In many cases their arms were slung, they had been told that there would be no work for them except to march to Verdun, where they planned to arrive in four days. Detachments of wire cutters and pioneers preceded the assault waves which followed one another at eighty to one hundred paces. The French resistance at first was feeble, here and there small groups appeared and some machine guns which had withstood the German tornado of shells, and inflicted some losses on the German infantry. The French heavy artillery was of little assistance. The French front line was captured and on the 22nd the Germans renewed the attack pushing Chretien's hard-pressed Thirtieth Corps back from Haumont and Caures Wood. Chretien used up 8 to 14 reserve battalions but reinforcements made up these losses. On the 23rd the French, threatened in the rear evacuated Brabant, and Wavrille. The French line, really their second line, now ran as follows: Samogneux-Fasse Wood-Beaumont Village-Herbebois, connecting with the first position at Ornes. The French were fighting chiefly in the open. Their artillery was now beginning to play with serious effect on the enemy infantry. The French position on Woevre was now becoming precarious.

During the night of the 23rd-24th, the French practically evacuated Samogneux and brought their line on the Woevre in close to the Heights of the Meuse.

On the 24th the struggle continued. The French counter-attacked toward Wavrille. The French line gradually crumbled and before night Samogneux, Fosses Wood and Ornes fell, and Beaumont during the night. The French lost heavily in the fighting at Ornes. At nightfall the Germans attacked just east of Louvemont, getting very near the final French position, having reached the Heights of Talon and were approaching Douaumont.

The situation was grave. General Langle de Carey, commanding the army group, thinking that the evacuation of the right bank of the Meuse was imperative, so wired Joffre, and even went so far as to stop the march of the Twentieth Corps which was on its way to reinforce the hard pressed Thirtieth. Joffre with characteristic tenacity of purpose, directed that the French resist on the right bank to the last extremity and to hasten the march of the Twentieth Corps. "Every commander", Joffre stated, "who under these circumstances, gives orders to retreat will be arraigned before a council of War."

On the 25th the Twentieth Corps arrived and relieved the Thirtieth which had lost 16,000 out of 26,000 effectives in their four days struggle against far superior numbers and guns. The 1st Corps was moved to the right of the Twentieth. Petain arrived and assumed command of the situation which was getting beyond the limited capacity of the small staff in the region. He strengthened the defenses where they had been neglected, divided the area into sections, assigning artillery to each and set a force to work on maintenance of the Verdun Bar le Duc Road. General Joffre also sent his chief of Staff De Castelneau to Verdun to report on the situation.

In the fighting for the day the French were forced to evacuate the heights of Talon and the Poivre, withdrawing to Belleville heights, but the enemy was finally stopped by an artillery barrage and a counter-attack by the 39th Division regained most of the lost ground. On the 25th the French line ran as follows: Vacherville-Poivre Hill Bois La Vauche-Bois d'Hardanmont, and Gorge of Vaux. The German attack was limited to the front from Poivre Hill to the spur of Hardaumont. The attack on Poivre was a failure, the German Infantry finding it hard going on the steep slopes and were cut to pieces by the devastating fire of the French artillery which was located across the river on Charny ridge. There was also fierce fighting about Douaumont which in the evening reached its height. The Kaiser was a witness of this struggle and seems to have made a special plea to troops to take Douaumont. The 24th Brandenburgers finally succeeded in taking the old Fortress and even got beyond the crest of the position, The French still holding the village of Vaux.

On the morning of the 26th, Petain sent the 20th Corps under Mangin in to counter-attack, and not only stopped the Germans at Douaumont but drove them back with exception of a handful who clung on to the ruins of the old Fort.

Vigorous counter-attacks now effectively stopped the German advance and the 1st Phase of the great fight was brought to a close, with the Germans far from their objective, the city of Verdun, where they expected to arrive on the 26th.

SECOND PHASE OF THE FIRST BATTLE.

The German attempt to take Verdun on a narrow front by frontal attack failed and they began to revise their plans. The Crown Prince decided to broaden his attack. Consequently after a lull, on March 4th, he renewed activities on both sides of the Meuse, striking on each flank of the salient. The attacks were coordinated like clock work, the plan seeming to follow Napoleon's method of striking both flanks and then, at the opportune moment, to smash through the center.

For this new attack the Germans moved some mobile batteries across the river to the Woods of Sept-Sarges east of Montfaucon. The main German route of supply was Metz-Conflans-Spincourt, from where a line ran to Dunn in the Meuse Valley and from there a branch was built to Montfaucon.

On the west bank of the Meuse, the French line covered Avocourt-Malancourt, then gradually paralleling Forges Stream it passed along the ridge north of Bethincourt and then passed between Forges and Bois des Forges to the Meuse.

The ground inside the French line on the west bank should be examined closely. The Brook of Forges running in a well defined valley is split at Bethincourt, one branch skirting on the west and north the destined to be famous ridge known as the Goose's Crest on the western end of which is Mort Homme. If the French lost this famous ridge it would be necessary for them to fall back no less than four miles to the Heights of Charny and they would lose important artillery positions which controlled Poivre Hill on the opposite bank of the river.

Soon after activities started on the right bank it was necessary for the French to abandon the Verdun Ste. Menchould Railway which ran parallel and close to the line, enemy long range artillery registering on it. The route of supply for the entire French Army at Verdun was now over the famous Verdun-Bar-le-Duc road by motor lorries supplemented by a narrow guage railroad running also from Bar le Duc.

A word can well be said here, in regard to this famous road. In spite of the constant stream of traffic an average of one vehicle every 25 seconds, it was necessary to constantly repair the road. Working detachments were spread along the entire length, each man having a foot or two of the road to maintain, standing ready constantly with shovels. These men would jump in and work a few seconds and then jump out before the arrival of the next vehicle. The equivalent to seven feet of stone was worn out on this road during the Verdun Battle. Difficulty of defending Verdun was enormously augmented by the necessity of falling back on one road as the only artery of supply. An average of 6,000 auto vehicles, 90,000 men and 50,000 tons of freight passed over this road daily, and assigned to the task of maintaining it and the supply system were 30 officers and 30,000 men.

The bombardments reopened March 2nd. To prevent reinforcements on the west bank a vigorous attack was made by the Germans in the vicinity of Douaumont. On March 6th two German Divisions of the 7th Reserves made an attack upon Forges Glen causing the French to fall back on a prepared position behind Goose's Crest. This withdrawal of the French was caused chiefly by the fact that their right flank was in the air, for on the opposite side of the river the Germans held the banks down to Talou Hill. This hill, swept by fire from both sides, was no man's land. Forges fell at midday and the Germans later took Regneville and advancing west up the steep slopes of Goose's Crest gained a footing in the Bois des Corbeaux. The French line now connected with the Meuse between Regneville and Cumieres, running through the Bois de Cumieres.

On March 7th most of the fighting was on Goose's Crest, a counter-attack by the French regaining most of the Bois de Corbeaux, on the east bank the Germans were more successful. An attack on Fresnes netted them several hundred prisoners and a successful assault in Bois d'Hardaumont gave them a position against Vaux.

On March 8th the French resisted at Bethincourt and made a slight gain in the Bois de Corbeaux, however, on the east bank the Germans drove their main attack up the ravine of Vaux. On the night of the 8th-9th the 3rd Branderburgers, a brigade of the 9th Reserve Infantry Division, and the 6th and 9th Posen Regiments attacked up the Vaux Ravine. They succeeded in gaining the village of Vaux but were driven out by the French at the point of the bayonet. They returned again and again but were repulsed. In the final effort they took the eastern edge of the village and advanced up the steep slopes to the left in the direction of the old Fort. Losing heavily on the slopes they were finally stayed by the wire about Fort Vaux.

On the night of the 14th the Germans made another attempt for Mort Homme, at that time the line on Goose's Crest made a salient with Bethincourt as the apex. Basing their attack on the Bois des Corbeaux, they attacked with 25,000 men in five successive waves, pushing the French behind the Bethincourt-Cumieres Road. The attack was checked by flanking artillery fire but the Germans gained possession of the spur, 265, and the ground between that point and the Bois des Corbeaux. On the 16th after a artillery preparation which began the previous day, the Germans launched an attack at 3:00 A. M., but were effectively stopped and driven back in disorder by French Artillery and machine gun fire. On the night of March 16th the attack was promptly switched to the other bank, and attempt being made to scale the heights to Fort Vaux. French searchlights were effective in spotting the attacking troops and the efforts were all repulsed.

The German alternate strokes on either flank were like the strokes of a woodman's axe whose blows sinking in slightly are deflected by an adamantine core. By the middle of March the Germans had not less than 30 divisions on the front between the Argonne and St. Mihiel. Eight divisions were on the left bank and 22 on the right. In all some half million Germans had been or were being engaged.

The next move of the Germans was an effort to take Mort Homme in the flank from the west. On the afternoon of March 20th a Bavarian Division supported with liquid fire gained a foothold in Bois d'Avocourt. Fresh troops were thrown in and in spite of the deadly work of the French batteries located at Esnes, they pushed forward to the eastern edge of the woods. On the 21st of March the Germans put a barrage down behind hill 304 and struck the Malancourt salient. They had built a redoubt in Bois d'Avocourt using this woods as a base for their assault on 304 which was now gravely threatened. On the 27th the German bombardment grew to such an intensity that it heralded another attack. On March 28th they attacked the French at Malancourt. Wave after wave were terribly shattered by the French heavies as they came down the slopes into Forges Glen. As in previous attacks Petain's merciless usury was costing the Germans heavily, however, they were approaching one of those vital positions which the French could not well afford to lose, Mort Homme. Consequently Petain made a determined counter-attack. The Germans were driven out of Bois d'Avocourt and the redoubt they had constructed there was captured. From the 29th to the 31st there was severe fighting at Malancourt which had become the apex of a badly pinched salient. The French finally withdrew to Haucourt and to the lower slopes of 304.

The slumbering volcano awakened again on the east bank the bloody Ravine of Vaux furnishing the stage for the terrible drama. The German attack came from both Bois d'Hardaumont and up the Ravine.

Up to April 3rd the Germans made a substantial gain flowing around the fierce French resistance of Douaumont village and Fort Vaux, these positions for the time becoming salients. In one of the severest struggles of the whole battle General Mangin's Division in a counter-attack pushed the Germans out of the Ravine and nearly out of Bois des Caillettes. Before this struggle was over the Germans again took the Ravine but were once more pushed out by the French.

From April 3rd to 6th severe fighting resumed on the west bank, the Germans taking Haucourt and forcing the French to withdraw from Bethincourt. On April 9th the Germans made a determined attack on Mort Homme, first by way of 304 and later made an assault on the whole front west of the river between Cumieres and Avocourt. A diverting action was made across the river simultaneous with this assault. Two divisions were to push through Bois d'Avocourt and Bois de Malancourt upon 304, while two other were to advance upon Mort Homme from Bois des Corbeaux. These assaults were supported by efforts on each flank at Avocourt and Cumieres. French artillery at Esnes stopped the attack from Bois d'Avocourt before it cleared the woods and the assault from Bois des Corbeaux also failed disastrously. The Germans made no important gain in this thrust for Mort Homme and used no less than nine divisions. At Mort Homme the French 1st Regiment of the Line and the 8th and 16th Battalions of Chasseurs covered themselves with glory.

The German attack on April 9th and 10th was really the culmination of their effort to take Verdun. Thereafter they played into French hands. The role of the French was no longer purely defensive but that of a gigantic holding attack while Joffre prepared to strike on the Somme. There was no longer any chance of profit for the Germans at Verdun. Their efforts were costly and their chances for success had vanished, for instead of weakening the French there was now nearly equality of comparative strength diverted to Verdun. The losses were terrific on both sides but the German loss could as illy be spared as those of the French. Hindenburg says in his work "Out of My Life" page 29, "There was no doubt that, at the end of 1916 the position as regards to relative numbers between us and our enemies had developed even more to our disadvantage than had been the case at the beginning of the year." Again in speaking of Verdun "Out of My Life", page 191, he said, "Why should we persevere with an offensive which exacted with frightful sacrifices, and as was already obvious had no prospects of success.

SECOND BATTLE.

There were no engagements of any consequence during April. Neville succeeded Petain who received well deserve promotion to the command of one of the three army groups. During April the Germans withdrew a number of units from Verdun and sent them to the Aisne and Champagne on account of the ominous British preparations. The French High Command intended to hold the enemy at Verdun and by timely offensive actions forced the Germans to resume activities.

At the end of April the French held the line, Avocourt-eastern edge Bois d'Avocourt, along the northern slope of 287 and 304—into the Ravine of the Esnes Branch of Forges stream—climbed the slope of Mort Homme, covering the Summit, across Goose's Crest and eclinging to the Meuse at Cumieres. On the right bank it ran on the south slope of Poivre Hill thru Bois d'Haudromont along south side of Donaumont ridge short of the crest, into Vauv Glen, through Vauv Village, and then south along the eastern scarp of the Heights of the Meuse, covering Fort Vaux.

On May 7th the Germans made a formidable attack on three sides of Hill 304. The front at 304 was held by the French 114 and 125 Regiments. Setting down a barrage which cut off the French communications to the rear the Germans with the equivalent of an army corps attacked but were repulsed several times. On the same day an action developed on the right bank between Bois d'Haudromont and Douaumont, north of Thiaumont Farm. The French line was carried for 500 yards on both sides of the Fleury-Douaumont road.

Fighting then subsided until May 17th when a German artillery action on the right bank developed from Avocourt to the Meuse over a six mile front. From the 18th to the 21st Mort Homme was attacked with great resolution and with characteristic disregard for losses. Between Avocourt and Cumieres the German used five divisions and succeeded in pushing half a mile nearer Verdun paying dearly however, for

every yard. On the right bank, Mangin counter-attacked with the 5th Division of 3rd Corps to relieve the pressure on the left. The French retook most of Ft. Douaumont. The struggle within the Fort was terrific. Hand to hand struggles where the bayonet and grenade played a prominent part. This was but one of the many scenes enacted at Verdun which proved that artillery unaided cannot shot men out of the ground and capture positions.

On the 24th the Germans attacking with two divisions retook a greater part of the Fort, while the effort for Mort Homme continued on the west bank, Espes Glen fell and later Cumieres. By the evening of the 24th both Mort Homme and Hill 304 were lost by the French, their line now running as follows: Avocourt-South slopes of 287 and 304-Chattancourt-Meuse.

On May 29th in their last great effort on the west bank of the Meuse, using troops estimated at 2 corps, containing five fresh divisions, the Germans attempted to push the French off the south slope of 304 and Mort Homme. In this attack all previous records in the number of shells and casualties for a limited area were surpassed. This attack did not net any important gain for the Germans. On the 31st of May the French line on the left bank held—the road to Verdun was still blocked.

Turning again to the right bank we find the German attacks alternating like clock-work with those on the left. From the 25th to the 29th the Germans pounded their way to within five miles of Verdun but were held at Fort Douaumont at approximately the same position they had gained on February 26th. On May 26th the Germans concentrated their efforts on Fort Vaux. The attack, preceded by a 26 hour bombardment, came from Bois des Caillettes and Damloup, pushing the French back. From June 2nd to the 7th the heroic little French garrison under Major Raynol, through completely cut off, continued the struggle. During the last days a bitter hand to hand fight was carried on within the dark vaults and passageways of the old Fort. Major Raynol finally surrendered on the 6th and was taken prisoner but permitted to retain his sword.

On June 7th the German objective was Ft. Souville, and they succeeded in pushing up the deep draw between Froidterre and the plateau upon which Ft. Souville was located. The French left was driven back and Thiaumont Farm fell. In the center the German attack, coming from Bois des Caillettes, pushed in the French to the village of Fleury.

On June 22nd Neville, foreseeing the last desperate effort of the enemy, issued the following orders to his troops. "The hour is decisive. The Germans hunted down on all sides are launching wild and furious attacks on our front with hopes of reaching the gates of Verdun. You will not let them pass my comrades——"

On the 30th of June the French counter-attacked, retaking Thiaumont.

Already the battle seemed to take on a new aspect—the hour had struck for the guns on the Somme were thundering.

COMMENTS.

Verdun, the largest continuous battle the world had yet known. In this battle we observed offensive and defensive weapons and measures developed to the highest degree civilized man had yet evolved, meet in a terrific impact. The tremendous striking power of the German offensive organization can well be compared to the blow administered to the recoil mechanism of a big gun, and the French defensive measures which received the blow is the recoil mechanism, which gradually saps the force from the blow and returns the gun to its original position. The flexible French lines stretched under the force of the German hammer blows and then rebounded to their original shape. A more rigid defense might have broken. Place a finger on a resilient rubber pad and strike it with a hammer. Now place it on a flat iron and strike it again. This painful experiment will bring home what is meant by flexible defensive tactics as compared to the rigid. These flexible tactics were adopted for the obvious reasons that they were most economical in man-power, and because the local ground temporarily lost was of no consequence. Thus we see the French holding their front lines thinly during the terrific bombardment which always preceded the German assaults at Verdun. Most of the French front line troops in support and communication trenches, in bomb proofs, tunnels, any place where they could live. When the recoil system, the famous 75's, machine gun, and artillery, had taken their toll of the enemy's assaulting infantry and they were close on the French positions, the French infantry would

come out and finish the job with rifles, bayonets and grenades.

German strategic and tactical reasons for attacking Verdun are sound. Success would have straightened out a dangerous salient which continually threatened their main communications in France. It was Foch's drive from the general direction of Verdun that caused the hurried withdrawal and defeat of the Germans in 1918. Its capture would also shorten the line and release holding troops. It was the weakest point to strike the French because French troops and material on the right bank of the Meuse were constantly threatened with disaster. No less than three times did Petain ask permission from Joffre to withdraw from the right bank—each time he was instructed to hold on. Also the French supply, the maintenance of an army of 250,000 over one road by motor lorry, was at best a tremendous task.

The German execution of the plan has been criticised by no less eminent an authority than Hindenburg, for he asks: "Was it not possible instead of a frontal attack to pinch the salient off altogether by an advance from the Argonne Forest and St. Mihiel.

For the Germans to continue a struggle so long after its military value had vanished and after success would cost more than its military worth, can well be criticised. Hindenburg stated: "Why should we persevere with an offensive which exacted such frightful sacrifices and, as was already obvious, had no prospect of success."

We see in the very beginning a grave error in Falkenhayn's estimate of the situation which resulted in his decision to attack France at Verdun. For in his calculation of the state of French resources and morale of the French people at that time, he was far from correct. Also in their plan we find the Germans placing the infantry in a subordinate role. They were soon to learn that the infantry was still supreme, however, important the other arms are considered.

We find at Verdun troops on both sides withstanding losses without breaking that hitherto were considered impossible. The French 30th Corps in the 1st days of the fighting lost over 60 per ct. of their effectives in a struggle lasting over four days, during which the troops went without sleep and were subjected to the strain of constant bombardment and fighting. They tapped reserves of human endurance hitherto considered impossible, and yet went still further than that. The fortitude and stoicism of the French soldier at Verdun was heroic, as a fighting man, his ideal example at Verdun has not been surpassed.

During the first days of the battle we find the French disregarding the possible use of the old permanent fortifications, which later became invaluable as shelters for use of troops and storage of munitions and supplies. Many of the old turrets remained intact. Had the troops on each side of Douaumont given it support during the initial offensive in February, it very likely would not have fallen. Because Lille, Antwerp, and other permanent forts had fallen the French commanders at first avoided old works, considering them in the light of dangerous traps or at least, as useless.

We see the æro-plane first come into use as an offensive weapon at Verdun, and we observe offensive troops using liquid fire with some success. We find the French famous 75 proving itself of tremendous value as a defensive weapon used against assaulting infantry. It stands invincible as a highly accurate mobile, rapid fire artillery weapon. The French often sacrificed these guns in order to secure their fire up to the last minute of the enemy infantry assault.

The tenacity of purpose of General Joffre and his willingness to shoulder full responsibility for his decisions, is shown in his repeated decision to hang on to the right bank of the Meuse, even after Petain repeatedly advised otherwise.

LESSONS.

1. An error in the estimate of a situation may mean failure.
2. A strongly fortified salient might better be pinched off by taking it in the flanks, rather than by a direct assault at its strongest point, the front. In other words, the principal is to strike the enemy in a weak point rather than where he is best able to resist.
3. It is not good policy to drop entirely an old weapon or principal, which has been gradually evolved and tried, and adopt a new weapon or principal which has not yet sufficiently proven itself as superior. Attention here is invited to the French discarding entirely the old enclosed fort rather than modifying it

to meet the new conditions; and also to the German reliance on the artillery and placing of the infantry in a minor role. We all know that later in the war we Americans, following up allied teachers, for a time placed greater reliance on the bayonet than the bullet. All were mistakes, learned to be mistakes by losses on the field of battle. Evolution and not revolution is the sane policy.

4. In closing, the greatest lesson relearned at Verdun is that principal of Napoleon's: "The moral is to the physical as 3 to 1." We must never forget that no matter what weapons or methods for destroying man are evolved by man, he is still their master and they can never be substitute for him on the battlefield. At Verdun, the French soldier was tried as soldiers were never tried before, down to the last dregs of his physical endurance. Yet he hung on by sheer moral courage alone, and won! At Verdun Germany would substitute the human will with iron and failed, she would smash the human will with iron and failed again. The clash of wills come when man meet man, body to body, when the infantry assaults, then the battle is decided.

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THE VERDUN OPERATIONS FROM JULY 2 TO DEC. 31, 1916.

—BY—

Major C. B. Townshend, Infantry

OPERATIONS JULY 2nd to DECEMBER 31st., 1916.

The German advance which began in February 1916 was halted by the French in the latter part of June. On May 29th., the Germans made their last great effort on west bank of Meuse in an attack against hill 304 and Mort Homme. This attack was stubbornly resisted and stopped by the French. Thus the line became stabilized and no further operations took place in this area during the remainder of the year. The battle here had reached a deadlock.

On July 2nd. the Germans held line from Avocourt, on the west, to Les Esparges on the east and were in possession of the outer ringlet of forts surrounding the city on the east bank of the Meuse including the village of Fleury and were making desperate efforts by a continuous series of local attacks, within limited areas, to break through the French lines and gain possession of Froid Terre and Souville. These attacks were successful. The situation was critical as the Germans were in a position to push the French back against the Meuse and shell the heights of St. Mihiel Belleville which endangered and would probably lead to the capture of the city.

General Petain who had been commanding the Verdun area called the attention of General Joffre, several times, to the seriousness of the situation but the French Commander in Chief insisted that the right bank of the Meuse should be held at all costs.

The Germans in the early part of July began to transfer large forces and many guns to the Somme front. This relieved the pressure, somewhat, on Verdun. The French realizing this fact and believing the Germans had spent their greatest energy in their forward movement and knowing they had incurred great losses, in both man power and material, planned and began preparations to assume the offensive.

The plan evolved and decided upon by General Nivelle, who had succeeded to the command of the Verdun district, was simple and was to consist of a frontal attack, simultaneously, with three divisions in line. This plan considered two distinct phases of battle and a definite objective of advance was selected for each division. When all parts of the assembling line would reach the objective the troops were to be halted and the line consolidated.

The first line to be reached was Haudromont quarries and ridge north of Ravin de la Dame, Thiaumont farm, Fausse Cote battery and Damloup battery. Second line and final objective, ridge northeast of Couleuvre ravine. Douaumont village and Fort, pond of Vaux and Damloup.

While the French were training and making ready for their offensive there was a cessation of major operations on the Verdun front for the main events and movements of the armies engaged in the great conflict of the World's War were taking place on the Somme. However, Verdun had its spasmodic periods of unrest and many strong and vigorously launched attacks and counter-attacks took place with changing fortunes but without materially effecting the positions of the contending forces.

The Germans attacked early on July 11th. from Fleury, after heavy artillery preparation and advanced their line to about one thousand yards northwest of Souville.

There was considerable activity consisting of small engagements and numerous raids by first one side and the other during July and August. The French assumed the initiative about the middle of July and organized many small raids extending the whole line from the Meuse to the Woevre.

These attacks were made by infantry with artillery preparation and netted the French many prisoners. This had a great effect on the German morale and the physical effect was likewise disturbing as it rendered the supply and reinforcement of the German positions most difficult and dangerous.

French attacked on August 3rd against Fleury and on August 5th. recaptured the village. Germans counter-attacked and took it back a few days later but the French immediately drove them out again. In the next few days the little village changed hands several times but the French finally captured and held it after the 17th. This straightened the French lines at this point. The little town was reduced to a mass of

ruins by these attacks.

During the early part of September the Germans renewed their attacks but gained no successes after which there was very little activity all along the line for over six weeks.

General Mangin, commanding the new Third Colonial Corps, was selected to take active charge of the contemplated French offensive and had assigned to him for the purpose the 38th division under General de Salins, 133rd division under General Passaga and 74th division under General Lardemelle. These troops were in the sector, had been there for some time and assisted in its defense and were therefore, familiar with the terrain and surroundings.

The divisions for the attack were taken out of the front line and sent to the rear for special training for the task assigned them. The training given was well planned, thorough, intense and was conducted on a replica of the ground to be fought over. A miniature of the country and an exact reproduction of Ft. Douaumont was constructed. The men were specially trained and equipped for the exact duties they were to perform.

Instruction in new tactics being employed on the Somme was given which included the standing and creeping barrage of artillery and use of trench weapons. New roads were constructed and old ones repaired. Light railways were also constructed and large supplies of ammunition brought up for use in the attack.

The French opened the assault October 21st. with heavy artillery bombardment under aerial observation, with 289 field and mountain pieces and 314 heavy guns.

At this time the Germans had in the sector from Avocourt to Les Esparges, fifteen divisions, seven of which occupied the first line of defense. In the line east of the Meuse from Haudromont quarries to Damloup they had twenty-one battalions in front line trenches, seven battalions in immediate support and ten in reserve. Their front in this sector was held with over two hundred batteries.

Prior to beginning the assault the French made a feint attack with infantry for the purpose of making the Germans expose their new battery positions. Many were thus revealed and shelled by the French.

On October 23rd the French divisions designated for the attack moved up an occupied the line of attack, a frontage of about seven kilometers, extending from south of Cote Poivre, skirting the wood of Nawe and covering Fleury village to north of Laufee fort. The time fixed for launching the attack was the morning of Tuesday October 24th. The hour of start was delayed on account of heavy fog. At 11:50 A. M. the infantry waves moved out. On the left of the line was the division of de Salins, with the 11th Infantry attached, which advanced towards Haudromont Woods, Thiaumont and Douaumont Forts. The 11th Infantry being on the extreme left assaulted and captured Handromont quarry. This quarry had been converted into a very strongly fortified point. It was surrounded and attacked with grenades. The Germans counter-attacked but were driven off. Many were caught in their underground chambers and bombed out. On the right of the 11th Infantry the left wing of the division advanced through the woods of Nawe to Ravin de la Dame and reached and took Couleuvre ravine by 2:00 P. M., after which they got their patrols as far as Helly ravine. This was accomplished by the 4th regiment of Zouaves. On the right of this 4th regiment a Moroccan battalion assaulted and captured Thiaumont farm, then a Zouave battalion following them passed and took Douaumont village. Another Moroccan battalion, under Modat advanced to the right on Fort Douaumont but met with such stubborn resistance and were so badly cut up they were compelled to halt and reorganize. While they were thus halted Crolls battalion following passed through them and occupied ground beyond the fort to the right and left. Nicolays battalion was pushed in after Crolls and made the main assault on the fort. The Germans who had stubbornly resisted up to this time now surrendered the Fort. The French used bombs in this assault and many Germans caught in their underground chambers were slain in this manner. The entire fort was completely in the hands of the French three hours after the battle began. Many prisoners were captured which included a number of Officers. Thus ended what is commonly known as the Battle of Douaumont.

Meanwhile the center division under General Passaga attacked from Fleury along the Verdun-Vaux railway through the woods of Caillette. The German line in the woods formed a salient towards the French

lines and was more distant than at any other point, therefore more ground had to be covered and contested for but this had been taken in consideration and the time of start had accordingly been regulated as well as the rate of advance,

The division crossed Baxil ravine, near the railroad, entered the Caillette woods which the Germans held with many trenches but the French pushed rapidly on overcoming them and in less than an hour this division was in possession of and occupying the line from just east of Fort Douaumont to Fausse Cote ravine west of Vaux Pond. This was the objective that had been assigned them and there they halted.

The most desperate fighting of the entire advance took place on the French right on the high ground where Ft. Vaux was located. Lardemelle's division formed the French line, in this sector, and advanced in the direction of Fort Vaux and Damloup. The advance was through the ruins of woods and across a number of small ravines which the Germans had organized with a maze of fortified trenches. North of Fort Souville and extending above Damloup the Germans had a strong, well organized front line, just behind which was an intermediate line and a second line about a kilometer in rear, from Vaux valley to Damloup. The division pushed steadily forward but were unable to drive the Germans from their first line trenches until long after dark. Damloup battery was stormed and taken by the 30th regiment early in the day. The German second line was not reached during the day and throughout the night there was fierce fighting on the entire Vaux front particularly in Fumin woods and on Vaux ridge. Next day, the 26th, the Germans made desperate efforts to recover some of their lost positions. Their first efforts centered on Douaumont. The attack was repulsed, here, and the French line was not broken. Meanwhile the French were pushing their line around on Vaux ridge where the Germans were making most desperate efforts to save their second line, for if they lost that they could not expect to save the fort. The fighting was most bitter for this line and French pushed patrols to the rear of both sides of the Fort effecting a junction with the line established to the west by Passaga's division. At this stage of the operation the weather prevented further advance and the French slightly returned to their lines where they remained until Nov. 2nd but in the meantime kept up their artillery bombardment.

The divisions of Passaga and Lardemelles were taken out of the line October 28th and relieved by those of Andlauer and Arlabosse, the former relieving Lardemelles and the latter relieving Passaga.

Artillery bombardment by both sides was kept up until November 2nd when French observers reported that the Germans were evacuating the ruins of the Fort. That night the French occupied without resistance the ruins of the Fort and found the Germans had withdrawn into the plains of the Woevre. The occupation of this high ground gave the French the advantage in observation.

The next day, November 3rd Andlauer pushed his division forward, occupying the entire plateau beyond Ft. Vaux and on Saturday gained more ground by pushing the Germans farther back across the Vaux-Damloup road. The Germans still held the village of Vaux and Hardoumont ridge. Arlabosse, later in the day, advanced troops through Fumin woods west of Vaux, and Andlauer pushed forward, on right, well up towards Hardoumont slopes and the village of Vaux fell. About the same time the French occupied Damloup village. These successes marked the attainment, by the French troops, of all the tasks that had been assigned them.

This, the completion of the second phase of the French offensive of October 1916 resulted in a most important moral as well as physical victory for them. It had netted them approximately 6,000 prisoners, many guns and vast quantities of supplies.

FRENCH OFFENSIVE OF DECEMBER 15th.

After the fall of Forts Douaumont and Vaux in the October and November operations the Germans were pushed back and held a front line of about ten kilometers extending from the Meuse just south of Vacherauville along the crest of Cote Poivre, north of Douaumont Fort and village and along the south slopes of Hardoumont woods to the plains of Woevre above Damloup.

Five German divisions were available for duty along this line disposed as follows: first line occupied by fifteen battalions, the same number in a second line called the immediate reserve. The remainder were

in quarters, in rear for immediate use. Farther back there were four additional divisions that could be brought up within a day or two in case of necessity.

This position occupied by the Germans was naturally a strong one. The high ground above the Louvemont plateau gave the Germans good gun positions and observation posts, especially hills 342 and 378. Profiting by the experience of October they had organized in this area, three lines of defense and had constructed redoubts and trenches and made them more secure by wire entanglements. The ravines had also been fortified to secure the positions on their flanks. This position made the French occupation of and approach to and from Douaumont dangerous and difficult. For these reasons and being flushed with confidence brought about by their recent success General Nivelles formulated a plan to push the Germans farther to the rear and gain more security for his present positions.

The plan for this attack, to quote from Buchan's history of the World's War, page 305, volume 3, "The movement was a swing forward of the right wing pivoting on Cote de Poivre. The day set for the beginning of the attack was December 2nd."

The direct command of this attack General Nivelles also intrusted to General Mangin and there were four divisions assigned to him for the purpose. Those of de Salins, Passaga, de Plessis's 37th, and Muteau's 126th. Muteau's division was new to the terrain but the others had taken part in the October operations and their morale was high. To accomplish his mission General Mangin made extensive preparations for the attack and the same method of training was carried out as had been done for the October operations and the men were trained upon a model of the ground they were to assault over. The task of the attacks was not to be so easy, however, for December weather had set in and there were frequent flurries of snow, rain and fog and they were to have the unpleasant and difficult task of supply over an old battle field where the ground had been cut up by many shell holes and also over new roads which they had recently constructed.

On December 2nd, the day that had been set for the attack, rain and snow had set in and the beginning of the attack had to be postponed for a week or more.

The preparatory artillery bombardment began on December 11th but ceased during the afternoon on account of fog and rain. The attack was to be accompanied by aerial observation and as long as the foggy weather continued such observation was uncertain, especially as the Germans had taken extra precautions to shield their positions.

The artillery preparation was renewed on the morning of December 15th and the attack began. Woillemont's brigade on extreme left of Muteau's division advanced and attacked the village of Vacherauville with an enveloping movement and occupied it within twelve minutes. Steinmetz's brigade moving on Muteau's right captured hill 342 a few minutes later. A Moroccan brigade from de Salin's division on Muteau's right moved from Haudromont woods and Louvemont thus surrounded was taken. On the right of this division the Zouaves captured and occupied hill 378, the highest point in the vicinity, after which they moved up and by 1:20 P. M. were in possession of Chambrettes farm. Du Plessis's division attacking from the vicinity of Douaumont met with stubborn resistance at the head of Helly ravine which was stubbornly defended by a German battalion from Posen that fought desperately to the end. Part of du Plessis's division, however, was able to reach almost to the edge of Caurierres wood and got in touch with troops occupying Chambrettes farm. The remainder of this division without serious delay carried the German first lines but were held up in the ravine occupied by second German line near Bezonvaux. Passaga's division coming from the direction of Hardaumont woods was also stopped by this second line near Bezonvaux. When the days fighting was ended on account of darkness, the French held the line from Vacherauville to Louvemont including Cote du Poivre, with the exception of a small salient on the east of the hill which was taken during the night. East from Louvemont they had retired their line from the high ground of Chambrettes farm and curved it back through the woods of La Vache and Hardaumont south Bezonvaux. This was done on account of the intensity of the German bombardment. Passaga's division which had been held up south of Bezonvaux and de Salin near Chambrettes were repeatedly attacked during the night from the wood of Caurierres. This enemy position in the woods formed a salient into French lines which partially infiltrated both of these commands. Desperate fighting occurred during these night attacks but no progress was made on account of

darkness and snow. Next morning December 16th, two battalions of Passaga's right brigade advanced and with the assistance of a flank attack of a battalion on the left captured Bezonvaux and about six hundred prisoners. The assaulting troops in their advance failed to provide sufficient guard for the prisoners and as these prisoners were going to the rear they noticed the small numbers of the attackers and having their arms still with them took positions in the shell holes and attempted to fire on the attackers from the rear. A reinforcing detachment detected the action of these prisoners and put a stop to it. Du Plessis's division pushed through the woods of Caurierres and occupied the scarp of the plateau.

The French were now in a position to secure Verdun and had proven that the great struggle which began in February had utterly failed in its purpose.

The Germans made many counter-attacks to regain the salient at Les Chambrettes in the next two days and succeeded in taking it December 17th but lost it again the following day.

The Encyclopædia Britannica in summing up these operations says "At the same time after the 15th offensive (December), reconnaissance had gone right beyond their objectives and practice by the creeping barrage destroyed guns and captured prisoners to the number of 11,387 including 284 officers. By adding the number of killed and seriously wounded the total loss of the enemy could not be estimated at less than twenty-five thousand on a front of ten kilometers. 115 guns were taken and destroyed and the defense of Verdun was now established on the narrowest part of the Meuse heights and in an excellent position."

On December 12th, Germany made the first overtures for peace and General Mangin in thanking his troops for their glorious victories said: "To their hypocritical overtures France has replied through the muzzle of your guns and by the point of your bayonets. You have been good ambassadors for the Republic, she thanks you."

No further operations took place in the Verdun area during the remainder of the year 1916 and the battle ended where it began, on the banks of the Meuse.

ANALYSIS AND CRITICISM.

The French offensive and operations, in the Verdun area, in the latter part of the year 1916 was the fourth and last phase of the great battle of Verdun.

It cannot be reasoned that its conduct or result had any direct bearing or influence on the main strategy in the World's war on the Western front or elsewhere.

The events may be considered a distinct and complete phase in itself. The fighting was local and its result had no far reaching influence on other theaters of operations. It did, however, have the effect of keeping both French and German troops from other fighting areas and weakened the man power and lessened the material of both belligerents.

The result was a severe blow to German morale and purpose. They had spent their greatest energy in their forward movement. Their plans had failed, they had not reached their goal and their resources were badly crippled.

The Germans were, however, not caught unawares and made stubborn resistance. They made the error of disposing their divisions on a very narrow frontage, in prepared underground defensive positions which did not permit of maneuver and offensive action.

The Germans realized that the French resources, both in men and material, had been terribly strained in the earlier operations and underestimated the possibilities of a new French effort.

The success of French troops was, in a large measure, due to knowledge of the particular area and experience gained in this zone by the leaders who had planned the enterprise and who commanded the troops.

Perfect unity, cooperation and understanding of command had great weight in determining the result. The special training given the troops was a most important factor in the success of the operation.

In the October movement the French did not follow up their success due to plan and orders that assigned limited objectives to the troops. Breaking of enemy's lines is of little value unless followed up by aggressive movement to reap the limits of victory.

French success was jeopardized for lack of care of details in the heat of excitement of victory by not taking the precautions to care for prisoners that had fallen into their hands.

LESSONS.

1. Artillery preparation is necessary to take a series of prepared positions. Field Marshal Foch says, "Role of Infantry is limited to seizing and occupying ground over which artillery had wrought effective and complete destruction. Experience has shown that when the destruction by artillery had been effective the advance of the infantry is easy and cheap in human life. When the destruction has been but partial or not thorough infantry is completely checked. Artillery preparation is clearly the measure of infantry possibility. It must be resumed the moment infantry is checked."

2. In warfare against prepared underground positions grenades and explosives are most useful and almost a necessity.

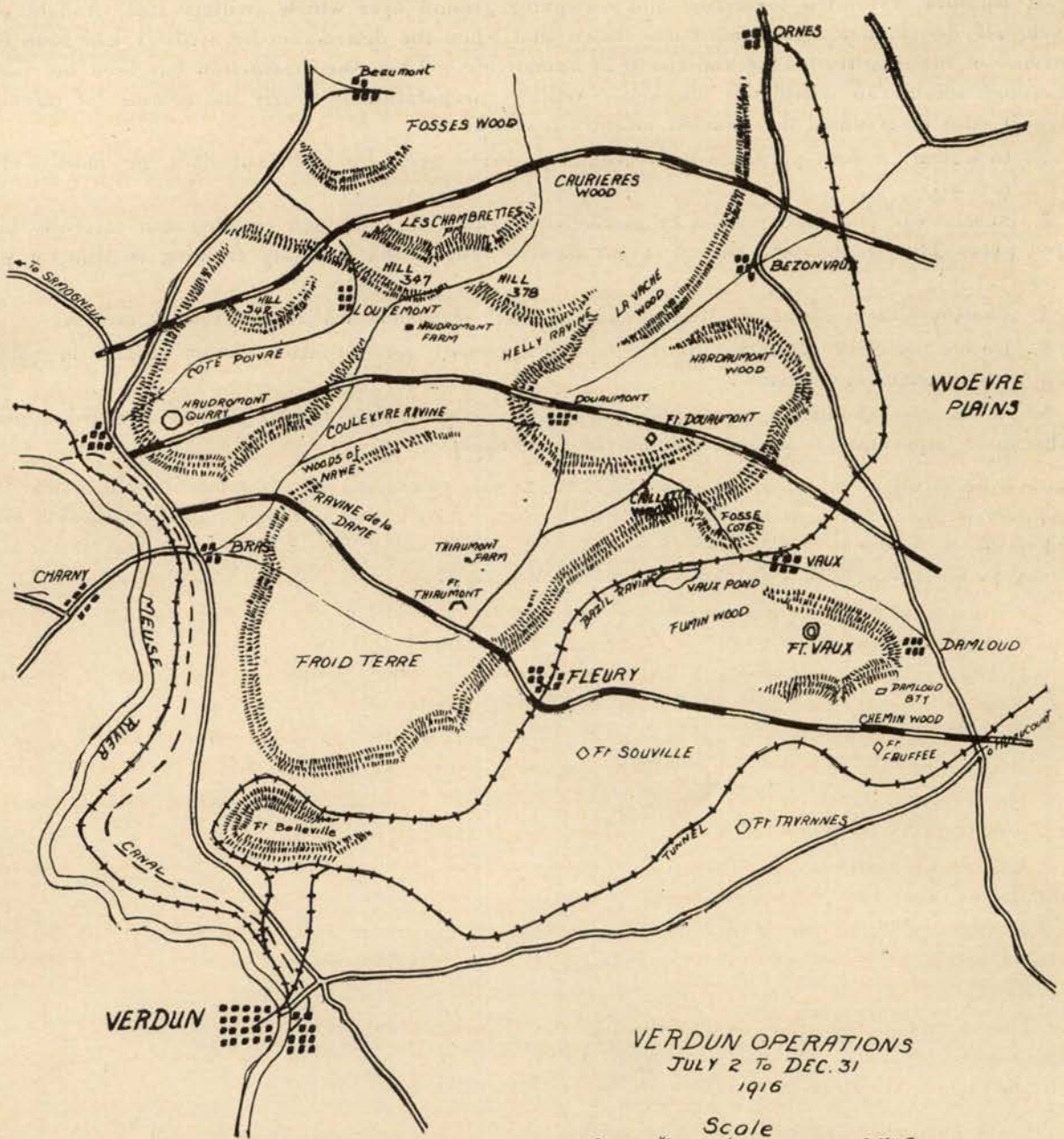
3. Success can only be obtained by perfected organization, thorough training and carefully laid and executed plans. This shatters the theory of our pacifist friends that military training in time of peace is unnecessary.

4. That movement and maneuver are more effective and economical than defensive tactics.

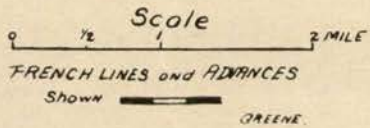
5. Do not prescribe plans that limit troops to aggressive pursuit after victory. Plans do not always develop with mechanical precision.

6. While care should be exercised in depleting assaulting lines, for the purpose of guarding prisoners, still, this most important precaution shall not be overlooked.

References:—Lecture by Col. Duffour, translated by Col. Hunter; The Encyclopædia Britannica, Vol 32; History of the Great War, by March; History of the Great War, Vol. 2, by Buchan; Same Vol. 3; Battlefields of the World War, by Johnson; Nelson's Encyclopædia, Vol.D; The London Times History of the World War, Vol. 10; History of the World War, by Simons; A Short History of the Great War, by McPherson; New International Year Book, 1916; New York Times History of the War, Vol. 8.



VERDUN OPERATIONS
JULY 2 TO DEC. 31
1916



THE FIRST PHASE OF THE BATTLE OF THE SOMME, TO INCLUDE
JULY 16, 1916.

—BY—

Capt. Albert L. Tuttle, Infantry.

Early in December 1915 General Sir Douglas Haig, General Alexieff, General Cadorna and General Joffre met at Chantilly to consider the best way of putting into effect a suggestion of M. Briand, who had been President of the Council of French Ministers since October 20, 1915, for united action on the Western Front.

Foch is placed in charge of the French part in this important operation. His plan of attack, to be made jointly by forty French and twenty English divisions north and south of the Somme where the Allied armies met, was approved February 21, 1916.

On the German side success in the original plan of reducing Russia fore-shadowed her return in force to the Western Front. Fearful of the growing Allied strength and steadiness of purpose Von Falkenhayn saw the coming storm and believed it possible to secure a separate peace with France without the sacrifices that would follow an attempt to break the Allied line.

In a report to the Kaiser in December 1915 which is evidently a result of very serious deliberation he says:

“France has been weakened almost to the limits of endurance. If we succeeded in opening the eyes of her people to the fact that in a military sense they have nothing more to hope for, a breaking point will be reached and England’s best sword knocked out of her hand.

“To achieve that object the uncertain method of a mass break-through,—beyond our means, is unnecessary. Within our reach behind the French sector are objectives for the retention of which the French General Staff would be compelled to throw in every man they have. If they do so the forces of France will bleed to death. I refer to—Verdun.”

Accordingly the Verdun offensive was commenced in February 1916 forstalling the Allied offensive. This pressure resulted in another general Allied conference at Paris, March 12, 1916 to revive prospects for major operations astride the Somme as previously decided upon.

The objectives as stated were: to relieve Verdun; to create a diversion in favor of Russia; to aid Italy, menaced by Austria; and to induce Roumania to enter the war.

Preparations went forward but the date was not set, waiting, in the words of Haig, for the “general situation to clear up”. Every week of delay materially assisted in the training of the British Army.

The Austrian drive on Italy, opening 14th of May 1916, clouded the situation until it could be seen whether their heavy demands for Allied assistance would have to be met.

A favorable turn was afforded by the Russian surprise attack 4th of June 1916, which diverted appreciably the German free strategical reserves.

As German abandonment of Verdun seemed likely, it became highly desirable for the Allies to open up elsewhere on the Western Front to keep Germany in a two-front campaign, contrary to her vital interests.

By the end of May Joffre and Haig decided to attack at the end of June.

The Germans attempted two interfering operations in the northern part of the sector as time drew near for the Somme offensive. On May 21 at Vimy Ridge and on June 2 from Mt. Sorrell to Hooge, neither of which distracted Allied attention from the operations in view.

TOPOGRAPHY.

The area selected was the rolling plateau between the Somme and Ancre Rivers east of Albert together with a similar formation north of the Ancre River to Gommecourt. The general level of all the crests is about 150 metres above sea level and about 40 metres above the river valley. It was midway in the western face of the German line considered as one salient.

This terrain is the watershed between the rivers flowing into the North Sea and those flowing south and west to the Atlantic Ocean.

Its situation in the chalk country of France was of the greatest advantage to the Germans. Be

ing easily worked, porous and dry it was admirably adapted to an intricate system of deep fortifications and dugouts, housing ample garrisons safe from the heaviest shell fire. The battle demonstrates that it was ideal from a defensive point of view.

The ridge was serrated to the west and south toward the Allied line with innumerable ravines running in such a variety of directions that strong points on the spurs and at the head of every draw could easily enfilade all approaches.

The back areas from the crests were sufficiently rolling to mask artillery positions and routes of supply.

STRATEGICAL PLAN AND TACTICS.

The strategical plan was simply to effect a break through on a front not too wide for the available means yet wide enough to maneuver in the gap. A series of limited objectives were to be sought with complete artillery preparation for each stage. The pressure was to be sufficiently continuous to prevent the defense from having time to rally and reorganize for counter-attack on a large scale.

Tactics included the artillery preparation, intended to immobilize resistance of first lines and break up operations in enemy back areas; infantry organized in depth; absence of surprise; rehearsal of movements prior to attack and holding attacks by large forces on the flanks.

THE OFFENSIVE.

The guiding purpose of the Battle of the Somme was the inescapable necessity of restoring the war of movement.

The original design to use forty French and twenty English divisions, making it primarily a French operation, was, of course, frustrated by Verdun, which had quickly put out of reach the allocation of so many French troops. The same cause entailed an extensive redistribution of British units as Haig assisted the French by taking over their line from Arras to the Somme in the Spring of 1916. French losses at Verdun and the general British situation as to front and forces had swung the main weight of attack upon the British.

In this manner the Battle of the Somme became the first great trial of what was known as Kitchener's "NEW ARMY."

GENERAL PREPARATIONS.

The work of preparation was very great. Many miles of railroads, standard and narrow gauge, roads, causeways and marshes, new assembly parallels, up and down communication trenches had to be constructed. Telephone systems over the whole front, gun emplacements for the heavy pieces, dugouts for men and supplies, mining operations on a large scale under enemy strong points all involved much labor.

About 120 miles of watermains were laid and 100 pumping plants installed. Map reproduction facilities in London were developed to furnish 10,000 copies of a given map within a week.

DISPOSITIONS.

The sector to be attacked was held by the right wing of the German Second Army under Otto von Below, its flank resting on Monchy. North of this point was the 6th Army under the Crown Prince of Bavaria. From Gommecourt to the Ancre River was the Second Guard Reserve Division and the 52nd Division. Between the Ancre and the Somme lay the 26th and the 28th Reserve Divisions of the 14th Reserve Corps. South of the Somme in front of Peronne were the 21st, 11th and 36th Divisions of the 17th Dantzic Corps. The 2nd Division of Prussian Guards were in reserve at Cambrai.

The main attack in the north was assigned to the 4th British Army under Rawlinson on a front of 22,000 yards from Serre to Maricourt. This army was disposed as follows: From Serre south to the Ancre River and the Albert-Arras R. R., was given to the 8th Corps under Hunter-Western; from the Ancre to include Thiepval, to the 10th Corps under Morland; from here Pulteney's 3rd Corps was to engage the very strong positions of Ovillers and La Boiselle, just north and south respectively of the old Roman road from Albert to Bapaume; the 15th Corps, under Horne was to cover both flanks of the Fricourt salient while Congreve's 13th Corps constituted the right flank and joined with the French in front of Maricourt.

From Serre to St. Pierre Divion the attack was rather to keep German reserves and artillery involved in that locality than to develop itself in depth. A further assisting attack on Gommecourt on the left of the 4th Army was assigned to Snow's 7th Corps of the British 3rd Army under Allenby. These forces totaled

about 230,000.

A relatively small force consisting mainly of cavalry was in the rear under Gough. This was first called the Reserve, later the 5th Army.

The French joined up for attack with the 6th Army under Fayolle on a front of about 14,000 yards from Maricourt down to Fay. This army consisted of three corps, the 20th from Verdun under Belfourier, the 1st Colonial under Brandelat and the 35th under Allonier. South of the 6th Army was the 10th under Micheler ready for attack if opportunity favored widening the original sector of assault.

IMMEDIATE TACTICAL PREPARATION.

During the last week of June seventy raids of considerable size were made all along the front between Gommecourt and Ypres. At the same time gas was put down at about forty places totaling fifteen miles in extent. Artillery covering fire was delivered on the entire front during June to assist in masking the real point of attack. On June 25 the air men destroyed 9 German observation balloons and at all times kept down the hostile air craft.

On June 24 the real artillery preparation commenced. In one week 4,000,000 shells were put down.

This last week in June the area was in continuous rain and fog. The weather finally cleared in the afternoon of June 30 and the attack was called for the next day. At 7:15 A. M. Saturday, July 1, 1916 the final burst of artillery fire rose to the highest pitch known up to that time. Whole hillsides spouted into the air like a heavy surf". At 7:30 came a momentary lull as the fire changed to a barrage and the Allied infantry went over the top.

Here the operations fall into two parts. The northerly half of the British front from Serre to Ovilliers failed in that two corps, the 10th and 8th, were cut to pieces without gaining their objectives. The attack to the south succeeded in part.

The hold-up in the north was due to German anticipation of attack which they evidently assumed would extend from Arras to Albert. Artillery and machine guns in very great numbers were in readiness. Just prior to the zero hour, counter bombardment of high explosives registered in a 100 yard belt on the British assembly trenches compelling the assault formations to form up out in the open. As they moved forward a shrapnel barrage stayed with them.

While crossing "No Mans Land" the Germans gave them very heavy machine gun fire, having come up from the deep dug-outs unharmed. Advancing lines in general melted away. At Pendant Copse below Serre parts of two battalions penetrated 2,000 yards. At various points the German line was crossed, some prisoners were taken but there were never enough survivors to attempt to hold these forward positions and at night the attackers at this part of the line were withdrawn.

The assault was sustained in the intervals between strong points from Ovilliers south. The 8th Division pressed on the flanks of Ovilliers; the 34th Division on La Boisselle; the 21st Division north of Fricourt and the 7th on the south took Mametz; the 18th prolonged the line of the 7th on a ridge and the 30th, connecting with the 18th, carried Montauban before noon.

The systematic advance in this area is partly explained by the fact that the 6th Bavarian Infantry lost 3,000 out of 3,500 in the bombardment.

Abreast of the 30th Division on the British right flank moved the 39th French Division, the first time these Allies had advanced in line together. On July 1 the French reached the outskirts of Hardecourt and Corlu, Dompierre, Becquincourt, Bussu and Fay fell. Every first line position on fourteen miles of the combined Allied attack together with 6,000 prisoners were taken on the first day.

At this juncture command in the British forces was rearranged. The two northern corps of the 4th Army which had been so badly cut up went to the command of Gough whose instruction were to maintain steady pressure on his entire front and to act as a pivot as the troops on his right progressed to the north. Rawlinson, with his remaining three corps, was to push development of the initial successes. The plan was to press forward on a line with the French, La Boisselle and Contalmaison being the left flank objectives.

July 2: two fresh divisions of the 3rd Corps came in, one carrying the trenches before Ovilliers, the other entering La Boisselle in the evening; elements of their right got as far as Round Wood. The 17th Division took Fricourt by noon, extending a little later to include a wood and farm in its rear. A counter-attack on

Montauban was beaten off. The French repulsed a counter-attack on Hardecourt and took Curlu, Frise and Herbecourt penetrating the German 2nd line position at many points.

July 3: Von Below issued an order saying in part "The decisive issue of the war depends on the victory of the German 2nd Army on the Somme."

British attacks on this day were again divided into two distinct operations. Penetration on the flanks of Ovillers, La Boisselle and north of Fricourt led to the attempted reduction of these very strong points. Fighting see-sawed all day and night to no decision.

The main British attack having been directed toward Bapaume now faced the German 2nd line, Guillemont, Longueval, Bazentin, Contalmaison. This was a heavily fortified crest covering the German artillery concentrations in the immediate rear. To get at this very strong line they must first reduce a net work of trenches containing a number of heavily wooded areas full of barbed wire and machine guns between Fricourt and Guillemont.

North of Fricourt two of these woods and a strong work called the Quadrangle, were taken with 1100 prisoners.

In the southern sector the trenches east of Fricourt and approaches to Mametz Wood were taken. A German counter-attack by a fresh division launched from Montauban was broken up by artillery fire. A battalion was destroyed upon detraining at the Montauban railhead, losing about 1,000 killed and captured.

The French farther south rapidly exploited the surprise of their initial attack. They broke the German 2nd lines all south of the Somme to Flaucourt. Some 12 German battalions brought up from the Aisne were put out of action.

July 4: heavy storms slowed up everything except desperate fighting for a foothold in Mametz Wood and Bernafay Wood east of Montauban.

The foreign legion of the French Army took Belloy-en-Santerre in the German 3rd Line.

July 5: The British renewed attacks on Contalmaison from the west. Their prisoners to this date were 94 officers, 5,724 other ranks. The French took Estrees and pushed their front to within three miles of Peronne.

July 6: General pause from fighting.

July 7: Determined attacks by the British in the attempts to secure their left from Thiepval to the area south of Contalmaison. The 19th Division stormed the latter place at noon taking 700 Prussian guards but a counter-attack in the afternoon forced them out. The 12th and 25th Divisions pushed forward one mile on the Bapaume Road, driving a deep wedge between Ovillers and La Boisselle. Heavy rain interfered with the movement to outflank Ovillers which was attacked again on the 8th. This strong point held out until the 16th when the last of its garrison, 3 officers and 124 men of the Guards surrendered.

July 8: This day marks the opening of the second week of the battle. The 30th Division assisted by French artillery on the French left, secured a foothold in Trones Wood. This wood, a key position on the right of the British advance was fought over for five days. Sunday and Monday, the second and third days alone, saw six German counter-attacks.

Mametz Wood was finally conquered by the 21st Division. Contalmaison on the left of the general British advance on July 10th had been carried finally by the 23rd Division. The regular counter-attack by the 3rd Division Reserve Prussian Guards was smothered by artillery.

July 9: Returning for a moment to the French; they completed the First Phase of the battle by pushing along to a line north of Barleux, the ridge of La Maisonette-Biaches to within one mile of Peronne. The railhead at Peronne had been moved to Chaulnes about the 7th.

Summarizing the French operations; in fourteen days they advanced on a ten-mile front to a maximum depth of 6 and one-half miles, taking fifty square miles of fortifications, eighty-five guns, 236 officers and 12,000 other ranks.

On July 10th, General Sir Douglas Haig issued this statement for the British: "Our troops have completed the methodical capture of the enemy's first system of defense on a front of 14,000 yards—includ-

ing five strongly fortified villages, numerous heavily wired and entrenched woods and a large number of immensely strong redoubts.

The British now faced the German second line proper on the generally southern crest of the watershed. Obviously to stand still was to invite a forced retirement to something like the original lines and loss of the area of approach to the German second line. German artillery could register at will.

The logic of two years of preparation and the high hopes of the whole British Empire on trial before the world demanded further exploitation of initial progress.

In accordance with the decision of the night of July 1, (to exploit the break in the first line by systematic attack of limited objectives with artillery for each). The artillery had kept pace with the infantry sufficiently to open on this ridge, July 11.

A critical decision was made to storm the second line by a night attack July 13-14. The front included 7,000 yards from the right on Longueval to the left at Bazentin-le-Petit Wood.

German trenches were at an average distance of from 1,000 to 1,400 yards from the British positions which necessitated a considerable preliminary movement to the proposed jump-off line. Preparation was thorough. Personal reconnaissance was carried out by division, brigade and battalion commanders and staffs before framing detailed orders. White tapes were laid by the engineers early in the night to mark the limits of the approach. Deployment of all units on a strict schedule and flank contact were carried out without attracting enemy observation. This movement was covered by strong patrols.

The actual assault delivered at 3:25 a. m., July 14., accomplished a surprise.

The Third Corps formed the left flank, patrolling heavily toward Pozieres. The Fifteenth Corps occupied the center against Bazentin-le-Petit Wood and village, being directed at High Wood. On the right the Thirteenth Corps was directed at Bazentin-le-Grand, Langeval and Delville Wood. This Corps also took Trones Wood where a party of 170 British had been holding out for some days. The right had been covered during the advance by French artillery putting down a bombardment from Guillemont to Ginchy.

The advance was sustained along the entire line. By midday the 21st Division had taken Bazentin-le-Petit Wood and village, the 7th likewise took Bazentin-le-Grand Wood, a little later they penetrated toward High Wood. The 3rd Division occupied Bazentin-le-Grand Village and the 9th the better part of Longueval. Trones Wood was also cleared.

A spectacular cavalry affair in which about two troops charged toward High Wood somewhat cheered the infantry. The cavalry hid from machine gun fire in some dead space until 8:00 o'clock in the evening when they sallied out, killed a number of the enemy entrenched.

On July 15th the British consolidated the newly won line giving up High Wood which was too far to the front. On the 16th, Ovillers on the extreme left of the active sector had been captured. Waterlot Farm to the right of Longueval went to the British and the South African Brigade continued the hard fighting in Delville Wood east of Longueval. The contest for this position, starting on the 14th. continued for thirteen days.

Heavy rain and mist intervened for three days terminating the First Phase of the Battle of the Somme.

CRITICISM.

THE GERMANS IN DEFENSE.

In the estimate of the situation the Germans outguessed the Allies in correctly gauging a large part of the objective. They were thus enabled to completely nullify the heaviest bombardment in history up to that time by hiding the garrison in deep dugouts. They achieved superiority of fire and security at the same time by manning the trenches with machine guns as the Allied bombardment became a barrage.

Economy of forces and concentration of forces were both effected by these tactics.

The fire power developed gave to the defensive an offensive-defensive character.

They failed in estimating the situation by assuming that the French were not strong enough to attack due to losses at Verdun. This failure led to the initial successes which made maneuvering in the gap possible to a certain extent and led to further exploitation by the Allies. The service of intelligence and reconnais-

sance failed to detect the French concentrations of men and guns.

The Germans signally failed to maintain extensive contact on the night of July 13-14. This lack of contact led to loss of security while the British formed up for the surprise attack. This was inexcusable, probably the result of over-confidence in their second line.

At Montauban they threw away about 1,000 men by detraining at an established railhead in the presence of the enemy within artillery range after the enemy had plenty of opportunity to register on the point.

They conducted counter-attacks by dribbles of troops brought hastily from quiet sectors without sufficient preparation, instructions or leadership.

THE ALLIES IN ATTACK. (British)

The British failed in having no idea of accurately estimating the effects of the bombardment and were unprepared to change their plan in case it did not accomplish the desired result. (Their initial successes were due entirely to corresponding failure of the Germans to be in readiness at those points).

Shortly before the Allied bombardment ceased the German high explosive fire on the assembly parallels should have been a warning. During the first advance they continued to pit personnel against material and lost two whole army corps; a failure in opposing force with force by straight frontal attack.

The infantry formations should have been such as that, as this resistance developed, friendly artillery could have smothered the German positions after the troops came up from the deep dugouts.

Economy of force was reduced to zero.

There was no surprise when surprise was possible in the fog existing for several days up to the date preceding the attack.

Incorrect objectives were selected in that strong centres of resistance protected by flanking fire were attacked frontally.

In the exploitation of the break made in the southern part of the sector of attack the principle of the limited objective was correctly applied. Artillery moved forward at night to support each stage. In this phase of the attack systematic reduction of strong points by envelopment was used whenever possible as the case of Fricourt which fell after being cut off.

The night attack deserves special mention. General Haig showed the greatest aggressiveness, boldness, decision and confidence in his troops. He correctly estimated the situation and effected a complete surprise.

Personal reconnaissance by commanders from the battalion to the division insured the night movement of 25,000 troops over the most difficult terrain being carried out intelligently by all concerned.

Frontal and flank security was attained by heavy patrol. The few routine German patrols were all gathered in. Flank security during the assault at 3:25 a. m. was effected by sufficient forces on the left flank toward the high ground at Pozieres and the right flank by fire of the French artillery.

Although the use of the limited objective was correct as applied locally, it had neither the driving power in depth nor the width of front necessary to achieve a complete break through.

ALLIES IN ATTACK. (French)

The French estimate of the situation, reconnaissance, employment of the limited objective and surprise were similar to the British operations where the latter succeeded in the southern part of their sector.

The outstanding feature of French operations was their technique when confronted with fire superiority on the infantry advance. They achieved security, economy of forces and surprise locally by first developing the resistance of a strong point, then calling for artillery support, continuing the Infantry advance after the work of demolition was well carried out.

An instance of this was the village of Curlu. The French approached, the Germans manned the cellars and houses with machine guns, the French artillery destroyed the village, the French gaining the position without a single casualty.

LESSONS.

It is fatal to underestimate the strength of a position.

Infantry cannot advance on a designated front when the enemy has established fire superiority in that area.

The service of intelligence and security cannot be dispensed with at any time, before, during and after combat.

When infantry develops hostile fire superiority, either it must avoid destruction by maneuvering or friendly artillery should be prepared to support at once and neutralize the hostile fire.

Relatively dense formations of infantry should not be thrown into an area from which they cannot be extricated should the enemy fire prove to be sufficient for practical annihilation.

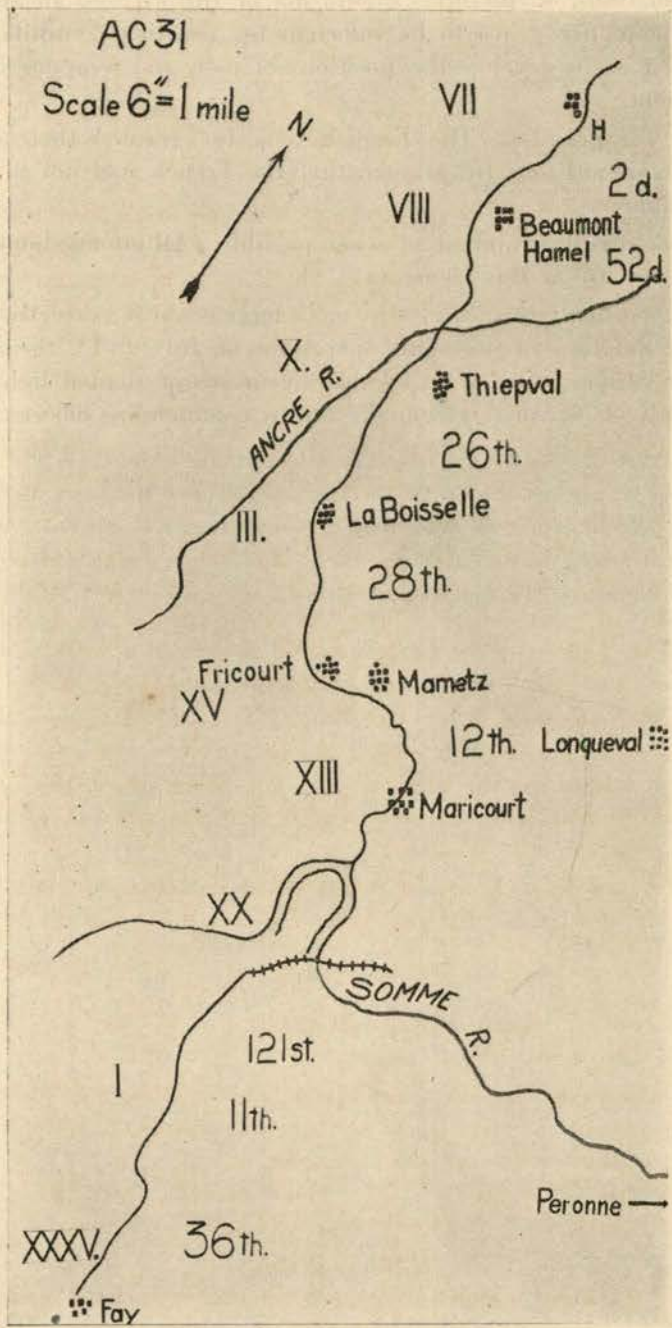
Infantry should maneuver to develop the positions of men and weapons in order that friendly artillery fire may immobilize them.

Never take anything for granted. The English took for granted that their preliminary bombardment was destructive. The Germans took for granted that the French had not man power sufficient to participate in the Battle of the Somme.

Surprise should be taken full advantage of when possible. All intended operations should be thoroughly studied with the view to the use of this element.

Night operations may be brilliantly successful on a large scale if correctly timed and the preparation is thorough down to minute details. In the night operations of July 13-14, the British, for example, made the directions of march for various units unmistakable by means of shaded lights directed toward the rear accurately located as a result of personal reconnaissance by commanding officers.

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THE SECOND PHASE OF THE BATTLE OF THE SOMME.

July 17th to Sept. 14, 1916.

—BX—

Capt. John J. Finnessy, Infantry.

GENERAL SITUATION.

The battles from July 1-17, 1916, left the Allies in a situation not altogether to their advantage.

The German second line had been taken from east of Pozieres to Delville Wood. Pozieres and Thiepval on the left of the British together with the elaborate system of trenches around and behind them had not been taken.

On the British right the Germans held Delville Wood and Longueval, thus forming a sharp salient running from Delville Wood and Longueval, Westward to Pozieres and Southward to Maltz Horn Farm, where the British lines joined the French.

From Maltz Horn Farm, the Allied line extended Southward to the Somme at Hem.

Longueval lay to the Southwest of Delville Wood and was a small village with orchards at its Northern end. Delville Wood was a mass of broken tree trunks, thick undergrowth and shell holes.

Rides had at one time been cut through it from North to South and from East to West and the German trenches were along these old rides.

The Germans now had direct observation, from their position in Leuze Wood, of all the Allied line from Guillemont to High Wood.

The Germans also held the ground to the South Between Maltz Horn and Falfemont Farms. This made it hard for the British to protect their right flank and joint up with the French.

Sir Douglas Haig summarizes the position as follows:

"The line of demarcation agreed upon between the French Commander and myself ran from Maltz Horn Farm due Eastward to the Combles Valley, and then North Eastward up the valley to a point midway between Sailly-Saillisel and Morval. These two villages had been fixed upon as the objective respectively of the French left and of my right, and in order to advance in cooperation with my right, and eventually to reach Sailly-Saillisel, our Allies had still to fight their way up that portion of the main ridge which lies between the Combles Valley on the West and River Tortille on the East. To do so, they had to capture in the first place the strongly fortified villages of Maurepas, LeForest, Rancourt and Fregicourt, besides many woods and strong systems of trenches. As the high ground on each side of the Combles Valley commands the slopes of the ridge on the opposite side, it was essential that the advance of the two Armies should be simultaneous and made in the closest co-operation."

The Germans had reinforced their line and believed their position to be impregnable.

They had made the maximum use of machine guns and artillery and were conserving man power wherever possible.

THE TERRAIN.

The second phase of the Somme Battle took place, for the most part, within the angle formed by the Somme River and its tributary, the Ancre.

Between these two rivers there lies a rolling tableland which does not rise more than 500 feet at any one point but even a small rise in elevation gives perfect observation of the country for miles around. Numerous woods and small villages are located in this region.

Ideally situated for purpose of defense, a long ridge extends from the Somme to the Ancre running generally East, Southeast and West, Northwest.

ALLIED PLANS.

The Allies had gained a foothold on the main ridge but only on a small front.

The operations now took the shape of a contest for the main ridge between the Somme and the Ancre, and for the extension of the footing which the Allies had gained upon it so as to enable them to develop their offensive on both flanks as well as straight to their front.

The Allies still planned to keep the Germans engaged on the Western front to prevent the removal of troops to any other front.

The Somme offensive was also launched to relieve the pressure on Verdun.

The British now desired to consolidate the ground they had won and to take the remaining critical points of the ridge. Pozieres and Guillemont were their main objectives. Pozieres because it was a very important point on the ridge from which the Germans could enfilade their lines as they now were and Guillemont since it was necessary to capture it before the British advance could be aligned with that of the French

TROOPS.

The German troops now facing the Allies were under Generals Fritz Von Below and Von Gallwitz. Sir Douglas Haig, in his Despatches, states: "On July 18th the Germans had 138 Battalions engaged in and behind the line North of the Somme, as compared with 62 on July 1st."

Nearly all of the very best troops in the German Army took part in the Battle of the Somme at one stage or another. The Prussian Guard organizations were all engaged.

The British had on the 1st of July, the Fourth Army under General Sir Henry Rawlinson and one corps from the Third Army, under General Sir E. H. Allenby, engaged on the Somme offensive.

On the second day of the offensive, (July 2nd), General Sir Henry Rawlinson had been placed in command of the Somme front where the attack was to be concentrated so that he could give his undivided attention to that sector.

The British Fourth Army on July 1st had consisted of five corps.

The French force on July 1st was the Sixth Army under General Fayolle and it had sixteen Divisions.

During the entire offensive troops were relieved on both the German side and the side of the Allies as the situation demanded it.

Ludendorff, who with Field Marshal Von Hindenburg, visited the Western front for the first time in September 1916, says:

"Divisions could be kept in the line only for a few days at the time. They had to be relieved and sent to recuperate on quiet fronts.

ENGAGEMENTS.

The weather, on the 17th and 18th of July, was unfavorable and this made it difficult for the air service to observe for effective counter battery work by the artillery. It was impossible for the Allies to locate new German battery positions, while the Germans, having occupied the ground themselves, were able to register on the Allied trench lines and probable gun positions.

On July 20th the British attacked with one Division at High Wood and carried all of it except the extreme Northern corner.

The Germans fought for every foot of ground between Pozieres and Guillemont and even though some of the smaller actions are only mentioned in a very few words, some of the small towns and woods changed hands several times and the scenes of fighting were as desperate as any in this great struggle.

The French pushed their front east of Hardecourt beyond the Combles-Clery light railway and south of the Somme they carried the German position from Barleux to Vermandovillers on July 20th.

POZIERES.

Preceded by an artillery bombardment along the whole front, the next general attack was launched by the British on July 23rd. Pozieres and its Windmill on top of the ridge and along the Albert-Bapaume road became the scenes of the most desperate fighting.

Buchan in his account of this struggle says:

"The village was in ruins and only a few stones remained to mark the spot where the windmill had stood on account of the heavy shelling, but the position was well entrenched and had many deep dugouts and excellent machine-gun emplacements.

The assault was delivered from two sides at about midnight by two Divisions. The 48th advancing from the direction of Ovilliers and the 1st. Australian from the Southeast, advancing from the direction of Contalmaison Villa. The 48th Division on the left advanced to the left of the high road and held the line along the outskirts of Pozieres in the direction of Thiepval. The Australian Division on the right had a more difficult task.

They were obliged to take a sunken road parallel with the highway, then a line of trenches and finally

the highroad itself which ran through Pozieres.

The Australian troops were second to none in the new British Army and they were equal to the task. They won the highroad after desperate fighting in the ruined houses and established a line where the breadth of the road alone separated them from the enemy. On the 24th and 25th, the battle continued and by evening of July 25th most of Pozieres was in the hands of the British and by morning of the 26th, the whole village had been taken by them."

July 30th the British again attacked at Pozieres and captured the trenches toward the Windmill from the ruined village.

The final attack at Pozieres came on August 4th and was a surprise delivered early in the evening by two Divisions and before dark the German second position had been taken on a front of 2000 yards.

The Germans made numerous attempts to retake Pozieres and the Windmill but were not successful.

GUILLEMONT.

The first attempt on Guillemont was made from Trones Wood on July 19th, by the British, but was unsuccessful.

Guillemont was attacked by the British on July 23rd, and again on July 31st, without gaining more than the railway station outside the village. August 8th, British troops entered Guillemont but were forced to fall back because of the failure of an attack on the German trenches on the flanks.

The ground south of Guillemont was dominated by the German positions in and about the village and Sir Douglas Haig decided that it could not be taken as a separate enterprise without very heavy loss, and therefore, made arrangements with the French on his right for a series of combined attacks with the object of taking Maurepas, Falfemont Farm, Guillemont, Leuze Wood and Ginchy. On August 8th, after a long bombardment, a combined attack was made, which met with a small amount of success and left the British troops in the outskirts of Guillemont.

September 3rd, a general attack was made all along the Allied line and Guillemont was taken after being defended for 25 days by the enemy without relief.

This meant that the last point in the German second position, from Mouquet Farm to where the British and French lines joined, had fallen.

In the meantime, there had been desperate fighting at Longueval and Delville Wood and on July 27th, the Wood was all cleared but its eastern side and Langueval was taken.

August 18th, Leipzig Redoubt south of Thiepval was taken by the British with about 1500 prisoners.

The British were gradually closing in on Thiepval.

The French Army was at this time going from one victory to another and had carried LeForest and Clery on September 3rd, and had taken the German lines to the outskirts of Combles.

During the first days of September, the Allies still pushed on in their attack and Falfemont Farm and Leuze Wood were taken by the British on September 5th.

Also on September 5th, General Micheler's X French Army with nine Divisions attacked south of the Somme and carried the German first position from Vermondovillers to Chilly, on a front of about 3 miles, taking some 3000 prisoners.

Ginchy was carried on September 9th, by British troops.

The attack on September 9th, was on a wide front but although successful in taking Ginchy, the British failed to succeed at High Wood and Deville Wood. East of Ginchy they were unable to capture a German strong point called the Quadrilateral and this was to cause them considerable anxiety a few days later.

LOSSES.

The losses for the Second Phase of the Battle of The Somme were heavy, however, I have been unable to get correct figures for this phase of the battle and can only state:

"That losses during the Second Phase of the battle were as heavy as during any of the other phases and McPherson, in his History of the Great War, gives the losses for the entire battle of the Somme as follows:

British 450,000.

French between 200,000 and 250,000.

German probably 600,000, (65,000 of these were prisoners).

RESULTS.

With the capture of Guillemont on September 3rd, the Allies had taken the last point of the German second position between Thiepval and Estrees and their front was in nearly a straight line. They occupied all of the higher ground.

The dangerous salient around Longueval and Delville Wood had disappeared and they had gained the front necessary for further operations.

The Allies had proven that they were able not only to take the German's strongest defense by means of long preparations as on July 1st, but to force him back steadily and continuously as demonstrated throughout the Second Phase, though at a heavy cost.

The majority of the German counter-attacks had failed with heavy losses.

The Germans had delayed the Allied advance but it had cost them dearly.

The French on the right of the British were in excellent spirits, and General Micheler with the X Army had cut the German lateral communicationns near Chaulnes.

On August 28th, Roumania had entered the war and this had helped to upset the German plans.

There had been changes in the German High Command and Hindenburg and Ludendorff were not satisfied with conditions on the Western Front.

The Allied troops had proven their worth and the newly formed Armies had been successful.

The German forces had been hard pressed and the question of ammunition and ration supply had become a grave one. Germany was having to manouvre her force with great rapidity to meet the new situations as they arose, and she had lost in three months the fortifications and positions which had taken her two years to prepare.

The Second Phase really marked the passing of the attrition theory and opened the way to return to the warfare of movement.

LESSONS.

One learns from the experiences of the Allies, that frontal attacks should not be used when it is possible to attack from the flanks and in this way take advantage of ground forms and cover. This was brought out around Pozieres and the Windmill, where it was also shown that to avoid direct observation night attacks are sometimes successful.

From Deville, where the Germans took every advantage that the terrain afforded, we learn that a well prepared defensive position may hold up an Army for a long time.

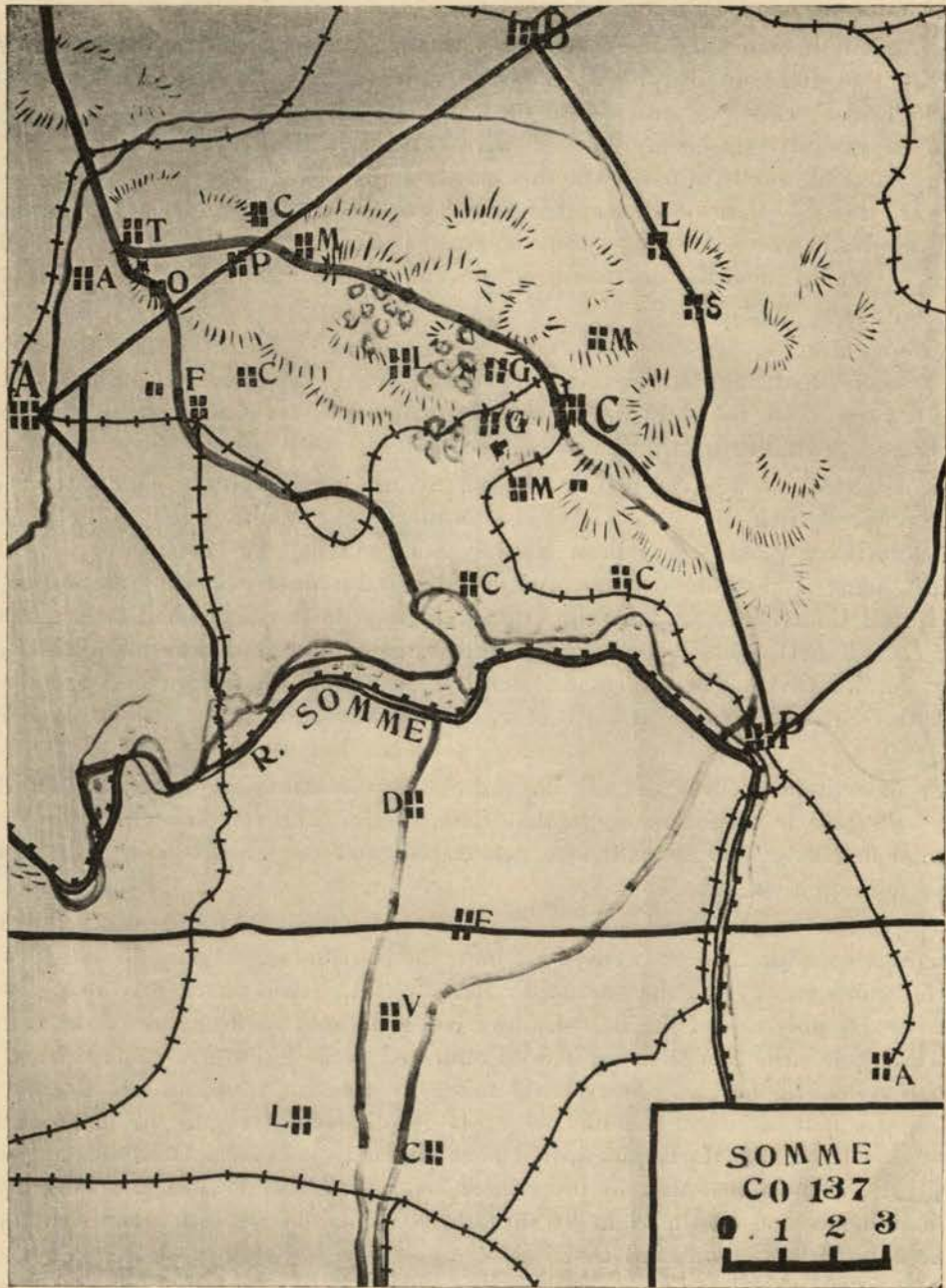
At Guillemont, we have seen that even though a well fortified place may not be taken from the front. If Armies can successfully advance on its flanks they will in time, force its occupants to fall back regardless of how determined their resistance may be.

From the resistance which the Germans offered in front of the British Army, we learn the value of intelligently selecting positions. Deep dugouts may sometimes prove to be man traps, as shown at Leipzig Redoubt.

We have demonstrated for us, in this period by the German forces, the use of a switch line, after nearly all of their second line had fallen, and by its use they were able to connect up their lines and still present a solid front to Allied attacks.

At Guillemont, after many lives had been sacrificed it was finally taken by flanking movements without storming the village itself.

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THIRD AND FOURTH PHASES OF THE BATTLE OF THE SOMME.

—BY—

Capt. Frank B. Hayne, Jr., Infantry.

OPERATIONS.

The Third Phase.

Artillery preparation over the entire allied front at 6:00 A. M. on the morning of September 12th, and continued without interruption until the moment of attack.

At 6:20 A. M. on the morning of September 15th the infantry assault started forward and the artillery fire was increased to great intensity. At the same time the new heavily armored motor cars of the British, known as "Tanks" were put into action for the first time. These formidable fighting machines were designed to break through enemy barbed wire, carrying with them the fire power of several machine-guns and, in some cases, of small cannon. On this occasion they came largely as a surprise to the German troops and although there is some evidence that they were not entirely unprepared for this new engine of war. There is no doubt, however, that they were of great assistance to the Allies in penetrating the German lines in this attack. A more detailed discussion of the employment of tanks during this attack and those immediately following will appear later.

About two hours after the attack started, tanks accompanied by infantry were seen entering Flers. By 10:00 A. M. British troops had completely taken this village, and by noon had occupied the German trenches for some distance beyond it. On the right the British lines advanced to within assaulting distance of Morval, Les Boeufs and Guendecourt during the course of the first.

On the left High Wood was completely cleared by the 47th Division after severe fighting. It will be remembered that the British line had skirted the southern edge of this wood at the beginning of the engagement, but the northern portion had been strongly held and had proven itself a difficult task for some time. This success made it possible to carry out the original plan of extending the left of the attack to include Martinpuich and Courcellette, and by the end of the day these villages had been taken respectively by the 15th and 2nd Canadian Divisions. The work begun on September 15th was completed on the eighteenth by the capture by the 6th Division of the Quadrilateral, a German stronghold which had up to this time effectively blocked the British advance toward Morval. Further gains were also made between Flers and Martinpuich.

The fighting of September 15th and the succeeding days resulted in a larger gain than the British had made in any other single operation up to that time. Three well fortified villages had been taken, two of the main German defensive systems had been penetrated, and the enemy had been pushed back to an average depth of a mile on a six mile front.

Severay days of bad weather following September 18th, temporarily checked the British advance, but at noon on September 25th, after a twenty-four hour bombardment, a general attack was launched by the Allies along the whole front from the Somme to Martinpuich. This attack was also generally successful, and at the end of the day only one of the British objectives remained in the hands of the Germans. This was Guendecourt, at which place the 21st Division had encountered very serious resistance from a party of the enemy in his fourth system of defense. Morval was taken by the 5th Division, Les Boeufs by the 6th and Guards Divisions, and a belt of country about 100 yards deep, curving around the north of Flers to a point midway between that village and Martinpuich, had been taken by the 55th Division, and the New Zealand and 1st Divisions. It will be noted that in this attack several replacements of attacking divisions had been made, notably the 56th Division on the right by the 5th Division, and the 14th, 41st, 47th and 15th Divisions, respectively by the 21st, 55th, 1st and 23rd Divisions.

On the right the French had taken their objective at Pancourt and had advanced their line to the outskirts of Fregicourt, completing the capture of that village during the night and early morning of the following day. Combles was now almost entirely surrounded by the Allied forces and in the early morning of the 26th it was occupied simultaneously by the British to the north and the French to the south of the railway. Combles was one of the largest villages taken during this period and the ease of its capture by the

method employed was no small tribute to the tactical success of the undertaking. Though lying in a valley the village possessed strong fortifications, in addition to numerous large cellars and galleries at a sufficient depth underground to afford adequate protection during the heaviest bombardment. A large quantity of stores and ammunition was found in these cellars when the village was taken.

On the same day the 21st Division made another vigorous assault on Guendecourt and succeeded in occupying it. This village had been protected on the west by German fortification, known as the Gird trench, which was captured in a very interesting manner by the combined action of a tank and an aeroplane.

The center of the advance of the British Fourth Army had now reached a line slightly north of Thiepval, and the British commander thought that the time had arrived when the capture of that village and the ridge on which it stands should be undertaken. This would bring his left flank into line and would also be useful in future operations against the rear of the German positions to the north, which had in the beginning been one of the possibilities of the offensive. A general attack by the two corps of the Fifth Army operating on the left was therefore launched at about noon on September 26th before the enemy had had time to recover from the blow struck by the Fourth Army on the 25th. The objective of this attack was the enemy position extending some 3000 yards along the ridge running to the north and east of Thiepval, and including, in addition to that fortress, the formidable German positions, known as the Zollern, Stuff and Schwaben Redoubts, with their connecting lines of trenches. On the right the 2nd and 1st Canadian Divisions reached the system of trenches which formed their objectives without great difficulty. Three waves of the 11th and 13th Divisions carried the outer defenses of Monquet Farm and entered Zollern Redoubt in the face of desperate resistance. Further to the left the 18th Division, assisted by tanks, encountered strong opposition in Thiepval, but succeeded in clearing the village by the morning of the 27th.

On that date the 11th Division carried the south and west sides of Stuff Redoubt and the trench connecting it with Schwaben Redoubt on the west, and also succeeded in pushing out along the northern slopes of Thiepval Ridge towards the east. On the 28th the 18th Division carried the southern face of Schwaben Redoubt, which they held against counter-attacks by German reinforcements. Patrols were pushed out from here toward the northern face of this strong point in the direction of St. Pierre Divion. Meanwhile the British line had advanced north of Courcellette, and on September 27th the 55th and New Zealand Divisions carried an additional part of the German fourth defensive system along a mile front northwest of Guendecourt. Between Courcellette and Guendecourt the German fell back on prepared defensive positions along a line running in front of Eaucourt l'Abbaye and Les Sars, which enabled the British troops to advance to a depth of from 500 to 600 yards on a front of nearly two miles without encountering serious resistance. Southwest of Les Sars, Destremount Farm was taken by the 23rd Division on September 29th.

On October 1st a successful attack was launched against Eaucourt l'Abbaye and the defense line extending about 3000 yards to the east and west of that village by the 47th, 50th, 23rd and New Zealand Divisions. An extremely accurate Artillery barrage was of great assistance to the infantry in this attack, and on October 3rd, Eaucourt l'Abbaye was taken. Previous to this, however, the British had received a check when an attack by the Canadians on Regina Trench was repulsed with heavy losses on October 1st.

Meanwhile the French on the British right had been vigorously pushing their attack. North of the Somme, Bouchavesnes had been captured by them, and since that time they had taken Vermandovillers, Berney and Deniecourt, south of the river, before September 20th. As has been stated, they had also succeeded in taking Rancourt and Fregicourt. At the end of September, Morval was turned over to them by the British commander, so that the way was now open for the advance upon Saily-Saillisee. General Micheler's new army south of the Somme had made important thrusts eastward between Ablaincourt and Chilly. In the Biaches region. General Fayolle's troops were in the vicinity of Peronne on the southwest, while from Bouchavesnes and east of Clery they were within striking distance of Mont St. Quentin, which was the key to Peronne on the north.

In following the course of operations up to this point, it had been necessary to mention only very briefly the employment of tanks by the British during the third stage of the battle. This was the first trial of the tanks, and upon these operations hinged the important role which they were to play later.

For the attack of September 15th, forty-two tanks were allotted to the Fourth Army and seven to the

divisions operating on its left. Of these forty-nine, only thirty-two arrived at their starting points during the night of September 14-15, the remainder becoming ditched or stopping on account of mechanical trouble.

From the standpoint of tank operations the attack on September 15th was not a great success. Of the thirty-two which started out with the attack, nine went ahead of the infantry, and nine others never caught up with the infantry, but were of considerable assistance in clearing up points where the enemy was still holding out in rear of the foremost infantry waves. Of the remaining fourteen, nine broke down from mechanical trouble, and five were ditched. Over half of the tanks which succeeded in crossing the German trenches were with the XV Corps. Of the seventeen tanks assigned to this corps, twelve reached their starting points. These were employed in the attack in the vicinity of Flers. The plan was for them to pass to the east and west of that village and proceed toward Guendecourt in conjunction with the infantry advances, attacking all strong points along their routes and assisting the infantry whenever it was held up. Of these twelve, eleven succeeded in crossing the German trenches and were of considerable assistance to the infantry.

From this time on, tanks were used continually in significant numbers in a series of small and largely experimental actions until they were all used up or the ground became impassable. The method of fighting them by twos and threes against special strong points was not satisfactory, and was later discarded. Nevertheless, these experiments showed, on a small scale, some special purpose which tanks could serve, and some of the experiments were successful operations in themselves.

Tanks shared with poison gas the distinction of being the two great innovations of the first four years of the great war. It came as a surprise to friend and foe alike, though it is doubtful if this surprise from a military standpoint, was fully exploited. One of the chief points the Allies learned during these first real tests of the tanks was that it actually could supply the place of a long artillery preparation, and could thereby enormously enlarge the possibility of a successful surprise attack in a war of position such as that on the Western Front.

The third phase of the Somme Battle drew to its close during the first few days of October, 1916. This entire fourth system of the German defensive lines had been reached, and it seemed that the Allies were about to accomplish the long hoped for break-through, for the German lines in rear were not to be compared with those already taken. In addition, the long strain of continuous fighting had begun to show its effect on the German troops, and they were not fighting with their old resolution. But just at the time when it seemed that the Allies would deliver the final crushing blow, the weather intervened in favor of the Germans, and the enormous war machinery of the Allies was brought to a standstill. During the months of October and November the rain came down almost without a break and the state of the ground became appalling. Through this sea of mud even lightly equipped runners found movement almost impossible. Under these conditions an ordinary trench relief became an achievement, and an attack almost a hopeless undertaking. Trenches, which were taken with great difficulty, proved to be practically impossible to hold.

The attempt to continue the attack at all under these circumstances has been much criticised on the grounds that no further gains which it could possibly make could compensate for the suffering and losses which they would entail. But to suspend the operations at this time would give the Germans time to convert the new lines in rear into as formidable ones as those which had just been so painfully and slowly pierced. The Germans were now in the last of their really formidable positions, as behind the Saily-Saillisee-Le Transloy-Bapaume line they had not had time to prepare any such elaborate defenses.

THE FOURTH PHASE.

On the British left the Germans now retained only a precarious footing on the main ridge on the heights above St. Pierre Divion and Grandecourt. Any substantial advance by the British center would turn the German position lower down the Ancre. But the British center could not advance unless the right came forward with it, and in front of the right the German positions were not formidable. The Saily-Saillisee-Le Transloy line was strongly fortified and held, and in addition was covered by a long spur running northwest between Beaulencourt and Guendecourt from Les Boeufs. The capture of this spur was essential before the Le Transloy line could be successfully attacked. It was essential that a successful attack be launched against the Le Transloy line in order to open an opportunity for an advance on a wide front in a north

and northeasterly direction. Such a stroke would not only outflank the strong Beaumont-Hamel position, but would take in rear the whole German position from Arras to the Ancre. A dry October might well have seen this plan accomplished, and in October, 1916, it must be remembered, there was no Hindenburg Line. But with the weather as it was in October, for the Allies it was a month of disappointment, constant and costly fighting, and little progress.

The delay in the Allied attack against Sailly-Saillisee and Le Transloy made it necessary to abandon the above plan when the September successes seemed to have brought it within their grasp. It also gave the German time to reorganize his troops, whose resistance again became stubborn. As the season advanced and the bad weather continued the original scope of the Allied plan had to be constantly reduced, until finally it was only possible to undertake the comparatively local operation of November 13th in the vicinity of Beaumont-Hamel.

The operations of the Fourth Phase of the battle may be divided into three general groups; those of the right, the center; and the left of the British attack. On the right the French succeeded in taking Sailly-Saillisee, but were unable to make any gains to the north and east of that village. The weather at this time showed no signs of improving, and the moment for decisive action passed before full advantage could be taken of their gains in this direction.

On October 23rd and again on November 5th, British attacks against the enemy positions east of Les Boeufs and Grandecourt were renewed in conjunction with the French operations against the heights of Sailly-Saillisee. This resulted in the British establishing their line on the crest of the spur in front of Le Transloy.

In the center, after the capture of Eaucourt L'Abbaye on October 3rd, the chief gain was the capture of Le Sars on October 7th, by the 23rd Division (Fourth Army). The slope on the Albert-Bapaume road on which stands the rise of ground known as the Butte de Ivorencourt held against repeated British attacks. On October 7th, 12th and 25th it was attacked respectively by the 47th Division, 9th and 13th Divisions, combined, and the 50th Division, all of which were repulsed. On October 18th and 20th, however, the 9th Division did succeed in gaining a foothold in the Snag Trench halfway up the slope, although the Butte itself was never captured.

On the left a foothold was finally gained in the Regina Trench after many repulses. On October 21st, during a spell of good weather, the line of this trench west of the Courcellette-Pys road westward to Schawben Redoubt, was attacked with complete success by the 4th Canadian, 18th, 15th and 39th Divisions. On November 10th the portion of the Regina Trench lying to the east of this road was carried on a front of a half mile by the 4th Canadian Division.

During the course of all the above minor operations, the Germans made numerous and determined counter-attacks.

At this point it is clear that the German resistance was stiffening, and that the German command had taken advantage of the respite allowed them by the bad weather to rally and reorganize their battered troops.

The last and most important of the Allied attack during the fourth phase of the battle was that launched against the Ancre region on November 13th.

By November 9th the weather had improved somewhat, and final preparations were made for the attack on the Ancre.

For four months the British had not attempted the stubborn German first line between Beaumont-Hamel and Serre. The slopes in this section were strongly fortified, being tunnelled deep with old catacombs, which had been linked up to constitute a subterranean city, where whole battalions could assemble. It was now desirable that this formidable position be assaulted with a view to driving the German out of his prepared defenses on the widest possible front before winter set in. The scheme of an assault upon this line seemed a desperate one so late in the season, but since July 1st the British had good reason to believe that they had gained many advantages. Their tactical use of artillery was improved, and now the creeping barrage protected the infantry to a great extent from the machine guns which had been their undoing in the original attempt. Although their possession of the Thiepval Ridge seriously outflanked the German positions north of the Ancre. The slow advance of the Fourth Army and the condition of the ground had led the enemy to

believe that a large attack would not be attempted before winter.

The preliminary bombardment was opened early on the morning of November 11th. On the morning of the 13th this developed into a very effective barrage covering the assaulting infantry, which were also concealed by a heavy fog. The attack extended from east of Schwaben Redoubt to north of Serre and met with immediate success on almost the entire front. South of the Ancre the 19th and 39th Divisions pushed northward on the northern slopes of Thiépval Ridge and took their objectives east of St. Pierre Divion in a short while. St. Pierre Divion was taken soon afterward by the 39th Division. South of the Ancre the British success was general. North of that river they met more serious resistance. The 63rd Division operating on the right bank of the Ancre reached their second objectives west and northwest of Beaucourt during the morning and although isolated from their supporting troops, held on during the day. By night fall the village of Beaumont-Hamel was in the hand of the 51st Division and for a half mile north of that village the German first line system had been carried by the 2nd Division. Further north, opposite Serre, the 3rd and 31st Division had had to abandon the attack early on account of the heaviness of the ground. Bad weather set in before the attack had been completely carried out, but even so the results for the British had been very favorable. They had secured command of the Ancre valley on both sides of the river and had done so at a comparatively small cost to themselves.

This operation has been said by many critics to have been most skilfully carried out of any attempted by the British during the Somme Battle. Ladendorff himself admits it "was a particularly heavy blow."

The thoroughness of the plans showed greatly improved staff work, and the technique with which they were carried out showed that the troops had learned many valuable lessons during the hard fighting of the previous months. If this operation is to be taken as a sample of what the larger attack which was originally planned would have achieved, there is little doubt but what the Battle of the Somme would have resulted in a decided crumbling of the German battle line on the Western Front.

It was the last attack of the great battle. The weather now became so bad that any thought of further operations was out of the question.

ANALYSIS.

An intelligent analysis of the third and fourth phases of the Somme Battle cannot well totally exclude the first phases of the battle, including as they do the motives which induced the Allied higher command to launch the battle, and the events leading up to its final stages.

Neither can its results be judged entirely from the standpoint of purely military achievements, nor from the view of any less than all of the participants.

On the Allied side the original object of the battle as agreed between the British and French commanders (Joffre and Haig,) its objects were threefold. As stated by General Haig they were:

- "(1) To relieve the pressure on Verdun.
- (2) To assist our Allies in the other theatres of war by stopping any further transfer of troops from the Western Front.
- (3) To wear down the strength of the forces opposed to us."

In regard to the achievement of these objects, General Haig says:

"The three main objects with which we had commenced our offensive in July had already been achieved at the date when this account closes; (about November 18, 1916) in spite of the fact that the heavy autumn rains had prevented full advantage being taken of the favorable situation created by our advance, at a time when we had good grounds for hoping to achieve yet more important successes.

"Verdun had been relieved; the main German forces had been held on the Western Front; the enemy's strength had been very considerably worn down."

The other side of the question can best be obtained from a study of the comments on the battle of the German commanders. In discussing the general military situations at the time of the Somme battle, von Hindenburg says:

"For lack of men we could not contemplate the idea of a relief attack either at Verdun or the Somme, however strong were my own inclinations for such a measure."

This statement leads to the belief that a relief attack might have been made at either battle if the other had not been in progress, as enormous numbers of troops were at that time engaged in both.

Speaking of the German retirement on the Western front in the early part of 1917, von Hindenburg says:

"If an improvement in the configuration of the front bequeathed by the Somme battle could not be effected by an attack, it only remained to adopt the necessary alternative and withdraw our lines.

"So it was a case of retreat on the Western Front instead of attack, It was a dreadful disappointment for the army in the West; worse perhaps for the public at home; and worst-as we had good reason to fear for our allies."

This is a plain statement that the Somme offensive had caused a good deal of worry on the part of the German high command, although the enforced shortening of the German lines in the west did make it stronger and allowed for more reserves.

Ludendorff looks on the Allied offensive on the Somme as an attempt to break through the German lines on a large scale, the wearing down of his forces as incidental to that. From this standpoint the offensive was certainly not a success. But Ludendorff himself repeatedly admits the gravity of the situation and the weakening of the German power by the wearing-down process. In regard to this, he says:

"The fighting had made the most extraordinary demands both upon commanders and troops. The relief arrangements inaugurated at Cambrai no longer sufficed. Divisions and other organizations had to be thrown in on the Somme Front in quickers succession and stay in the line longer. The time for recuperation and training on quiet sectors became shorter and shorter. The troops were getting exhausted. Everything was cut as fine as possible."

These are the comments of the two German Generals who directed the defense at the Somme from the end of August until the Allied pressure relaxed for the winter.

Von Falkenhayn, who, it will be remembered, was in command of the German forces at the Somme until the end of the August, looks upon the Allied offensive entirely as an attempt to break through the German battle line on the Western front. He maintains the attack was an absolute failure, and further states that the battle had no effect at all upon the other fronts. His statements to this effect are as follows:

"The events on the Somme have no connection with those of August on the Italian front, which led to the loss of the right bank of the Isonzo.

"In Galacia the most dangerous moment of the Russian offensive had been passed before the first shot of the Battle of the Somme was fired."

"The only tangible gain, then of this battle to the enemy remains in its effect on the situation on the Western front. As a matter of course the expenditure of strength such as the enemy favored demanded the use of correspondingly strong forces for the defense. The operations in the Meuse area were not yet, however, immediately affected."

On the whole General von Falkenhayn appears to decidedly minimize the effects of the battle.

The comments of von Hindenburg and Ludendorff, however, give the impression throughout of being the more unbiased analysis of events, and for this reason appear to express more nearly the true effect of the battle from the German viewpoint.

Measured in terms of territory, the results of the battle were small. The advance was nowhere greater than seven miles and the total area conquered was about 120 square mile. The total German losses were in the neighborhood of 700,000; of the British, approximately, 450,000. The French published no official figures, but if they lost half as heavily as the British, the total Allied loss would be 675,000. In point of numbers lost, the Allies were not far below the Germans.

From July 1st to November 18th, the British took 38,000 prisoners. 29 heavy guns, 96 field guns, 136 trench mortars, and 514 machine guns. The number of prisoners taken by the French was about 42,000.

By what test are we to judge the result of a battle in modern war? On the Western front, at least, there was no retreat or rout or envelopment by which we may judge. A battle is final when it ends in the destruction of the enemy's fighting strength. A battle may be decisively won when it results in the achievement of the strategic purpose of one of the combatants, provided that purpose is based upon sound military principles. The amount of territory gained or important points won may not necessarily be the standards by which success is measured. Judging by this, Tannenburg was a victory for Germany, the Marne for France, and the First Battle of Ypres for Britain. The Battle of the Somme was no less a victory since it achieved the purpose of the Allies.

The German official report, not without justification, divides the four phases of the battle as fol-

lows: The first an attempt to break through toward Bapaume and toward Peronne. Toward the end of July this attempt confined itself more and more to a broadening out of the Allied salient north of the Somme. In August there was less pressure on all parts of the front. The third phase began in September with a renewal of the effort to break through north of the Somme at the point of the salient, on both sides of Combles. This gave the Allies their maximum tactical success, but it ended in temporary exhaustion and was never renewed. In October and November came the fourth phase, which was distinguished by a return to broadening-out tactics. It was the beginning of the end.

The Somme was for the most part a battle of the rigid positional type. Yet it represented an important step toward open fighting and freedom of movement. The real effects of the dislocation of the German line were not fully realized until the Hindenburg retreat four months later. Cavalry was used in High Wood on July 14th and the British Fourth Army evidently had a considerable body of cavalry in reserve to use in case of a break-through. Tanks were also used here for the first time, and they were to play an important part later in revolutionizing offensive tactics and readjusting the balance between the offensive and the defensive.

The ability to smash the front line trenches with artillery was also demonstrated by the British on many occasions during the latter stages of the battle.

CRITICISM.

It is no easy matter to criticize an operation on the enormous scale of the Somme battle such a short time after its occurrence. Time will show it in its proper perspective, but at present out of the heterogeneous mass of detail which has been written about the battle, it is practically impossible to separate the really important events from those of more temporary interest. In addition to this almost every historian up to this time who has been in a position to have a really broad knowledge of the subject has been biased toward one side or the other.

A limited number of criticisms may, however, be deduced by carefully sifting available data on the subject.

(1) At the time of the battle of the Somme, the German line on the Western front was stretched to the extreme limit which it could stand. Consequently she had no adequate reserves to meet the special emergencies which arose.

Had Germany maintained a policy throughout of a cautious defense on the Western front it is probable that she could have tired out France and Great Britain. This would have allowed her to consolidate her enormous gains on the Eastern front, where the cost of conquest was light.

Had Germany adhered to this policy, her battle lines on the Western front would have been much shorter, Verdun would never have been attempted, and a terrific drain on her resources, such as was caused by the Somme battle, would hardly have been possible.

(2) Germany's adherence to a policy of putting great faith in strongly fortified but rigid front lines at the Somme would lead to the belief that she had not grasped the full import of the lesson which she herself had taught the Belgians at Liege and Namur. Although the Germans had four distinct series of strongly fortified defensive positions at the Somme, they were each in turn occupied by her troops, and the organization in depth was not to be compared with that of the later "Hindenburg Line". Had the Germans employed at the Somme the scheme of defense which they later employed in 1917, it is possible that the Allied losses would have been much greater. This scheme called for a forward zone, lightly held with machine guns, the main defense being withdrawn a mile or so in the rear, and put more dependence upon counter attacks. This method actually was employed toward the latter part of the battle by the Germans, and it must be admitted that they learned the lesson more quickly than the Allied commanders. "However, they learned it at a terrific cost and many of their units were unnecessarily disorganized and shattered during the first stage.

(3) The "bull-dog" tactics of the Allied attacks show a certain lack of ingenuity and failure to fully make use of superior facilities in man-power and material, according to Field Marshal von Hindenburg. "If our Western adversaries" he says, "failed to obtain any decisive results in the battles from 1915-1917 it must mainly be ascribed to a certain imaginativeness in their generalship. The necessary superiority in men, war material, and ammunition was certainly not lacking, nor can it be suggested that the quality of the enemy troops would not have been high enough to satisfy the demands of a more ingenious leadership. Moreover,

in view of the highly developed railway and road system, and the enormous amount of transport at their disposal, our enemies in the west had free scope for far greater strategic subtlety. However, the enemy commanders did not make full use of these possibilities, and our long resistance was to be attributed, apart from other things, to a certain barrenness in the soil in which the enemy's plans took root."

(4) The use of tanks at the beginning of the third phase of the Somme battle has probably been more severely criticized than any other one feature of the two stages of the battle.

Experts maintain that their use on September 15th was premature, that they should have been held as a surprise until large numbers could be employed, and that their first use should have been on more favorable ground than this shell-torn battlefield. In this connection Major General E. D. Swinton, of the British Army one of the originators of the tank and the first commander of the British Tank Corps makes the following statements:

"The employment of tanks in September, 1916 was contrary to the views of those who had originated the arm, who were responsible for its production and had most studied its action. They held that the utmost value should be obtained from the new weapon and the secret of its existence should not be given away until a surprise attack could be carried out on a sufficiently extensive scale to give a chance of achieving a decisive success. In this sense the launching of the tanks was a repetition of the same error made by the Germans when they released gas on a small section alone on April 22 1915. Whatever may have been urgency at that time of reviving the momentum of the Somme offensive, which had died away after weeks of great endeavor and immense sacrifice, and of raising the moral of the tired troops, and whatever might have been the success of the new weapon, it is doubtful if the small number actually employed could have given a result to compensate for the premature disclosure of the secret, which in potential value was equal to that of the 42 c. m. howitzers and the poison-gas of the enemy. Again, not only was a small number of tanks used, but they were employed in dribbles in different directions, instead of together in as great a mass as their available number would allow. As an experiment this trial was, no doubt productive of valuable lessons, but they were obtained at the cost of discounting the future."

LESSONS.

(1) One lesson taught by the Somme battle was that front lines, no matter how strong, could be demolished or smothered by artillery. The Germans learned this lesson during that battle, and from it was evolved the scheme of defense which they employed in 1917. It led to the adoption of lightly held front lines, with the main defensive position some distance in rear. Many small centers of resistance near the front and counter-attacks were depended upon to a much greater extent.

In the supplementary Somme battle in March 1917, the Germans employed these tactics with excellent results. When the British stormed the first line, they found them held only by machine gun squads, the infantry and artillery being further back.

From the Somme battle it may truly be said that the zone system of defense was evolved.

A good example of this principle is found in the so-called "Hindenburg Line." Lt. General Baron Ardenne, one of the most prominent German critics gives the following description of this line:

"The British called this the Hindenburg Line thereby betraying that they completely mistake its real character. It is not a line but a complicated, quadratic system of tactical bases and positions, reinforced after the manner of a fortification, from Cambrai to La Fere—that is to say over a front with a width of sixty kilometers (about thirty-eight miles) and a depth up to forty kilometers (twenty-five miles)."

This great barricade defied all assaults of the French and British throughout 1917. It is probable that it would have held out against them much longer if America had not been driven into the war.

After the battle of the Somme broad changes were to be seen in the German tactics of defense. Shallow constructions replaced the deep underground forts in the front lines; underground pill-boxes" were more common; conspicuous lines of trenches, which showed up plainly in aerial photographs, were replaced by a defense which was broader, looser and better adapted to the ground. Forward infantry positions with a broad field of fire made good targets for enemy artillery, and so were withdrawn closer under the protection of their own guns.

(2) The introduction of tanks at the third phase of the Somme battle conveyed many important lessons to the student of tactics.

The problem of attacking without a preliminary bombardment, which of necessity destroyed the element of

surprise, had been a serious one since stabilized warfare had commenced on the Western front. While the tank attack at the Somme was only an embryonic effort, it nevertheless showed the possibilities of these weapons in taking the place of an artillery preparation.

It proved, even then, that machine guns and barbed wire entanglements were no longer impassable barriers for the infantry, and that attacking infantry could at last meet the defense on equal terms.

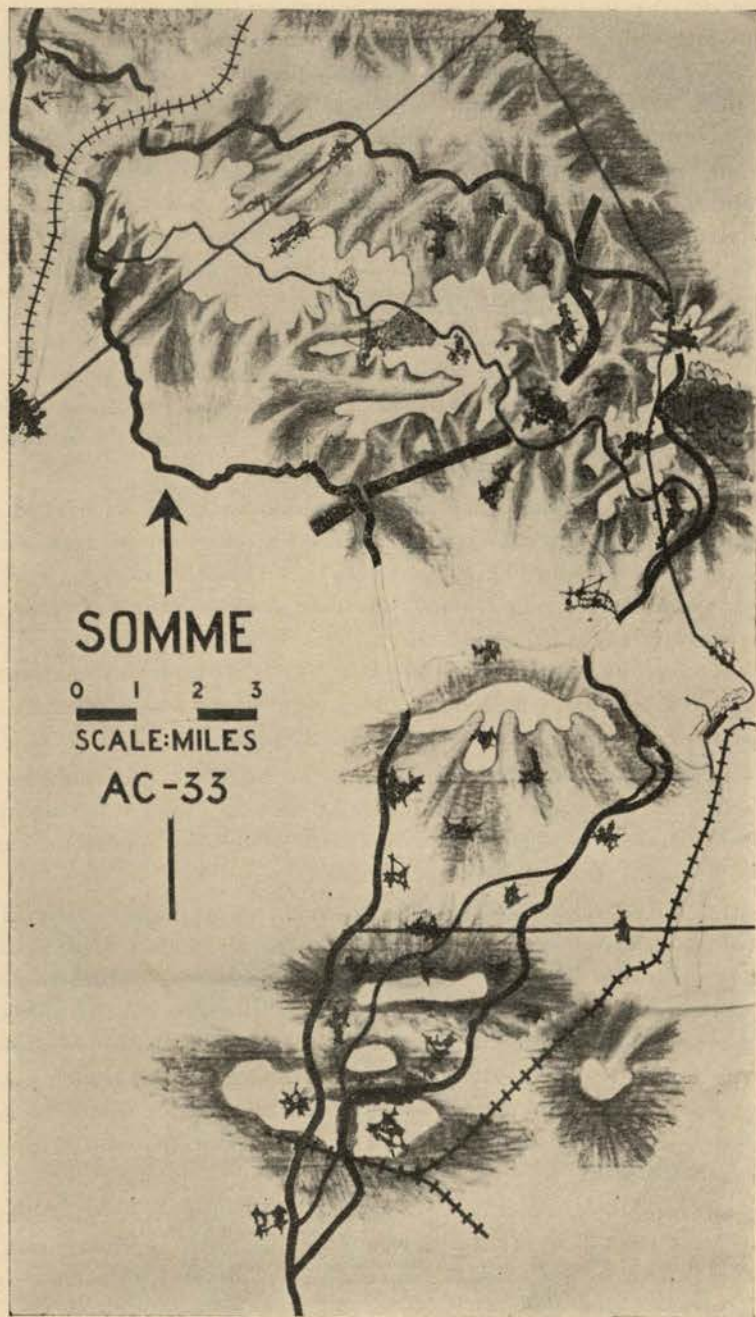
There is no question but what the effective co-operation of infantry, tanks and artillery was a great factor in the successful termination of the war in 1918. But it is doubtful if this co-operation would have been obtained if the Allies had not learned the possibilities of tanks and gained experience in their use at the battle of the Somme.

(3) The third great lesson of the battle is a very general one in its application. It is that a purely defensive attitude can never bring about a decision, whether it be a simple battle or a campaign. War cannot be won by defensively waiting for the enemy to attack. This has long been recognized as a fundamental principle based upon all history.

Whatever may be the ultimate decision on the outcome of the Battle of the Somme whether an Allied victory or defeat there can be no doubt that the constant terrific pounding on Germany's strongest line at this time, even if they did not weaken her powers of resistance, did much toward preventing her from building them up sufficiently to resist the shattering blows of 1918.

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THIS STRATEGIC RETREAT OF THE GERMANS,
FEBRUARY AND MARCH, 1917.

By
Capt. Charles F. Sutherland, Infantry
THE GERMAN GENERAL SITUATION.

At the close of the Battle of the Somme the Germans had been forced out of their former commanding positions and strong lines of defense to lower and weaker organized positions. As a consequence the British had driven a broad, deep salient into the German lines. We now find that the advantages of the terrain have switched from the Germans to the Allies, from Lys to Champagne.

The Position of the lines near Noyon, which was nearest Paris, had become a serious salient for the Germans. Their systems of communications were constantly harassed by British artillery fire along the front from Peronne to Roye. In the sectors of defense to the north, the salient, whose apex was on the spur above Beaumont Hemel, was becoming more dangerous, with each British advance toward Bapaume, or advance in the Ancre Valley. Each advance by the British forced the Germans to select poorer and more enfiladed positions, and gave the British a better view of the rear defenses of Serre and Commeccourt.

THE GERMANS PREPARATIONS FOR 1917.

It was anticipated that with the entry of Rumania into the war on the Allied side, that the Allies would resume their attacks on the Western Front, in the spring when weather would permit, and, since the British had the better positions, local successes were certain. This combined with the information of work on a large scale behind the British and French lines made an attack almost a certainty. Knowing this, a plan must be made for some way of overcoming these disadvantages in positions.

Field Marshal Von Hindenburg had been appointed Chief of the General Staff of the Field Army. He realized that the demands of the German Army were to create a reserve to be maneuvered where most needed. If an attack came from the Eastern Front by Russia against the Austro-Hungary lines it might cause their lines to collapse, if reserves from the German Army were not sent to their aid. This activity on the part of Russia was by no means an uncertainty as they might, as in the Winter of 1916 and 17, reorganize their army for an offensive. To create this reserve, Von Hindenburg had started a recruiting campaign in Poland on a large scale, but its results were negative. The negotiations for a separate peace with Russia had failed, so to overcome these failures some other plan must be made before the Allied Spring offensive.

Previous experiences had taught Von Hindenburg that the Allied attack would be co-ordinated along the whole front, and with a shortage of men and material a relief attack along the Somme or at Verdun would not be practical before the creation of a strong reserve. It was therefore best to anticipate this spring offensive in way that would give Germany the initiative at the end.

A withdrawal from the unfavorable positions from Arras to a point North of Soissons would have many advantages and but few disadvantages. In a retreat from the lines they now held they would have the power of selecting their new defensive lines on better ground, forcing the Allies to select poor positions. A retreat would, if in time, prevent the Allies from enveloping their positions in this salient by combined British and French attacks from the north and the south. It would shorten their lines by about 40 miles and in this shortening of their lines relieve large units, giving the troops withdrawn a much needed rest, allow them time for a course of training and create them a reserve. The area given over would be practically worthless to the Allies since it was wasted from long occupation and shell fire contained no large cities, factories or advantageous positions.

In addition to these advantages the new line selected would afford an excellent place for a counter-attack. A defensive action could then be taken with the lines held by a fewer number of troops, while activities could be resumed in Russia with a view of checking any offensive on their part, or crushing her before the end of 1917.

It was expected that the submarine campaign results would seriously cripple the industries of France and England and thereby lessen the effectiveness of the Allied offensive.

By destroying the territory to be evacuated, the Allies could not deliver an effective attack on a large front without taking considerable time to repair the destroyed roads, bridges and buiding railroads lines to supply the troops.

The only disadvantages of this retreat would be that following so close upon the heels of the defensive on the Somme, it could cause fear among the German people at home that an invasion from the west might take place. It would also raise the morale of the Allies and cause them to drop large supplies of phopaganda behind the German lines. To combat this propaganda campaign by the Allies, articles (news-paper articles) were published under the direction of General Staff containing descriptions of the vast amount of destruction going on before the retreat, which was to be made for strategic reasons. Since the Germans had great faith in their popular leader, Von Hindenburg, the fear of an invasion from the west would be lessened.

THE PLAN FOR 1917.

Seeing the advantages of a retreat from this area to new positions Von Hindenburg decided upon a retreat. General Erich Von Ludendorf was then Von Hindenburg's most reliable assistant, so the plans for the retreat were to be carried out by him.

The retreat was to take place March 16, 1917. During the time prior to the retreat, the Crown Prince Rupprecht worked out a program for the destruction by his army of the area to be enacuated. This demolition began February 9, 1917, over a broad belt of about 15 kilometers in width. In order that the Allies would not notice the work being carried out, the work was scattered over the wide belt and carried on under cover of fogs and darkness. the program was carried out until the time for the beginning of the retreat.

During this period of destruction, the work on the new German lines was hurried to prepare these positions for the retreating troops. The new lines were to be ready by March 1st, 1917. To overcome any possibilities of an early attack, General Ludendorf made plans for a retreat to be carried out before March 16, should the pressure on the German lines become heavy. The main objects in this plan was to avoid battle where possible, salvage all material possible, to destroy all villages, woods and other cover behind which the Allies might organize for an attack and to give the troops in rear sufficient time to prepare the new lines for defense.

THE HINDEN BURG LINES.

The Germans had given this new line, while in the process of construction, many names principally after heroes of Teutonic mythology. It was known as the Doden, Siegfried, Alberich, Bruchilde and Krilmhilde Line, but the most common name for it used by the Germans was the Siegfried Line. It branched off from the old German defenses near Arras, ran south-east for 12 miles to Queant and then passed west of Cambrai toward St. Quentin, covering this village then crossed the Oise and followed the east bank of this river until it reached the St. Gobin Forest, passed south of Laon, between the Ailette and the Aisne, touching the Aisne east of Soissons and then followed the Craonne Plateau, crossed the Chemin-des-Dames which ran along the crest of the Craonne Plateau and then turned south joining the old trace of dismantled forts near Rheims. Various "Switches" branched off from the new line were also constructed. These switches formed the "elastic defense". It was an organization in depth and from these "Switches" counter blows could be struck. The natural defenses of the line were of two kinds, the Douai Plain and water barriers in the form of canals and rivers. It was an excellent natural defensive position and was made more powerful by the excellent method of constructing the trenches.

To the Allies this line was known as the Hindenburg Line so named because it was Hindenburg who planned the construction of this line to which his strategic retreat was made.

DISPOSITION OF TROOPS.

At the beginning of 1917, the German lines were occupied as follows:

The group of armies under the Crown Prince Rupprecht of Bavaria was composed of four armies and extended from the North Sea to La Fere. The 4th Army, Under Von Ormin, extended from the North Sea to Lys, the 6th Army, under Oatto Von Below, extended from Lys to the Canal, the 1st and 2nd Armies, between the Canal and La Fere. Joining this command was the group of armies under the German Crown Prince composed of the 7th, 3rd and 5th Armies which extended almost as far as the Orne east of Verdun.

THE PLANS OF THE ALLIES FOR 1917.

THE CHANTILLY PLAN.

On November 16th, 1916 Field Marshal Joffre and Field Marshal Sir Douglas Haig met at Chantilly, France and made their plans for the operations of 1917. It was decided that pressure was to be kept up along the Western Front and preparations were to be made for a co-ordinated British and French attack to take

place in the middle of February 1917.

It was agreed that the Allies were in a better position now to attack than before previous attacks since the British had been successful in their operations on the Western Front in the latter part of 1916. However Joffre was of the opinion that the French Army could stand but one more large offensive and after that the burden of attack must rest upon the British Army.

In a later order, issued November 27th, more detailed instructions were given. By February 1st, 1917, the British Armies were to be ready to attack Bapaume and Vimy Ridge. The French Northern Group, under General Franchet D'Esperey, were to attack between the River Oise and the River Somme. Within two weeks the French Central Group, commanded by General Micheler, in clinching the 5th army under General Mazel; 6th army under General Mangin and the 10th Army under Duchesne, would attack from south to north between Soissons and Rheims, but the main concentration of the attack would be over the Craonne Plateau to Laon. The attack would be followed by another attack by the French to the west of Rheims. If it was thought necessary, the British would follow with an attack in Flanders.

THE POLITICAL SITUATION.

The French General Staff was far from being satisfied with these plans for 1917. Jealousy caused by British being placed in such an important part of the attack and on such a large front caused much discontent. By this time French politicians had become tired of Joffre's "war of exhaustion" and feared that France would be the first to wear out. They now looked for a new leader who would quickly defeat Germany.

NIVELLE'S APPOINTMENT.

General Nivelle had become very popular with the French people as a result of his tactics at Verdun. When it had been decided to promote Field Marshal Joffre to Marshal and retire him to Paris, General Nivelle was selected to take over his command.

NIVELLE'S PLANS.

On December 21st, 1916 Nivelle informed Haig that Joffre's plans had been changed. He proposed that the two attacks that were planned at Chantilly would be carried out but on a much shorter front. The main attack would be on the Oisne and would be carried out by 27 French divisions. In this attack he would mass artillery along the front, break down all defenses and resistance. He would then use the 27 divisions in the attack and change the whole strategical situation on the Western Front. Minute details were written with gains and number of prisoners listed. In short, it was to be a great drive that would bring immediate victory for the Allies.

In order that Nivelle might organize this reserve of 27 divisions, he requested Haig to extend the British Front south of the Somme to where the lines crossed the Amiens-Roye road. This extension of the British Front would greatly alter Haig's plans for the British would now have an active front of 110 miles, and close pressure on the German lines would be impossible. In return for this Nivelle proposed that the British could alter their plans for close pressure.

This would necessitate a delay of the attack since roads, railroads and positions in this new area must be improved before the attack could be made. It was estimated that this delay would be about 6 weeks. Nivelle now postponed the attack to March 15th, till the advantages Joffre had planned, to wear out the German reserves by constant pressure, would now be lost by the delay and the Germans would have time to recover from the effects of the Battle of the Somme.

POLITICAL SITUATION IN ENGLAND.

Lloyd George had become Prime Minister of Britain and upon hearing of Nivelle's plans welcomed the promise of a speedy victory for the Allies. On January 15th Nivelle explained to the British War Cabinet his plans, though Haig, Robertson and Petain were doubtful of the results, the British War Cabinet decided to adopt Nivelle's plan.

In a conference held at Calais, on February 26th, 1917, it was decided that Haig was to conform to Nivelle's plans but that he choose his own methods of carrying out these plans. Any serious differences that might arise between the two would be reported to the British War Cabinet for decision.

Since Haig was now to conform to Nivelle's plans the British lines would be extended to the place proposed by Nivelle. This was completed on February 26th, 1917.

BATTLE LINE AT BEGINNING OF 1917.

The close of the Battle of the Somme left the Germans in a Pronounced salient between the Ancre

and the Scarpe Rivers. The British held the high ground and could observe movements in the river valleys. With a short advance they would gain command of the spur above Beaumont Hamel. When this was in the hands of the British, each new advance by the British would more enfilade the German positions and gain better observation, due to the direction in which the ground sloped. By short advances the Germans could be slowly pushed out of their positions.

The Germans held the whole of the valley of the Ancre from Le Transloy to Grandcourt-Their first line of defense extended along the northern slope of Thiepval Ridge. On the northern side of the Ancre the Germans' line extended from Beaumont Hamel, of which the Germans held the large part, along the ridge north of Beaucourt and crossed the Ancre River passing in front of Grandcourt, Miraumont, and Pys. To the north the Germans still held their old front lines which passed Serre, Gommecourt and Monchy - au - Bois to the northern slopes of the main watershed and then north-east to the valley of the Scarpe River east of Arras.

In rear of these positions, and fortified villages of the Ancre valley, a secondary line was held along the forward crest of the ridge north of the Ancre valley. This Secondary line of defense consisted of a double line of trenches, heavily wired. It extended north-west from Sallisel past Le Transloy to the Albert - Bapaume road where it turned west past Grevillers and Loupart Wood. At this point it turned north-west past Achiet-le-Petit to Buquoy. This was a strongly constructed line and had the advantages of the terrain. This was known as the Le Transloy-Loupart Line.

A third line of defensive trenches were established on the far side of the crest of the ridge north of the Ancre valley and parallel to the Le Transloy-Loupart line. It was on the line Rocquigny, Bapaume and Ablainzeville.

BRITISH OPERATIONS IN JANUARY 1917.

Sir Douglas Haig decided that the first object for the British Army would be to advance in the Ancre Valley to gain positions within striking distance of the Le Transloy-Loupart Line. This attack began November 18th, 1916. In this attack the British improve their positions by a short advance. During the month of January a series of small operations were carried out by the 3rd, 7th and 11th Division under Major Generals C. J. Deverell, H. E. Watts and A. B. Ritchie. Each of these small operations resulted in improvements in positions and observation. Before the end of January the high ground north-east of Beaumont Hamel was in the possession of the British.

The most important of these small attacks was made on January 11th by the 7th Division, on a front of about 1500 yards of trenches along the crest of the spur east and north-east of Beaumont Hamel. Two hundred prisoners were taken in this attack and a counter-attack by the Germans was checked. A total of 500 prisoners were captured during the month of January 1917.

ALLIED OPERATIONS DURING FEBRUARY.

With Beaumont Hamel in the possession of the British in opened a new field of fire for their artillery. The Beaucourt valley and Western slopes of the spur opposite Grandcourt and the Serre was exposed to artillery fire and observation. The British again began operations to clear the remainder of the valley of the Serre.

On the night of February 3rd and 4th, the 63rd British Division under Major General C. D. Sheets, made an attack on the German 2nd line of defense, located on the southern slopes of the ridge north of the Ancre valley. After stubborn resistance by the Germans which lasted during the 4th and night of February 4th and 5th, the British gained their objectives. In this attack the British took 176 prisoners and 4 machine guns.

This advance made the British positions even with the center of Grandcourt. This made the German defenses south of the Ancre dangerous to hold.

On February 6th, British patrols operating in the remaining portion of the old German second lines of defense, reported that this section of trenches had been completely evacuated, south of the Ancre River between Grandcourt and Stuff Redoubt. These positions were occupied by the British upon this discovery. This was followed by further patrolling to ascertain if further movements were taking place.

On February 7th, patrols reported that the village of Grandcourt was evacuated, and by 10 A. M. a part of the British 63rd Division had occupied that village.

During the night of February 7th and 8th, an attack was made on Baillescourt Farm about half-way between Beaucourt and Miraumont. In the attack the British took 87 prisoners.

Operations were not resumed again until the night of February 10th and 11th when the British made an attack on 1500 yards of trenches, the western end being at a point at the southern foot of Serre Hill. This attack was made by the 32nd Division under Major General R. W. T. Barnes. The attack began at 8:30 P. M. under a covering barrage. The objectives of the British were taken with the exception of two strong-points.

A counter-attack was made by the Germans from the direction of Puisieus - au - Mont at 5 A. M., the morning of February 11th, but the counter-attack was unseccessful. A second counter-attack followed but was also unsuccessful.

On February 12th a third counter-attack on the front where the advance was made on the night of February 10th and 11th occurred.

The ground gained had made the village of Serre the point of a very pronounced salient and with each new advance by the British made holding the village more dangerous for the Germans. At this time larger operations were planned.

The object of this plan was to attack along the spur which extends north from the main Morval-Thiepval Ridge near Courcelette. If this objective was gained it would give the British the commanding positions of the southern approaches to Pys and Miraumont. It would also afford excellent observation of the upper valley of the Ancre River where German artillery was concentrated for the defense of the Serre Sector.

Another smaller attack was to be co-ordinated with this attack, from the opposite bank of the Ancre. and its objective was to gain possession of a part of the sunken road along the crest of the 2nd spur to the north of the Ancre. From these positions the British could control the western approaches to Miraumont.

On February 15th the Germans attacked the French positions on Massiges Ridge and captured 900 prisoners.

February 17th another raid was made on the French lines between the Oise and the Aisne Rivers, near Quennevieres.

The co-ordinated attacks planned began at 5:45 A. M., February 17th. They were made by the 2nd 18th and 63rd Divisions under command of Major Generals C. E. Pereira, R. P. Lee and C. D. Sheets. A thaw caused the ground to be very muddy and unfavorable for the attack. A heavy counter-barrage was laid down by the Germans.

The advance continued on the south bank of the Ancre to within a few hundred yards of the village Petit Miraumont. Heavy resistance was offered in the right of the attack. The British met with complete success on the north bank of the Ancre, resulting in a gain on a front of about one and one-half miles. A counter-attack followed the same morning.

The following day (February 18th) the Germans made a counter-attack at 11:00 A. M. In this attack the Germans used about 2 battalions and their losses amounted to 11 officers and 588 men.

The results of these attacks were that the high ground gained gave better observation of the German artillery defenses in the upper part of the Ancre valley and of the defenses in and around the villages of Pys and Miraumont. The British artillery now shelled the defenses of these two villages which caused their evacuation. With Miraumont in the hands of the British the village of Serre, the point of pronounced salient, and its defenses would be in danger of being enveloped, by a British northern attack. were evacuated.

If Serre was captured its loss would make Puisieux-au-Mont and Commeourt difficult to defend.

On February 24th British patrols reported that the defenses in front of Pys Miraumont and Serre

On February 25th strong British patrols pushed forward and by evening of this date the 1st line system of defenses from north of Guendecourt to west of Serre including Luisenhof Farm, Walencourt, Eaucourt, Pys, Miraumont, Beauguar, Dovecat and Serre were in possession of the British. The Germans covered their retreat by machine guns and shelled the area evacuated heavily with artillery.

The Spring thaw followed these operations and the ground gained by the British was a sea of mud. Trenches caved in, roads were in a bad state of repair and very muddy. These days were misty and made observation from aeroplanes very unsatisfactory. These conditions combined afforded the Germans excellent conditions under which they could retreat.

The British in continuing these attacks encountered heavy resistance from secondary defenses of a part of the Le Transloy-Loupard Line due west of the village of Beaulencourt and continuing along this line in front of Ligny-Thillois, Le Barque and to the southern defenses of Loupart Wood.

On February 25th the British 1st Anzac Corps commanded by Lieutenant General Sir W. R. Birdwood

made a series of attacks against a part of the Le Transloy-Loupart Line. Heavy resistance was offered by the Germans and the gains made by each attack were small. These attacks covered a period from February 25th to March 2nd. By the evening of the latter date the British had captured all of this section of the line and had taken the villages of Le Barque, Ligny-Thilloy and Thilloy. In these operations the British capture 128 prisoners. Counter-attacks were made by the Germans but were unsuccessful.

After occupying Serre and Pys on February 24th, the British continued their attacks along this sector on February 27th, and the German detachments of machine guns covering their withdrawal, were on this date pushed back to their last positions in Puisieux-au-Mont. The same evening British patrols entered the village of Gommecourt, and the defenses evacuated by the Germans were occupied.

On February 28th Puisieux-au-Mont was captured by the British. The Germans had now fallen back to the defenses of the Le Transloy-Loupart Line at all points with the exception of a salient whose point was near the village of Irles. This salient was connected to the Le Transloy-Loupart Line at Loupart Wood and Achietle-Petit.

ALLIED OPERATIONS IN MARCH 1917.

It now became necessary for the British to capture Irles and crush the salient formed at that village. Orders were issued for this attack and for another attack to follow on the Le Transloy-Loupart Line.

Before these attacks could be successfully made, preparations must be made, as the roads in rear of these positions were in a bad state of repair. The mud was very deep and work on artillery positions, ammunition dumps and distributing points for material involved an immense amount of labor. This work was completed by March 9th.

On March 8th the French took about 1650 yards of trenches between Butte-de-Mesnil and Moisons-de-Champagne and captured 136 prisoners.

On the night of March 8th and 9th the French made a raid near Crapeau, south of Roye.

Following the completion of repairs made by the British, they began their attack at 5:25 A. M. March 10th. The assault on Irles began. The attack was made by the 2nd and 18th Divisions and all objectives were gained. In this attack the British captured 289 prisoners, 16 machine guns and 4 trench mortars.

With part of the Le Transloy-Loupart Line now in the hands of the British their next object would be a general attack on the part of this line remaining in possession of the Germans. The sectors to be attacked were heavily shelled on March 11th, by British artillery in preparation for these attacks.

The night of March 12th and 13th the Germans retired to the parallel positions on the reverse slope of the same ridge. This caused the evacuation of Grevillers and Loupart Wood. The British now began preparation for the attack on this parallel line.

THE GENERAL RETREAT OF THE GERMANS.

During the latter part of the Battle of the Somme, British aviators had reported that the Germans seemed to be constructing new lines of trenches in rear of their line held at that time. This conclusion was based upon observation of large working parties of what was thought to be Russian prisoners. These lines were under construction from in front of St. Quentin to a point near Cambrai.

The Allies called this line the Hindenburg Line, named for the German Chief of the General Staff. By the Germans it was called the Siegfried Line.

On March 4th General Franchet d'Esperey, in command of the French forces joining the British, reported to General Nivelle the information gathered indicated that a general retreat would be made by the Germans. After a delay of three days, on March 7th, General Nivelle sent a message to General d'Esperey that a general retreat by the Germans at this point was "inconceivable" since the Germans held strongly constructed positions around Roye which was very close to Paris.

On March 14th British patrols operating near St. Pierre Vaast Wood reported that the trenches in that sector had been evacuated. The British moved forward and occupied the abandoned lines.

The following day, March 15th, the British obtained information from patrols that the German forces holding the front south of the Somme had been greatly reduced and were holding the line principally with machine guns and detachments of infantry.

It will be remembered that the German High Command had orders for the schedule of the General retreat to start on March 16th, 1917.

But little resistance was offered against the British advances and on March 16th the western half of Moislains Woods, St. Pierre Vaast Wood, with the exception of the north-eastern corner, and the front of

the Le Transloy-Loupart Line as far as the northern part of the village of Sailly-Saillisee was occupied by the British.

The order was issued by Field Marshal Haig for a general advance on March 17th.

General Franchet d'Esperey seeing that there could be no doubt whatever that the German retreat was taking place issued orders on March 17th for his troops to advance. The Allied advance would not cover a front of over 100 miles or from Arras north of Soissons.

In their retreat the Germans left detachments of machine guns supported by small groups of infantry in selected positions to delay as much as possible, the advance of the British and French and give their own troops time to withdraw. Some of the selected points of defense were Chaulnes, Vaux Wood, Bapaume and Achiet-le Grande. With the exception of these points the British met with but little resistance in their advance.

By the night of March 17th the British had captured Chaulnes and Bapaume. These villages were captured by the 61st Division under command of Major General C. J. Mackenzie and the 2nd Australian Division under the command of Major General N. M. Smyth. The British had now advanced from Damery to Monch-au-Bois.

On the night of March 16th and 17th the French advanced on a 12 mile front and gained to a depth of about two and half miles, north of the Ancre.

The 48th British Division under Major General R. F. Anshawe entered Peronne and then occupied Mont St. Quentin, north of Peronne. British troops to the south were now on the western bank of the Somme in a line extending from Perrone to a point north of Epenancourt.

On this date French and British cavalry entered the village of Nesle.

On the evening of March 18th the French made an advance to a depth of 12 miles in the direction of Ham.

The French made an advance between their old lines and the road from Noyon to Roye and the area between Damery and the Lagny was captured.

On the 18th and 19th the French continued their advance and reached the Ham-Nesle railroad at points. To the north of Noyon they took Guiscard. To the east of the Oise River they occupied the abandoned 2nd line positions. Ham was occupied on this date.

The bridge across the Somme at Brie had been destroyed and further progress was held up until the necessary repairs were made. Upon the completion of these repairs, at 10 P. M. on the 18th, the British crossed to the east bank of the Somme. To the north of Peronne, the last German system of trenches known as Beugny-Ypres Line, was occupied by the British. Beyond this system of trenches the country was open, rolling terrain. It extended as far as the Hindenburg Line. On the left of the advance the British captured Beaurains.

The British line now extended to the north of Peronne along Bussu, Barastre, Velu, St. Leger, Beaurains, and the line of the Somme from Peronne to Canizy. British cavalry had kept in touch with the German troops at Nurlu, Bertincourt, Noreuil and Heninsur-Cojeue.

By March 20th detachments of British infantry had crossed the Somme and a line of out-post were established through Hancourt, Nurlu and extending to Bus. To the north the British had occupied Morchies.

The advance of the British was now slowing up due to the difficulties in crossing rivers. All bridges were blown up by the retreating Germans and telephone lines were either destroyed or removed.

North of the Somme River French cavalry reached the outer edge of Roupy and to the north-east of chauny the infantry had crossed the St. Quentin Canal. That night the French captured Jussy.

The advancing troops moved over the area of destruction so thoroughly carried out by the Germans. The Germans had begun their systematic work of destruction on February 9th and wide belts of what was once the garden spot of France was now a desert with an area of about 1,000 square miles. Villages, roads, woods and orchards were leveled. Even the ruins of towns where only the walls were standing were blown up. Cellars were caved in and wells were either blown up or filled with trash. Such articles that were worth removing were carried off by the retreating enemy. The inhabitants were gathered in central points and left for the advancing troops to feed.

The advance of the British continued slowly forward for transportation of supplies and the moving of artillery over this wasted area required an immense amount of work. The British realized that the Germans

had the advantage for a counter-attack and were cautious in their advance. With each advance selected positions were organized for defense, to be used in case a counter-attack came.

The Germans were kept informed of the progress of the French and British by their screen of machine gun detachments to their front.

The resistance by the Germans now stiffened as the British and French approached the Hindenburg Line. To the north of the Bapaume-Cambrai road the British occupied a line between Noreuil and Neuville-Vitasse, within 3 miles of the Hindenburg Line.

Beaumont-lez Cambrai was taken on March 21st by the British. Five counter-attacks were made by the Germans to recover this village but all were unsuccessful.

The advance of the British and French now came practically to a halt and minor operations were numerous until the close of March. In one of these small operations a part of the British 5th Cavalry Division captured Villers Faucon, capturing 23 prisoners and 4 machine guns. This cavalry division was commanded by Major General H. J. M. MacAndrew.

The close of March found the advance of the British and French Armies checked, and in front of the Hindenburg Line.

ANALYSIS AND CRITICISMS.

In Hindenburg's estimate of the situation on the front between Arras and Soissons he took into consideration all advantages and disadvantages of a retreat, and after weighing them, formulated a plan for the retreat, then immediately began preparations to carry out his decision.

In weighing the advisability of a retreat, he realized that small successes for the Allies were certain and that it would be only a matter of time until the salient would be straightened.

Since the Germans would be forced back by the Allied attack he could retreat and gain many advantages with but few casualties, that would obtained should he offer strong resistance.

By this retreat his advantages gained would then be:

(a) He had the power of selecting his places of defense and forcing the Allies to fight under unfavorable conditions.

(b) Prevented the Allies from enveloping this salient from combined attacks from the north and south.

(c) Shortened his front about 40 miles.

(d) Created a reserve from the units removed from the line which could be used to support the Austro Hungary lines should they weaken, check and attack from the eastern front or place these units in training centers for training and rest.

(e) Take the defensive to await the results of the submarine campaign against Allied commerce.

(f) Made an attack over a large front impossible until railroads, bridges, roads and systems of communications were built.

(g) He gave over an area of about 1,000 square miles that would be totally worthless to the Allies.

(h) He overcame the disadvantages of a retreat by selecting and constructing excellent positions for a counter-attack.

The thoroughly organized program for the publishing of propaganda in the German daily papers was a great step in keeping the morale of the people high and of taking away the sting of the retreat.

This retreat was one of the greatest strategic conceptions of the World's War.

A certain amount of destruction was necessary to delay an attack by the Allies, but the destroying of scattered orchards, valuable paintings in cathedrals and things that would in no way aid the Allies in war was nothing short of Vandalism.

THE ALLIES.

Joffre's plans were to keep up pressure to wear out the German Reserves before the attack, had this been done it is reasonable to believe that the Allies would have been successful in these operations. We have seen that the Hindenburg Line was to be completed by March 1st, and should Joffre's attack of February 1st, 1918 have been carried out as scheduled it would have placed the Germans in a serious position. The Allies had every advantage of terrain superior strength and supplies. The Germans were without a suitable reserve and were in poor positions to withstand a heavy attack.

It is estimated that the Germans had 154 divisions and the Allies 178 divisions on the Western Front. With this superiority the Allies would have had a decided advantage.

The political influences used in the removal of Joffre were a serious mistake at this time. Though his tactics may not have met with their approval, he would have been successful in his operations.

When Nivelle changed Joffre's plans the Germans gained what they most desired—time to prepare for their retreat.

When Nivelle extended the British front he lost the advantages gained in the Battle of the Somme. He placed Haig in such a position that close pressure on the German lines was impossible and the possibilities of wearing out the German reserve was out of the question.

Nivelle's actions indicated that he was more interested in the political situation in France and England than in what was taking place on the Western Front.

In his minutely detailed plans he saw nothing but a sweeping victory and seemed to give but little thought to the obstacles that would be placed to check his advance.

In his efforts to create a favorable opinion of his plans he failed to keep in touch with the situation on his front and upon receiving information of the German retreat, completely ignored the judgement of D'Esperey.

LESSONS.

The importance of Higher Commanders keeping in touch with their commands and enemy operations cannot be too greatly stressed. General Nivelle lost touch with his front and by so doing gave the Germans time to retreat.

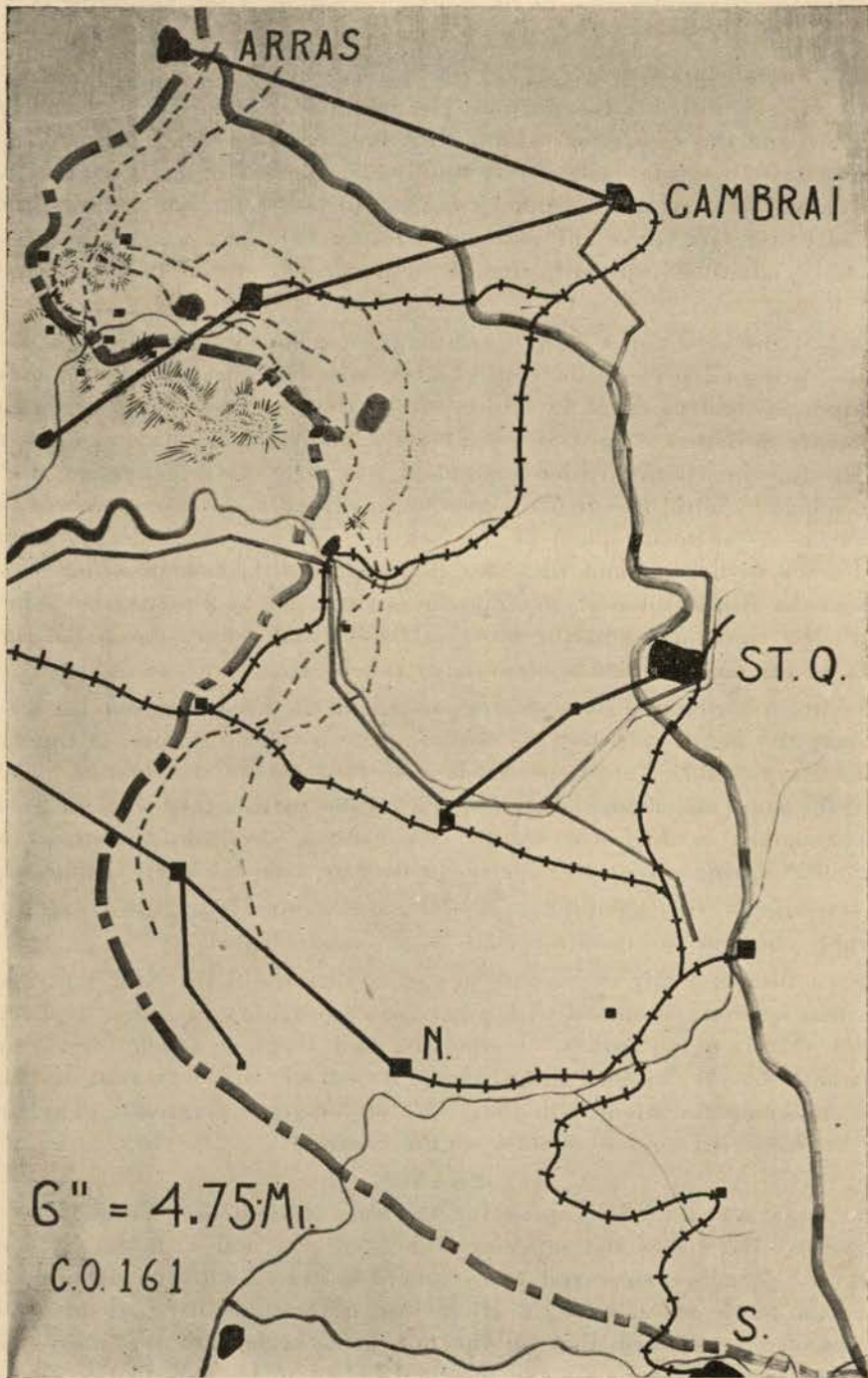
The necessity of combat reconnaissance is shown by Haig's constant patrolling and pushing detachments to his front to keep in touch with the Germans.

The placing of Nivelle in command of the French forces and at the same time placing the British operations in his charge was a task too great for one man. He should have been appointed Commander-in-Chief of the two armies and in a position to be free from the details of a small command.

The importance of communications between units is seen by the thoroughly organized system between the French and British.

The importance of a correct estimate of the probable intentions of the enemy is seen by Von Hindenburg's plans. In his plan of retreat it is shown that he had accurate information of the Allied attack.

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OPERATIONS ON THE WESTERN FRONT JANUARY 1 TO MAY 15, 1917
(EXCEPTING: 2ND Battle of the Aisne).

By

Major Ernest J. Carr, Infantry.

Prior to undertaking the discussion of actual operations in the main theater of War, it is deemed useful to digress briefly for a consideration of the general situation at the beginning of 1917.

GREAT BRITAIN

Great Britain, nationally unified for a vigorous prosecution of the war to an early decision had placed in power a ministry firmly committed to this purpose. Her munitions production was well organized, had ample sources of raw materials, and was greater in volume than ever before. After February first, unrestricted submarine warfare was to threaten seriously her food supply and the flow of materials from the United States.

British forces on the western front, although not completed to the quota desired, were larger and better equipped, and had better "service of the rear" than ever before, and were disposed on ground favorable to the resumption of the offensive, especially should the Germans continue to occupy and fight on their present defensive lines.

Britain had sensed the need for a more centralized command among the Western Allies and was to entrust her part of the spring offensive to the control and leadership of a French Generalissimo. Although the arrangement was temporary, and its duration subject to the decision of the British commander in chief, (in case of threatened disaster to British Army), it was a move in the right direction and it is most regrettable that French officer selected for the Higher Allied Command was deplorably lacking in the qualifications necessary for supreme command. With the British decision to subordinate their command to that of the French went a complete reversal of the spring plans of the British. This was in order to carry out the strategic conceptions of the French high command who now believed a break through on the Western Front possible, in contra-distinction to the British plan of wearing the German out by pinching out salients, local offensives, a heavy drive toward the German submarine bases at Ostend and Zeebrugge on the Belgian Coast and the seizure of such parts of the German line as dominated nearby British positions.

The British having subordinated their strategy to that of the French, a plan for the Allies was arranged giving the French army the major role and the British army a subsidiary one in the spring offensive. This plan later had to be further modified after the Hindenberg Retreat, but the relation of major and minor and minor role, remained the same and throughout the operation the British gave wholehearted and complete support to the French commander in chief. The unfortunate result of the campaign made the British unwilling thereafter (until the 1918 spring crisis) to experiment further with a French Commander-in-Chief.

The British estimate of the capabilities of her allies to sustain aggressive action against the central powers fell considerably short of the facts especially in the case of Russia.

Great Britain was forced, partly on account of earlier reverses in the Near East and a resultant loss of imperial prestige in that quarter, combined with a fear of eventualities in India, to divert considerable land forces and material of operations in Turkey, Mesopotamia and Bagdad, which forces, probably could have been used more decisively on the Western Front. (Employment of sufficient land and naval forces to keep open the Suez Canal and communications with India was, of course, imperative). (The British had, in spring of 1917, 52 divs. on the Western Front, 30 of these on the Somme).

-FRANCE-

France, in the mass, was united in spirit for the war, exultant over Verdun, but underneath the surface, tired and war weary. Her losses and sufferings had been great but with success in the field her morale would remain. However, when her mercurial temperament was faced with the calamity of Nivelle's offensive, and she contemplated the havoc wrought by the Hindenberg retreat, her national spirit fell to the depths and a period of such despondency obtained, that for the time being her armies were incapable of offensive action, (open mutiny broke out in some regiments) and the British had to be appealed to for special exertions on their front to relieve the situation on the French front. German propaganda operated in France and found its mouth pieces in the so-called "Defeatists" who championed peace at any price and peace without victory, thus obstruction, insofar as they were able, the best efforts of the mass of the French people.

French civil politicians dabbled in purely military affairs to the extent of embarrassing the army com-

mander on the eve of his most vital field operation.

France reflected the belief of England that Russia and Italy would be able to co-operate continuously and effectively against the enemy during 1917. French industry had been reorganized and munitions output had increased to a satisfactory degree. The nation-wide desire for a return to the offensive in contra-distinction to the defensive type of warfare waged by Joffre had resulted in the elevation of Nivelle to the supreme command—a general imbued with the idea that break-through on a large scale was not possible. The plan of offensive chosen was not approved by Petain and numerous other able French officers, for military reasons, but was put into effect in spite of the opinions of these men.

Italy, laboring under a fuel shortage, with increased armament and augmented field forces, but still lacking a united nation behind those forces, looked optimistically forward to reopening the offensive on her northern frontier. In Italy, like France, German propaganda furthered the "Defeatist" attitude toward the war. Not until Cadorna reeled back to the Piave under smashing German blows did Italy realize that nothing short of her maximum national effort could constitute her offering to the defeat of Germany. By the end of 1916 Italy had sent 200,000 troops into Albania, thereby increasing the strength of the Entente in this region, but accomplishing a dispersion of her forces and moreover, arousing Greek jealousy by this action. An immense amount of construction and engineering work in the mountainous northern frontier had been carried to completion by Italy in preparation for her spring offensive.

-ROUMANIA-

Roumania, like Serbia, was now removed as an asset to the Entente. No longer capable of resistance, her army had retired into Moldavia, her food supply was converted to German use, and much of her territory and communications were consolidated into Mittel-Europa.

-GREECE-

Greece under the pro-ally government of Venizelos had declared war on Germany in October 1916, and was now definitely committed to the Entente. Athens was occupied by the Allies and control of the navy and forts was in allied hands. The situation in Greece was now immeasurably more favorable than during the period to the removal of Constantine. Greece labored, however under the disadvantages common to any state which but a few months before had changed the form and personnel of its national government.

-RUSSIA-

Russia had shot her bolt. The failure of the allies to force a helping hand to her through the Dardanelles, had cut Russia off from supplies vitally necessary, weakened her offensive power, and prevented the free communication so vital to a successful prosecution of the war by the Entente. Russian domestic conditions were not understood by either the Allies or the Quadruple Alliance at the Beginning of 1917. A full appreciation of these conditions would have been a rude shock to allied morale at this time, but it might have forestalled Nivelle's abortive offensive effort in April. When the blow finally fell (Russia's condition becoming known), its force was lightened by the contemporaneous entry of the United States as a belligerent on the side of the Allies. Well into 1917, in spite of her inherent weakness, Russia continued to be a threat which Germany did not dare to disregard. (Up to the battle of Arras in April, but one Russian-front division had come west, and this one had left the Eastern front before the Revolution).

-THE QUADRUPLE ALLIANCE-

The powers of the quadruple alliance at the beginning of 1917 were still capable of a mighty and united war effort, although temporarily unable to man a major offensive in the west.

Germany dominated the alliance imposing her will with few restraints upon the lesser Teutonic allies, both in matters of State's Policy and military operation. She was beginning to show signs of the wear and tear of war and to feel the ever increasing strain of the Entente blockade. This was felt especially in a growing shortage of food and raw materials. Substitute articles were in use for many commodities which were unavailable on account of the blockade. (During the winter 1916-17, which was very severe, the use of a substitute lubricant which froze, contributed materially to slowing up of interior transport which already was taxed by the freezing up of inland waterways).

Ammunition supply in reserve had temporarily increased, due to the winter lull in operations more than to improvement in agencies of production.

The promised victory of 1914 was now somewhat behind schedule and faith in German leadership and

power could not fail to be shaken after years of heavy losses and strong evidence of the augmenting power of the foe which Germany had failed to crush in 1914.

The prestige of the Dynasty suffered as a result of the close connection of the Crown Prince with the long sustained slaughter at Verdun. The unfulfilled promises of victory by the government and High Command brought these powers under question as to their judgement and while disciplined Germany did not criticize openly, doubt must have arisen in thoughtful minds as to Germany's ultimate ability to achieve victory. The increasing pressure for domestic reforms found expression in the Socialist group of the Reichstag, and later in the year gained such proportions as to clearly indicate to the outside world that the Imperial government was losing its former firm grip on the nation.

The field command of the armed forces was fortunately placed at this time, both Ludendorf, and Hindenberg holding an assured place in the esteem of the German Masses. The prestige of Hindenberg especially, was a valuable asset later in March, when the use of his name in connection with the strategic withdrawal ("Hindenberg" Retreat) to the Siegfried line ("Hindenberg" Line) avoided injury to German morale, such as might have been expected to result from a retreat of such dimensions.

The group which championed unrestricted submarine warfare were now in the saddle and their utmost desires were translated into official action on February First. The factors entering into the decision to make unrestricted use of the U-Boats were: The need of some sort of offensive to bolster up national morale; the scarcity of troops with which to attack in force in the west; a failure to foresee the early collapse of Russia; and underestimate of the speed and power of America's reaction to the U-Boat offensive; a need for a success which would renew faith in the Dynasty and government and stifle for a time the growing demand for domestic reforms and a real belief on the part of most of the High Command that the submarine could starve out England and materially injure France before American effort could be decisively utilized by the Entente.

The use of the submarine offensive of 1917 was an interdependent action with the assumption of the defensive on the Western Front by Germany. She would realign and hold strongly her western defenses, give the submarine time to accomplish its purpose and await the outcome in Russia, hoping for the time when Russian conditions would permit large transfers of forces from the east to the west and a resumption of the western offensive.

Germany had learned valuable lessons on the Somme in 1916 and her defensive organization in the west in 1917 applied those lessons-with what success we will discover later.

The difficulties mentioned as besetting Germany in the period considered must not be taken as evidence of serious weakness in Germany at that time, but merely as indications of a situation in which positive successes on land or sea would steel the German people to the utmost endeavor and restore full faith in the Imperial government and Dynasty, while an extensive reverse, or a long continued pressure of the Allied blockade would vastly injure German morale, affect the will to victory, and increase the domestic difficulties of the State.

The German High Command believed in ultimate victory, or at least knew that to exist after the war, the Empire must win. The deliberate, malicious havoc wrought on evacuated territory at this time evidences the firm belief of the German chiefs that they would finally conquer.

At the time of the great retreat Germany had, according to Ludendorf some 150 divisions facing 190 Allied Divisions in the west. The British estimate at the time was 159 of which they supposed 69½ divisions were between the Oise and the North Sea.

Beginning to feel the shortage of man-power and knowing that it was bound to increase, Germany sought by all means to use material where it could replace personnel. Between 1914 and 1918 she cut the man-power of divisions in half but increased the weapon complement three times its original strength.

By use of new Levies and subtractions from the man-power of old organizations, she formed 13 new divisions for use in the Spring of 1917.

The reduction of battalion strength caused by the subtraction mentioned, was further increased by the formation of "Works Companies" whose functions heretofore had been performed by details from line troops. These depletions had two advantages especially they permitted a more elastic control for the numerical strength involved, than had been the case with larger divisional units and they gave the inexperienced young

captains groups of a size more easily lead and administered than the 200-men companies of the earlier part of the war.

Germany strained every effort to improve her air service and on the other hand commenced a large scale breaking up of cavalry units. Horses went to the artillery and transport services and the men were formed into dismounted battalions.

In training Germany took a chance and reversed her whole scheme of defensive tactics in preparation for the Spring of 1917.

-LESSER TEUTONIC ALLIES-

A discussion of the situation in Austro-Hungary, Bulgaria, and Turkey will not necessarily be on the same scale as that used for Germany, as these lesser allies were dominated by Germany and in return received only such assistance as was considered necessary to the success of Germany.

Austria came to German Headquarters with a request for twelve divisions for use in a spring offensive against Italy, but was refused. She was hard pressed by the war and beset from within by the frictions of her heterogenous peoples. Her more loosely organized state could not weather the strains of war as well as Germany. She had borne the initial shocks of each Russian offense and although reenforced by German at critical times, she smarted under the political and military dictatorship of her dominant ally. As long as Austria, Bulgaria and Turkey remained in the quadruple alliance their policies, resources and operations were in the hand of Germany. Bulgaria requested six divisions from Germany for use in a spring offensive in Macedonia, but like Austria was refused, and committed to the role of containing, if possible, the allied armies on her front.

-TURKEY-

Germany could not afford troops for the special aims of her lesser allies, but tried to improve the quality of the troops they had already possessed. Turkey like the rest of the lesser allies, did not get all the German help she desired for her own aim. Her armies were not all that Germany desired in training. Ludendorf states that, of the Turkish commanders, only Liman Pasha worked seriously, and that all Turkish troops at this time were second rate, except the German-trained Turkish troops in Galicia and Roumania.

Turkey was using the war as far as possible to further her national aims. Events during the earlier part of the war had favored her in this. She had failed to withdraw her two armies from the Caucasus during the severest winter weather and had suffered heavy losses from exposure of her troops during the winter 1916-17. Germany indicated no particular mission for her during the spring of 1917 other than to do the best she could with her own forces in holding off allied attacks in her particular area.

-BULGARIA-

German High Command placed Below in charge of improving the training of the Bulgarian army during the winter of 1916-17, but the action was not fully satisfactory due to lack of assistance from the Bulgar General Staff. Lack of acquaintance of the part of German personnel with the Bulgarian language and national sentiment further hindered improvement of the Bulgar army by German officers. German High Command had experienced friction in the Rumanian Campaign whenever Bulgar forces were used in areas outside of Bulgarian national interest, and it was decided that in 1917 full use of Bulgarian forces could best be obtained by using them to operate as containing forces on their own fronts as far as possible.

WESTERN FRONT.

-ALLIED SITUATION-

The Entente had a superiority in numbers and material on the ground, sufficient to prevent the Germans from assuming the offensive, but not enough to force German withdrawals on a grand scale. This was especially true after the Hindenberg Retreat in the middle of March. Neither before nor after the Hindenberg Retreat had they sufficient superiority to warrant attempting a break-through and exploitation in a strategic sense. Prior to subordinating their army, the British plan favored increasing pressure on all allied front, coordinated but limited attacks and the gradually increasing exhaustion of the German Army. This plan would have suited Joffre, but he had been displaced by Nivelle whose plan became the allied plan and called for a strategic break-through by the French while the British army executed a diversion.

This plan as originally conceived had the saving quality of calling for offensives on broad fronts but

after the Hindenberg Retreat broke up the frontage prepared for attack the plan had to be carried out on restricted fronts.

-GERMAN SITUATION-

The German defensive line on the Western front was practically the same on January 1, 1917 as the line at the close of the Somme battle in the autumn of 1916. It covered the submarine bases at Ostend and Zeebrugge at its northern end. Leaving the Sea, near Nieuport, it ran south passing west of Dixmude, east of Ypres, west of Lens and ran along Vimy Ridge dominating Arras. From here it covered Bapaume, St. Quentin, passing east of Albert, west of Roye and just east of Soissons where from commanding ground it dominated Soissons. Including Caonne it passed through Berry-a-bac and just east of Rheims it again held dominant ground commanding that city. From here it passed east of Verdun and on to the Vosges.

The weak sectors were especially in the part of the line from Arras to Soissons (Noyon Salient). In the northern end of this zone the British had forced the Germans into a salient between the Scarpe and the Ancre and their early 1917 operations were pointed on Bapaume. The sector north of Soissons and up to the British front had numerous small salients and faced the French sector which was being prepared for a large part of the French spring offensive.

Germany needed time to watch Russia, to wait for the U-Boat victory, and to gather strength for a resumption of the offensive in the west. Therefore she assumed the defensive in western Europe. To carry out the defensive she shortened her lines, thereby gained reserves and took up new positions stronger than the old. This shortening of lines removed the salients, and weak frontages, and established the army on a front whose preparation had begun in September 1916 (Reported by English airmen in fall 1916). She effected a re-grouping of the separate army commands for better control on the new front and applied the lessons of the Somme in the new system of "elastic" defense.

Having thus sketchily outlined the general schemes of both the Allies and Germany we shall now proceed to a consideration of each in detail as applied in actual operations between January 1st and 15, 1917. Within this period the most important actions (in chronological order) are: (1) British operations in January and February southeast of Arras, 2() The Hindenberg Retreat, (3) the Allied Spring Offensive commencing April 9. (The French participation in the Allied Offensive will not be treated in this monograph as it has been assigned as a separate study to another officer.

British operations in January and February, 1917 (37):

The British plan prior to their acceptance of the plan of Nivelle called for an offensive pointed on Bapaume and intended, with French Cooperations to pinch out the salient between the Scarpe and the Ancre. Having completed this operation they contemplated a sudden shift to Flanders and a major offensive against the German submarine bases at Ostend and Zeebrugge. The attack on the Scarpe-Aucre salient was to be delivered from two directions, namely an attack from Arras southeast and from the Ancre east and northeast. In relation to the whole front, this operation, if successful, would materially weaken the German position in the Noyon Salient and would obliterate the lesser salient west and north of Bapaume. The attack from the southern side was first undertaken. Between the first week in January and the end of January the 3rd, 7th and 11th British divisions by small advances pushed forward on the Ancre front and among other positions occupied the Beaumont Hamel Spur east and northeast of Beaumont Hamel. This position afforded much assistance to the British artillery and enabled the Infantry to push on again on February 3rd and 4th to a position seriously threatening Grandecourt which was evacuated by the Germans and occupied by the British on the morning of February 7th.

The British 32nd division attacked in the Beaucourt Valley on the night of Feb. 10-11th under cover of an artillery barrage and took the German trench lines with the exception of two strong points. (Throughout all the January and February fighting counter attacks were common, and German resistance was vigorous up to about the 25th of February). Following the attack in Beaucourt Valley the British, on February 17th, attacked on both sides of the Ancre in greater strength, using the 2nd, 18th and 63rd divisions. This advance was made toward Miramont and was halted within a few hundred yards of Petit Miramont. On the 18th the Germans counter attacked heavily north of the Ancre but were broken up by artillery and machine gun fire. In the next few days small gains by the British gained complete observation over German artillery positions in the upper Ancre Valley and on the 24th of February the Germans gave up Miramont and Serre and numerous

neighboring defenses. Extremely bad weather and visibility hampered the British advance from February 25 for many days following.

On February 27, Gommecourt was taken and on February 28 Puisieux-au-Mont. The village of Irles now protruded as a local salient in the German line and its reduction was under taken. The British infantry had gotten ahead of its transport and communications and a week's delay was required to reorganize. On the 10th of March Irles was taken by the 2nd and 18th divisions. The British had now covered two-thirds of the distance to Bapeume and faced the Le Transloy Loupart Line. Systematic bombardment was commenced and was so heavy that the enemy's forward line was evacuated on the night of March 12th and 13th, and as a result the British occupied Grevillers and Loupart Wood. At this stage it became evident that the Germans were not only about to desert the small Ancre salient but were also preparing a major retirement from the Noyon salient. (Arras to Aisne). Patrols, on the 14th of March, discovered large local evacuations of defense and from the Somme came word by the 13th of the German retirement at the southern end of the line. From this time on the British pushed forward on the whole front from south of Arras to the French Sector beyond the Somme, finding little resistance but hindered by weather and the condition of the evacuated territory.

The rearward movement detected on the 14th of March was the Hindenberg Retreat, the troop movements of which occupied from March 15th to March 18th, but preparations for which had been going on since February 9th.

(For a detailed description of the Hindenberg Retreat see the preceding article)

-ELASTIC DEFENSE-

German defensive organization in the west was now based on the experiences of the Somme Battles of 1916, where it was shown that superior gun power blasted strong continuous trench lines out of existence; that such lines were easily reconnoitered from the air and easily registered on by artillery; and that heavy front line garrisons could neither withstand intense shelling nor get out of their dugouts in time to resist the first infantry assault wave. The German command therefore decided: to hold front lines in depth, lightly and without continuous trenches; in rear of this to checkerboard plenty of machine guns; to site the machine guns in folds of the ground giving natural cover.

The limiting line of a sector was not permitted to run thru a village and provision against infiltration between groups was made by placing emergency groups in rear of threatened areas. Counter attack divisions were placed in rear of front line divisions at critical points for use in methodical counter attack especially. All commands were trained to depend on themselves for the forces used in the immediate counter attack. The immediate counter attack was to be delivered at the moment of enemy success or immediately thereafter.

Troops were made to realize that the methodical counter attack by other organizations in rear was an operation requiring time preparation, and could not be expected to regain promptly ground relinquished by forward zone troops. Ground was to be given up when holding it longer was not worth further losses, but withdrawal was to be carried out only on order. This provided elasticity of defense and morale would not be injured by such timely withdrawal by order, and after the attacker had paid the price. A lavish use of barbed wire, and plenty of machine guns gave fire power and economized forward zone personnel, and protection and where necessary, was provided by concrete small shelters ("Pill-boxes"). The remainder of the defense, while further back came the "switchlines" and artillery organized in depth.

Bombardment of the forward zone, under this defensive system, demanded untold amounts of artillery ammunition and never was fully effective, as some machine guns and crews always escaped and by fire action were able to throw the first assault waves into confusion thereby preparing the situation for immediate counter attack.

All organizations down to include the Company were required to furnish their own forces for the "immediate" counterattack and therefore were disposed in depth. For instance, a division of three regiments would hold narrow sectors for each regiment but all three regiments would be in line. This permitted alternate front-line and support duty within an organization and furnished counter-attack groups familiar with the ground in front of the supports, it also avoided the mixing of units during combat which would unavoidably result if broad fronts of shallow depth were assigned to units. Having in mind the defensive measures taken by the German Command, let us now return to the Allied armies as they faced the new Hindenberg Line

on April 8th, the day before the commencement of the Allied Offensive of 1917.

The new plan of the allies-Nivelle's Plan, was sadly deranged. Favorable points for attack had been removed, communications and heavy artillery on a large part of the front were still far to the rear. The new German line buttressed on three positions of great natural strength: Vimy Ridge at the north, the St. Gobain forest in the center and the Heights of the Craonne Plateau at the south near Soissons. Opposite only one of these (Vimy) had a heavy allied blow remained ready after the dislocation caused by the Retreat to the Siegfried Line. The Germans had not dared to relinquish their grasp on this strong natural position, it dominated the British in Arras, and guarded against advances eastward along either its northern or southern flank, and at the same time denied observation to the British over the back areas to the northeast and east.

Under the Nivelle plan, the attack on Vimy Ridge and vicinity, originally prepared as a British operation prior to going into Flanders now became a subsidiary attack in relation with French Aisne-offensive scheduled for April 12th, but not executed until April 16th. No matter what particular place was assigned to the Arras British attack in the French plan of combined battle, the fact remained that at Arras a heavy blow had been made ready and was delivered on April 9th.

THE ARRAS OFFENSIVE.

-THE BATTLEFIELD-

Let us first make a brief map reconnaissance of the terrain on which the battle is to be fought. Arras and the country to the east is part of the "Loam-Chalk" plain of the Somme. The dominating natural features in the fore-ground are Vimy Ridge to the north and slightly east of Arras and Monchy Le Preux east and a little south of Arras. All of the rivers in the battle field flow in a general northeasterly direction, these are: From north to south, the Souchez beyond the northern end of Vimy Ridge and below Lens, and the Scarpe just north of Arras and Monchy Le Preux. The Cojeul, the Sensee running thru Croiselles and Fontaine le Croiselles, and lastly the Hironnelle beyond Bullecourt at the southern limit of the battlefield. Along the Scarpe in the center of the field there is much marshy land. Small villages are scattered all over the field also patches of woodland and small hills.

The high ground on which the Vimy Ridge is situated extends from the Souchez to where it is cut by the Scarpe, beyond the Scarpe it rises again to the crests of Orange Hill and Monchy Le Proux, then falls away to the Cojeul on the south. All of this highland slopes gradually upward to the east and falls abruptly to the east on reaching its highest elevation. This is especially true of Vimy Ridge proper, where the long gradual ascent from Arras ceases at the crest of Vimy in an abrupt eastward facing escarpment which circumstance permits an observer on Vimy Ridge to view from above, the country for miles to the north and east, but denies such observation to all points west and south of the Crest. The elevation of Arras is 60 meters, Vimy Crest 145 meters, Monchy Le Preux 105 (B.M. 107.81), and Orange Hill 100 meters above sea level. Monchy Le Preux forms a most threatening natural position east of Arras dominating the Arras Cambrai Road and Cojeul Valley to the south, the valley of the Scarpe to the west. The value of the Monchy Le Preux position was demonstrated as far back as 1654 when Turenne and his French army operated from it against the Spaniards the besieging Arras. The whole foreground taken by the British during the Arras Battle was later to prove invaluable in standing off German assaults, in 1918. The Arras-Cambrai road runs southeast from Arras through the battlefield and the Arras-Lens road cuts across Vimy Ridge west of Thelus on its way to Lens. Numerous less important roads and some railroads cross the terrain but with the exception of railway triangle and the sunken roads around Monchy Le Preux had little effect on the battle. Railway Triangle (east of Arras on the wrecked Arras-Lens railway) by reason of its artificial strength and the contiguity of other strong points (especially Observation Ridge just east of the triangle) proved a serious obstacle to British Advance. The sunken roads around Monchy also proved difficult obstacles due to the number of German machine guns sheltered by them.

The other points in the terrain deserve special notice, namely, the "Pimple on the south side of and the Bois en Hache on the north side of the Souchy River. The taking of these two points on the flank of Vimy Crest was the decisive action with regard to the British capture of Vimy Ridge.

The Geological structure of the battlefield essentially affected the action of both armies, permitting large scale excavations in the chalk for cover by both British and Germans. The loam surface soil, when affected by the wet weather, retarded movements forward of British transport and guns. Chalk substructure caused the

close grouping of dwellings into numerous small villages which in the battle became strong points. Numerous sunken roads played an important part in certain sectors as at Monchy Le Preux.

-BRITISH PREPARATIONS-

Preparations for British attack east of Arras had gone on all thru the Winter of 1916-17. The scale of these preparations is indicated, for instance, by the size of a single undertaking in which shelter for three whole divisions was excavated under the City of Arras. This underground work also provided communication and sufficient safe exits to the east to totally avoid German Artillery fire when moving into the attack positions.

The artillery cut enemy wire systematically for three weeks prior to April 9th. All preparations for a highly organized assault and local exploitation were at hand. Even a Corps of Cavalry was brought into position in rear of the 3rd Army for possible use in open fighting. The Ypres front to the north was bombarded as a feint covering the real attack at Arras.

The British First and Third armies were to deliver the main attack covering from the north end of Vimy Ridge to beyond the Cojeul. The Fifth and Fourth armies were to extend the front to the south (with attacks of a subsidiary nature) to about opposite St. Quentin. Horn's First army had its Canadian Corps (Byng) opposite the northern and highest part of Vimy Ridge. The Third army under Allenby had its 17th Corps (Fergusson) from the Canadian's Right to north of the Scappe and northeast of Arras. Then came Haldanes 6th Corps opposite (east) of Arras and Snow's 7th Corps constituted the right of the third army attacking astride the Cojeul and cooperating with Gough's 5th Army which faced Bullecourt and extended to the south.

The divisions assigned to the initial attack north to south as they formed on the line of departure were as follows: Canadian 24th, 4th, 3rd, 13th; Brit. Brig. of 5th Div. 2nd and 1st Canadian; 17th Corps, third army: 51st, 34th, 9th, with 4th in rear of 9th for "leap-frogging." 6th Corps 15th. 17th Corps 3rd, with 37th "leap-frogging" the 15th. 17th Corps 3rd army: 14th, 56th, 30th and 21st.

The 2nd (British) 63 (Royal Naval) 29th, 50th, 18th British and the 2nd Australian divisions later came into the active battle area of the 3rd and first armies.

The 19th Corps and Cavalry Corps were held as army reserve in rear of the 3rd army.

The 1st and 18th corps were in reserve behind the Canadians of the 1st army.

Each corps in attack used a formation in which two brigades were on front line, I brigade was in support, and a division was held in rear as reserve.

In rear of the battle line British communications were complete and effective. Sufficient cover for troops, animals and supplies had been provided both under and in rear of Arras.

British Artillery assigned to the Arras attack amounted to 989 heavy guns and 1890 light guns.

If we consider all calibers except those firing small arms ammunition the British gun total would be 4,000 pieces as against a like German total of not less than 3,000.

British artillery Superiority at the moment of attack on April 9th was 3 to 1.

Maps and fire preparation:

German Artillery fired by French maps which were inaccurate and resulted in German Batteries failing to fire on more than $\frac{1}{2}$ of British Battery Positions effectively.

British maps used were their own, having been compiled after the inaccuracy of the French maps were discovered. In this compilation British Headquarters made use of all available railway and mining surveys available, and completed the location of enemy artillery positions with the aid of sound and flash recording devices. The result was 93 per cent correct location of enemy batteries. Efficiency of location was demonstrated by the fact that after the final preparation no German gun fired during the first quarter of an hour of infantry advance. Light machine guns were liberally supplied to the British infantry, and were used effectively especially in the quick consolidation of positions captured by small groups of infantry.

TANKS:

Heavy tanks were assigned to each corps for the Arras attack. The type used mounted two 6 pounders and four hotchkiss guns or five vickers and one hotchkiss, and required twelve men to operate and fight. They were slower than the French tank of contemporaneous type. Where possible, they attacked with the infantry

assault echelons using a "trident" formation in which all moved into the enemy positions in line and then the flank elements turned outward while the center elements continued to advance deeper into the enemy zone of defense.

-GERMAN DISPOSITIONS-

In April 1917, Germany had 156 divisions on the western front.

The British estimate at the time was: 159 of which 69½ were definitely located in positions between the North Sea and the Oise. Foch estimated the total German strength at 230 on all fronts, with 155 of these divisions on the western front.

The 4th German Army was in Flanders, 6th and 17th in Artois and the 2nd in Picardy to the Oise. The regrouping of German Command and organizations moved German General Headquarters from Pless to Kreuznach and placed the forces of Prince Ruprecht, the 4th, 6th, 17th and 2nd armies, opposite the front of British fronts April 13th.

The particular army of this group which faced Arras and bore the main British attack was the 6th under Falkenhausen, and contained 25½ divisions.

The Germans had insufficient rail lines in support of the Vimy Ridge area, reserves were placed too far in rear, and when the crisis of April 9th occurred, reserves had to be rushed up in such amounts as available motor transport permitted.

Fifteen German divisions faced the British Arras attack of April 9th, and 18 additional divisions were in reserve for these but well to the rear. (Replacement of German divisions for recuperation and refitting was contemplated when 50 per cent loss was reached, and divisions taken out stayed out about 2 months).

The reserves in front of Arras had been moved forward some distance in anticipation of British attack but not far enough. Transportation weakness, faulty estimate of the time of British attack, and probably an underestimate of its strength were the causes.

While overmatched both in men and gunpower in the early stages of the Arras battle, after the 14th of April the German reserves had restored the balance sufficiently to prevent further large scale successes by the British.

Reserves in counter-attack and the zone defense were relied upon to stop the British. Just prior to the British attack of April 9th, the 6th Army had abandoned a local offensive of minor nature which was being prepared near Lens on the Souchez River at the northern flank of the Arras battlefield. The giving up of this projected action and the preliminary movement forward of German reserve divisions were both caused by signs of the coming British offensive at Arras.

The tactics of the German forces at this time were guided by the "Defensive fighting" order of Hindenberg spoken of else where herein.

The General disposal of German reserves undoubtedly was based on their knowledge of the location and proportions of the French offensive forthcoming on the Aisne. This knowledge was secured by the capture (From the 2nd French division in Champagne in February) of a battle order which contained the information referred to.

German issue of light machine guns to infantry was at the rate of three per company this limit being enforced by the limit of production. The German troops facing Arras had, on April 25, as high as sixteen light machine guns per company.

All through 1917 and to the end of the war the German Command continued to replace men by materiel.

An armor piercing small arms bullet was furnished troops for use against tanks and its effectiveness was demonstrated during the battle, as high as four members of one British crew being hit while inside their tank.

(For detailed description of the Battle see the following article)

DISCUSSION AND CRITIQUE.

It is purposed in the following conclusions to treat the three (3) phases of action covered by this monograph in the order of occurrence. They were, as will be recalled: 1. British operations on the Ancre early in 1917. 2. The Hindenburg Retreat. 3. The Arras Battle. 4. It is also intended to treat the Arras battle in its

relation to the 2nd Battle of the Aisne as well as on its local and individual value.

1. The British operations in the Ancre merely hastened the Hindenburg Retreat. Had they been executed in the face of a German decision to hold the Line of 1916, they would have materially weakened the German Noyon Salient, and cut off the Ancre-Arras Salient. The forces available made the operation an assured local success for the British in either case.

2. The Hindenburg retreat was a strategic and tactical success and fulfilled all of its purposes for Germany. The manner of its execution was malicious, barbarous, terroristic and inexcusable insofar as it exceeded military necessity, and the margin of excess was wide. It is possible that some of the labor expended on demolition in the evacuated area could have been better used in improving the communications in rear of the 6th German Army.

The fact that Knowledge of the magnitude of the preparations for the Retreat was kept secret from the Allies until the retreat was actually in progress, and the fact that the retreat itself was not discovered until combat groups of Allied infantry smashed their way into the zone of retreat, both show that under conditions of bad weather, bad visibility and stubborn enemy resistance the most highly organized intelligence systems will probably fail to get results of any value. (We are further warranted in this conclusion by the fact that the Sixth German Army was kept in ignorance of the time of the British-Arras attack up to the day of its delivery.)

3. The Arras Battle up to the 14th of April was a huge tactical success, and the value of the ground gained was so great that, in the light of the German 1918 offensive and its failure to retake this same ground, we may regard the Arras victory as a Strategic success on its own merits.

The battle released the Vimy Ridge domination of Arras, gave observation to the east and north for miles, denied like counter-observation to the Germans, removed one of the main bulwarks of the Hindenburg Line, Effected heavy enemy loss of manpower and material, and as a part of the Allied spring offensive drew heavily on German reserves available for use on the Aisne.

The continuation of the Arras attack after the 14th of April in support of the French-Nivelle offensive was proper under the Allies plan, but useless as far as local advantage was concerned.

One lesson that this battle teaches is that the faithful and efficient execution of a minor role, even in a faulty general plan may have both valuable and permanently useful results.

The Battle demonstrates the imperative necessity of a well organized service of the rear. It justifies the "Elastic-Zone Defense". It affords a striking demonstration of the value of envelopment in the action north of Vimy Ridge where the movement of the 24th British Division beyond the flank of Hill 145 started a wholesale German retirement. (Capture of Bois en Hache and Pimple by 24th Division)

The difficulties of artillery observation and forward movement, under bad weather and ground conditions, were shown especially during the first ten days of combat. This battle demonstrates the absolute interdependence of infantry and artillery in modern war.

The battle gave abundant proof that the principles set forth in the German "Order for defensive fighting" were sound. Numerous captured documents, some printed as early as June 10th, 1917 give testimony that their theory of defensive had been tried and found suitable.

The German's were guilty of an error of troop disposition in placing the reserves of the 6th Army too far in rear of the Fighting line. They also failed to provide efficient transport in rear of the 6th Army.

The statement of Hindenburg in his book "Out of My Life" that, "The main lesson of Arras for us was that English had not yet learned how to exploit an attack" is far from a fact. Hindenburg's real thought on this subject must have been a regret that the British in 1917 at Arras refrained from exploitation further than available forces and communications would safely permit.

The British learned in this Battle that their heavy tanks were not effective on badly shelled muddy ground, especially where the ground had any considerable amount of slope. They also found that tanks needed counter battery work to protect them, and that the tank armor used was no protection against the new German armor piercing bullet.

The danger to an unprotected flank during attack was strikingly shown in the attempt of the Third British Army to assault down thru the Hindenburg Line (April 11th) toward Bullecoart, without first having

neutralized the enemy in Heninel and Wancourt on their left flank.

Let us now pass to the discussion of the Allied Plan under which the Battle of Arras was fought.

A critique on the Battle of Arras with relation to the 2nd Aisne (Nivelle's) Battle cannot be undertaken on any ground other than that of a criticism of the plan under which both Battles were fought, and it will be discussed from that perspective.

To go back to January 1917, the Allied plan of tightening the ring about the Central powers had some advantages in that it arranged for offensives co-ordinated in time and separated widely enough to exhaust German reserves. It did not take into consideration the true condition of Russia, the probable German Retreat, the Strength of the New German defense in the west and the fatigue of France. The Allies failed to realize the far reaching effect on Russia of their own failure at The Dardanelles. Further they failed to exactly inform themselves as to Russia's internal situation. Their plan had the advantage of not demanding a strategic break-thru and in this it was much like the plan of Fock in 1918.

Then came the Russian debacle, the entry of the United States into the war and the Hindenburg Retreat. Now if ever was the time to go slowly. The correct strategy as I see it would have been local offensives to strengthen the line held, such as the Arras, Messines Ridge, Chemin de Dames operations, the organization of a deep defensive zone to be held until the American forces could arrive in strength, and a maximum sea effort to overcome the U-Boat.

Instead of this the Allies chose a form of offensive which in the whole course of the war never succeeded on the western front, namely a deep penetration on a grand scale, the British to divert reserves and Nivelle to push thru to the Moselle or Rhine. Much as I desire to criticise the French High Command for adopting this plan I cannot but place equal blame on British for approving such a plan. Both parties believed in it or they would not have agreed to it. The only additional blame that can rest on the French alone is that they conceived the plan, and having adopted it failed to exercise proper precautions toward keeping information concerning it away from the Germans. The French public and the German Command knew of the plan weeks before the date set for the offensive. Detailed instructions were issued too far in advance of operations and enough data was captured from the Second French Division in February to fully inform the Germans of the extent and location of the French offensive.

The French knew that this information was in German hands but still persisted in the plan.

The point chosen for attack was broad enough in both the British and French sectors to afford a valuable gain of ground even after the Hindenburg Retreat. This is proved by the results of both the Aisne and Arras battles in their first stages. In their first stages both battles demonstrated the strength of the new German defensive and pointed the way unmistakably to the wisdom of ceasing the offensives at once but this was not done. The battles were continued and almost ruined the French Army.

Had the French been even more successful and had they effected a deep penetration they were still bound to failure as the flanks would be weak and the army if it pushed forward at the rate of its infantry's maximum capabilities would have out run its artillery and communications. The second Battle of The Marne is the answer to strategic penetration on the Western Front.

The only strategy that ever could succeed on the western front was that of a succession of widely distributed local blows each strong enough to rob the enemy of organized ground, capture some of his material (probably that in his forward artillery positions) and effect exhaustion of reserves, The Allies between January 1, 1917 and March 15, 1917, did not possess the power to pursue this line of action and should therefore have assumed the "general defensive-local offensive" plan until the forces at their disposal justified other measures. They were finally forced to the defensive and when this came about the ground on which they were forced to fight was not organized in depth and much of their man-power had been spent uselessly.

With reference to Nivelle himself, I feel warranted in concluding that he either did not understand the situation, or understanding it, was willing to sacrifice the French Army in a forlorn hope with all the odds against success, in order to meet the demands of the political party in power for an early victory.

Nivelle's offensive is a prime example of military action undertaken, in a sense opposite to the best available military advice, and under pressure of political duress and public clamor. The disaster to Nivelle's Offensive parallels our own First Battle of Bull Run, the chief difference being in the scale of the operations

involved and in the numerical strength of the forces engaged.

The words of Petain to a British officer spoken just before Petain formally accepted the command of the French Army upon the relief of Nivelle are typical of the man and indicative of what I conceive should have been the attitude of the Allies High Command during the Spring of 1917. The words are as follows:

"With equal forces little can be done.

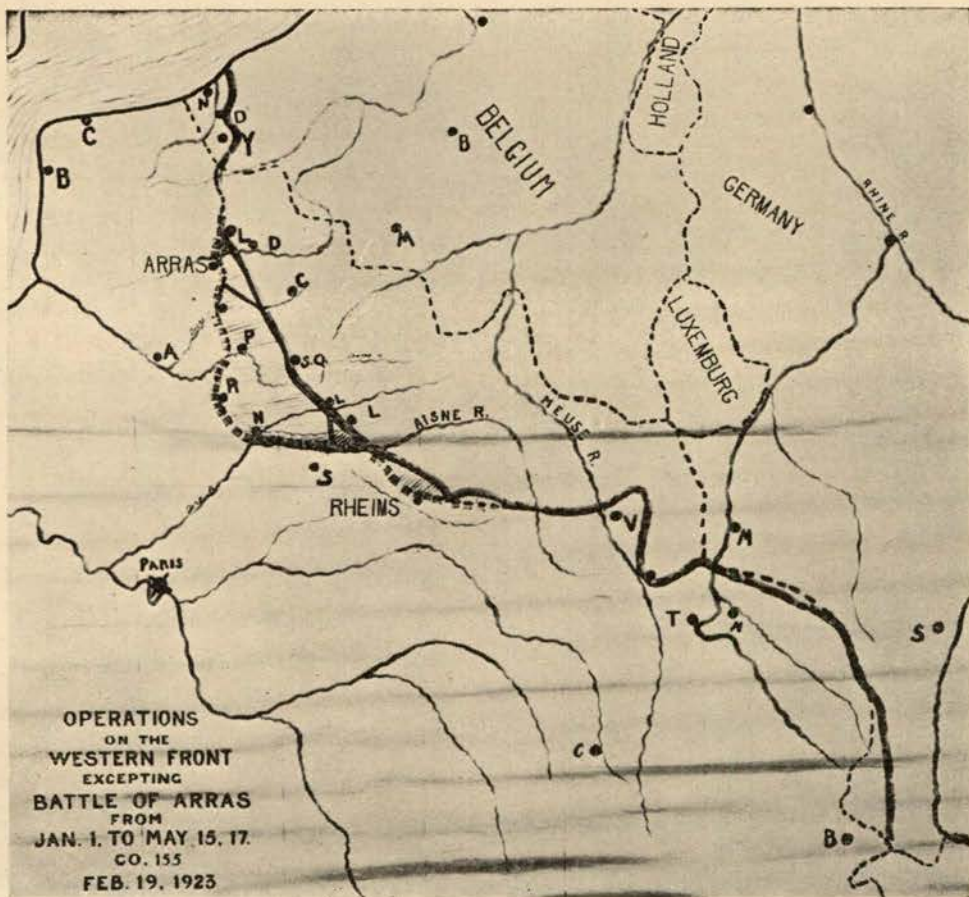
Have much-and do a little at a time, not attempt much with a little.

You cannot have strategy until the enemy reserves are exhausted.

I'll tell the truth, and if the Politicians don't like it-They can find someone else to lie to them."

With these words on his lips Petain picked up the broken weapons of France on May 15th, and threw himself into the task of repairing the damage wrought by his predecessor and the politicians of France.

References. History of the Great War, Vol. 4, by Simonds; Haig's Despatches; Ludendorff's Own Story; out of My Life, by von Hindenburg; Encycopaedia Britannica, Vol. 30; Nelson's History of the War, Vol. 11, Vol. 19; Strategy of the Great War, by McPherson, Battlefields of the World War by Jhonson; History of the War, by Repington, Vol. 1:



THE BATTLE OF ARRAS.

APRIL 1 TO MAY 30 1917

by

Capt. Thomas J. Heald, Infantry

At a meeting of all the allied military representatives held at the French General Headquarters, November 1916, it was unanimously agreed upon that the Allies would put forth their best efforts for a vigorous spring offensive. This plan comprised a series of offensives on all fronts. In December 1916, however, General Neville succeeded Marshall Joffre as commander in chief of the French Armies, and the above plan was somewhat modified.

Under this modified plan the British were to make a preparatory attack, having as its object to draw a large number of German reserves to its front. This attack by the British was to be followed immediately by a more decisive action on the part of the French.

The great German retreat to the Hindenburg Line did not materially affect the plans of the Allies. This retreat, commencing in the late winter and early in the spring of 1917, swung inward from two fixed points, Vimy Ridge, to the north of Arras, and the Craonne Plateau, north of Soissons.

The new German line of defense on the British front, established in the early spring of 1917, ran in a general north westerly direction from St. Quentin to the village of Tilloy-les-Mofflaines, just southeast of Arras, thence across the valley of the Scarpe River in the heights of Vimy Ridge, then, curving in just west of Lens, it stretched northward to the Channel.

There was a slight difference of opinion between General Neville and Sir Douglas Haig, the British commander in chief, as to what point of the line the British would launch their attack. General Haig had in view the sector just in front of Arras, to include Vimy Ridge to the north and the village of Croisilles to the south, a front of about fifteen miles. General Neville urged that the British not include Vimy Ridge, as this would widen their front of attack too much. His idea was for the British to attack farther south on the Arras-Ancre front. Sir Douglas Haig had, however, closely studied the situation, and his argument that the capture of Vimy Ridge was necessary to protect his left flank seemed very sound.

It was decided, therefore, that the British would attack on a twelve mile front from Givenchy-en-Gohelle, in the north, to a point just short of Croisilles in the south.

Vimy Ridge practically dominates the country around Arras. It rises to a height of nearly two hundred feet above the plain; the western side rises in a gradual slope, but on the eastern side it falls down abruptly into the plain. Vimy Ridge has two natural boundaries, the Souchez River that flows westward from Lens and the Scarpe River that passes through the suburbs of Arras. In the high ground south of Arras, the Cojeul and Sensee Rivers rise and flow eastward, forming a junction beyond the village of Guemappe and from there flow eastward across the Douai plain.

The British Army that was to make the attack at Arras had reached a high point in training and morale. Despite the heavy losses at the Somme, it still contained much of the best British manhood. The last phases of the Somme battle, which were victories for the British, had created a confidence in all ranks of the British Army. And the German retirement, coming immediately after the victories of the Somme, had given the British soldier a feeling of superiority over the enemy. The British Army after the Battle of Arras never again attained that high degree of proficiency that was so noticeable in the early spring of 1917.

Facing the British Army in this sector, was the Sixth German Army under the command of General Von Falkenhausen. Information as to corps and divisions of the German Army employed during the Battle of Arras is not obtainable, but prisoners captured during the British advance were identified as members of the following divisions:

- 11th Regular Division
- 17th, 18th, and 79th Reserve Divisions
- 16th Bavarian Division
- 1st Bavarian Division
- 1 Division of the Prussian Guard

Prior to the attack, great preparations were made by the British for the improvement of transportation

facilities. The neighborhood of Arras was supplied by two single line railways which would prove inadequate for the preparation of a big offensive; therefore, a large amount of work on narrow gauge and standard railways was started. All roads in the vicinity of Arras had to be improved. For this purpose considerable use was made of planking, of which some very good roads were built. Extensive work on the water supply was carried on so that the forward areas could be supplied immediately after the attack.

During this period great activity on the part of the Air Service was maintained, which included bombing of the German lines of communication and, also, the forward defense positions. Great numbers of aerial photographs were taken of the German defense systems, of which the artillery made very good use.

About three weeks prior to the attack, a very heavy concentration of Artillery fire searched the German area and lines of communication. This continued until just before the attack, when a more severe bombardment of the German defense systems was made.

On this front the German defense systems were very strong. On the high ground around Vimy Ridge, which forms a natural barrier against any attack directed at this point of the line, the Germans had constructed innumerable strong positions of defense. Small reinforced concrete forts, which contained machine gun implacements, were built on commanding positions. From Vimy Ridge to Bullecourt, the Germans had taken advantage of all high ground and had placed hundreds of machine guns so that in case of attack the surrounding country could be swept by flanking fire. The strongest of these positions were: Telegraph Hill, The Railway Triangle, and The Harp, also the villages of Givench-en-Gohelle, Feuchy, and Tilloy-les-Mofflaines. Interwoven between these strong positions were three separate and heavily wired trench systems. A few miles to the rear of this formidable trench system, the Germans had constructed the "Oppy Switch Line", which ran down from Lens, crossed the Douai Plain, and joined the old line at Bullecourt. Still farther back the Drocourt Queant Line, which was a northern extension of the Hindenburg Line, stood as a sentinel against further progress to the Douai Plain and the road to Cambrai.

The British First Army, commanded by General H. S. Horn, and the Third Army, commanded by General E. H. H. Allenby, were to make the attack. The First Army was to attack on the left, which was to include Vimy Ridge, and the Third Army, on the right, to include the village of Croisilles. Four extra Army Corps were placed at the disposal of General Allenby, also a Cavalry Corps to be used in case of a break through. The plan of attack for these two Armies corresponded, for a series of short advances, approximately with the enemy's systems of defense.

The positions of the British Army for the attack were as follows: against Vimy Ridge lay the right of the First Army which included the Canadian Corps and the 13th British Brigade; then came the Third Army between the Canadians and the Scarpe River: the 17th Corps was opposite Arras; next to the 17th Corps was the 6th Corps with the 7th Corps on the extreme right; two Divisions, the 4th and 37th, were placed just in the rear of the 9th and 15th Divisions, which were to attack in front of Arras, The 4th and 37th Divisions were to go through and exploit the gains of the 9th and 15th Divisions.

The Units comprising the British First and Third Armies were as follows:

- 4th Canadian Division;
- 3rd Canadian Division;
- 13th British Brigade;
- 2nd Canadian Division;
- 1st Canadian Division;
- 17th Corps
- 51st Division
- 24th Division
- 4th Division
- 9th Division
- 6th Corps
- 37th Division
- 15th Division
- 12th Division
- 3rd Division

9th Corps
14th Division
56th Division
30th Division
21st Division

The Battle of Arras can well be divided into three separate phases. The first phase ended on April 19, with the British in possession of the first, second, and part of the third line of German trenches, extending from the southern part of Vimy Ridge to a point west of Croisilles, and as far east as Fampoux. The second phase, starting with the fighting on the 10th and continuing until the 24th, consisted of slight gains by the British and numerous counter attacks on the part of the Germans. At the end of the fighting on the 24th, the British line extended from the vicinity of Loos in the north to Croisilles in the south and as far east as the village of Gavrelle and Infantry Hill. From April 25th to the close of May, by local gains on the part of the British, the German line was pushed back to the Drocourt Queant Line. From this Line the British withdrew from the Arras sector and turned their attention to their northern offensive which was to take place in the vicinity of Messines.

Behind one of the most effective artillery barrages that had yet been put down on the Western Front, the British attacked at 5:30 A. M., April 9. The weather had been very bad, and rain which had been falling turned to snow. Observation on the part of the Air Service was practically nil. The Germans were not surprised. Ludendorff had been expecting an attack at this point and had ordered up reserves behind the Sixth Army. They were surprised, however, in the intensity of the barrage. Forty minutes after the "zero hour", practically all of the German first line positions were taken. By nine o'clock, the Canadians on the left had captured Vimy Ridge, except for a small portion of the northern corner and Hill 145. Here, at this point, the Germans maintained a stubborn resistance which lasted throughout the day. On the right of the Canadians, the 17th Corps had taken La Folie Farm and were advancing on Thelus. The 6th Corps, in front of Arras, had captured Blagny, Tilloy-les-Mofflaines, and the fortress called the Harp. The whole German second line had been taken except for a short length west of Bailleul. Most of the above positions were stubbornly held and heavy fighting ensued. By the end of the day, British troops had advanced to the German third line positions. The 15th Division had taken Feuchy, and to the north of the Scarpe River the 9th Division had taken Athies, and the 4th Division, going through the 9th Division, had captured Fampoux.

The end of the First day's Fighting had been a complete success for the British. All of the German first and second line positions had been taken, and the third line had been penetrated on a front of two and one half miles. Large numbers of prisoners were taken, and many guns had fallen into British hands. The German front line positions had been practically destroyed. The British line now ran from the southern slope of Vimy Ridge in a southeastern direction to include the village of Fampoux, then south to a point west of Croisilles.

At the beginning of the second phase on the 10th, the advance became general. The Canadians carried Hill 145, and with it the whole of Vimy Ridge. The 37th Division advanced as far as the northwestern edge of Monchy-les-Preux, where heavy fighting ensued for the possession of this village. Again on the 11th, heavy fighting took place for the possession of Monchy-les-Preux. The British losses at this point were heavy. By noon of the 11th, Monchy-les-Preux was captured with the assistance of Tanks.

Successful as the British had been in these first two days of fighting, there had been no complete break through. The Germans were retiring in good order to organized positions.

The advance through the Cojeul River Valley had not been so successful as that on the Scarpe River. Here the British ran into heavy machine gun fire from the villages of Heninel and Wancourt.

On the morning of the 11th, in conjunction with the Fifth Army, the right of the Third Army assisted by Tanks made a gallant effort to break the Hindenburg Line in the vicinity of Bullecourt. The 4th Australians and the 62nd Division of the Fifth Army penetrated as far as Bullecourt, but owing to the failure of the attacks by the right of the Third Army this position could not be held. On the 12th, the 21st and 56th Divisions captured Wancourt. North of the Scarpe River, the 4th Canadian Division and the 24th Division took the high ground astride the Souchez River which included The Pimple and Bois-en-Hache.

From the 12th to the 14th, the Germans made numerous counter attacks which were repulsed. At Monchy-les-Preux heavy counter attacks were launched by the Germans, but these were not successful.

As far as the British were concerned, the Battle of Arras was over on the 14th. But as the French were on the point of launching their offensive, the British were compelled to continue.

Thus far the British effort had been a success. The Germans were compelled to bring a large number of men and guns to this front; an advance of four miles had been made, and some fourteen thousand prisoners had been captured.

On the 15th, five regiments of the Prussian Guard attacked on a six mile front astride the Bapaume-Cambrai road from the Village of Hermies to the village of Noreuil. The success that followed this attack was short. The Australians counter attacked and drove the Germans back.

On the 16th, the French launched their main offensive on the Aisne. The much looked for rapid break through of the French Army did not occur. In order to relieve the pressure of the French Army, the British were compelled to continue their operations.

On the 23rd the British attacked on a nine mile front against the line, Garvelle-Roeux-Guemappe-Fontaine-lez-Croisilles. During the day heavy fighting occurred with numerous counter attacks. On the Arras-Douai road the 17th Corps capture Garvelle, and beyond the Scarpe River the 6th Corps had captured Guemappe.

This ended the second phase of the battle. The British line now ran from Loos in the north to Croisilles in the south and as far east as Gavrelle.

On the 28th and 29th, the British continued their advance. The village of Arleux-en-Gohelle was captured by the Canadians. South of the Scarpe River the advance continued to a point north of Monchy-les-Preux. The French attack having failed on the Aisne, the British were forced to continue their operations in order to relieve the pressure on the French.

May 3, the British attacked again on a twelve mile front, from the Achville-Vimy road to Bullecourt, south of the Sensee River. The Canadians broke through and captured Fresnoy. On the right, the line was advanced to Roeux and Infantry Hill. The support trenches around Bullecourt were taken by the Australians of the Fifth Army.

From May 3 until May 17, the fighting resolved itself into numerous counter attacks and heavy fighting around Bullecourt. On the 17th, Bullecourt was captured by the 58th and 62nd Divisions of the Fifth Army. May 20, between Bullecourt and Fontain-lez-Croisilles, the 33rd Division captured all the German front positions.

This practically ended the operations on the Arras front. The Germans had retired to the Drocourt Queant Line.

The British had accomplished their mission. In less than two months they had advanced their line twelve miles on a twelve mile front. Over 20,000 prisoners had been captured, also 257 guns, 464 machine guns, and 227 trench mortars had fallen into British hands. As the French had failed on the Aisne, it hardly seemed wise to continue the operations on this front. Moreover, the last phases of the battle were exceedingly costly in men. If activities were continued, it would delay the British thrust in Flanders.

CRITICISMS

The Battle of Arras was a complete victory for the British Army. Considering it in its true perspective as a holding operation to aid the French on the Craone Plateau, it accomplished all that was expected of it. But, as Neville had failed on the Aisne, the British effort seemed useless. Moreover, the British losses were considerable, and their contemplated offensive in Flanders was long overdue.

LESSONS TO BE LEARNED

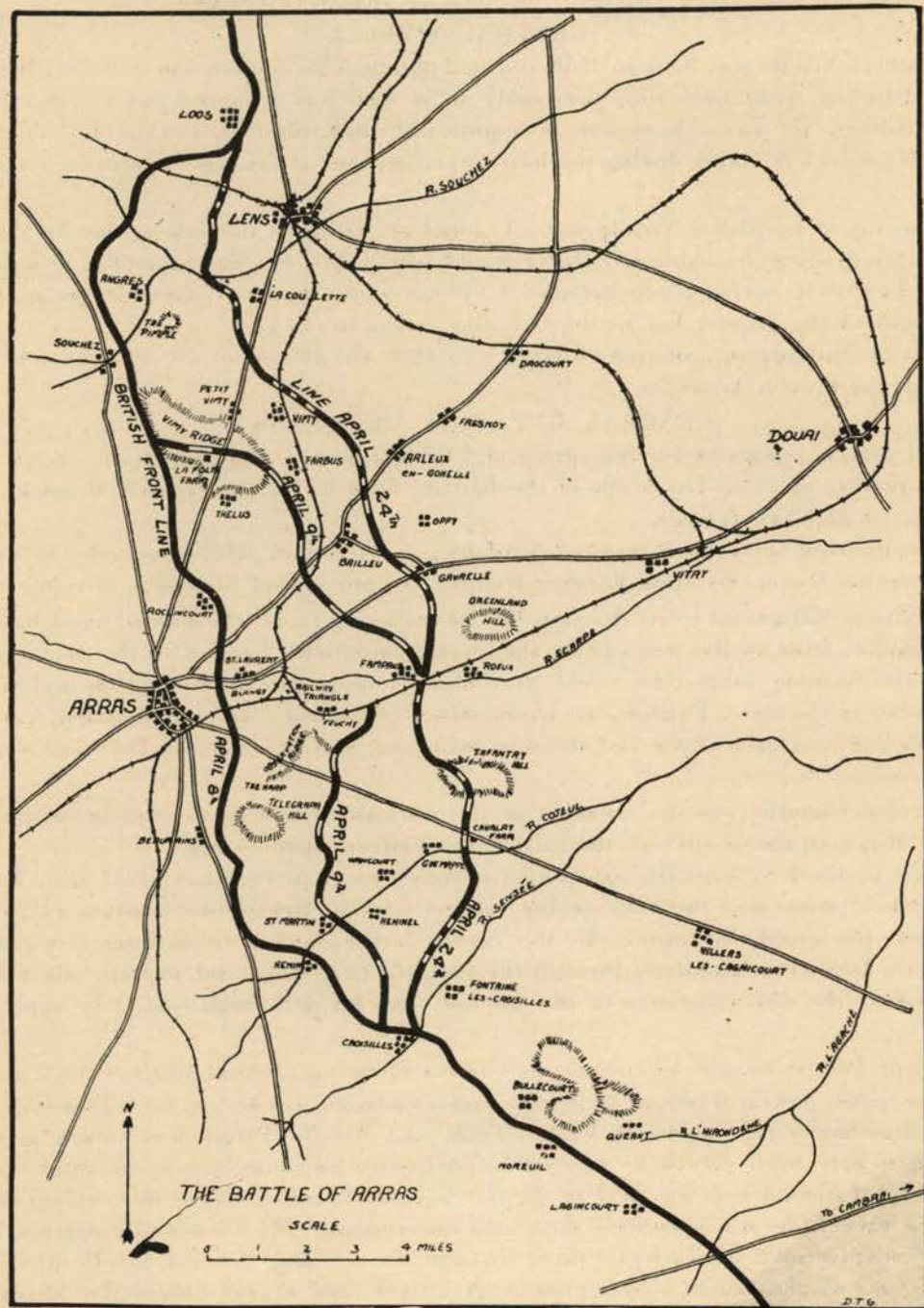
First, the success of the British Army at Arras was largely due to its high degree of training and morale.

Second, in a battle of the magnitude of Arras, there must be the closest cooperation between all branches of the Service employed. The British Infantry could never have taken the positions they did without the closest support on the part of the Artillery. And the Artillery, to give this support, must cooperate with the Air Service which helps to direct its fire.

Third the Germans relied too much on their defensive positions which they thought to be impregnable, not realizing that the strongest positions can be rendered useless by the intensity and accuracy of modern artillery.

Fourth, the highly trained and disciplined German Army gradually disappeared from the Western Front. The German Army was broken up to form units for new armies, and this was in direct contradiction to her whole theory of war which was a well oiled fighting machine.

References. Haig's Despatches; The Encyclopaedia Britannica, 12th Edition, Vol. 1; History of the Great War, Vol. 3, by Buchan; History of the Great War, Vol. 4, by F. H. Simonds; Ludendorff's Own Story.



THE NIVELLE OFFENSIVE, APRIL 1917.

By

Lieut. J. J. Fraser, Infantry.

ORIENTATION

The Nivelle Offensive is the title given to the Allied offensive carried out in the Aisne-Champagne region during April and May of 1917. The general line of battle extended from Soissons to Reims and thence to Auberive. The plans for the Nivelle Offensive included the British Offensive at Arras.

GENERAL NIVELLE

General Robert Nivelle was born in 1856 and had obtained his commission in the artillery from the Ecole Polytechnique and having spent some time previously at St. Cyr, was grounded for a career in either the Infantry or the Artillery. He was a horseman of repute and when transferred to the staff showed great capacity as a linguist. He served in China during the boxer uprising and afterwards served on a special mission to Corea.

On the opening of hostilities Nivelle was a Colonel of Artillery and saw service in Alsace and in the fighting on the Ourcq where he exhibited coolness and intrepidity. He was promoted to General of Brigade in October 1914. In 1916 he served in the defense of Verdun where he drew considerable attention to himself by recovering much of the ground lost to the Germans earlier in the year.

Nivelle was taciturn, daring, and somewhat of a fatalist. On December 16, 1916 he was appointed commander-in-chief of the French Armies.

GENERAL SITUATION AND PLANS

The Allied plan of campaign for the spring of 1917 had been drawn up at a conference held at Chantilly, France, in November of 1916. The heads of the British, French, Italian, Serbian, Roumanian, and Russian Missions participated in the conference.

The deliberations of the council resulted in plans for a series of offensives to be so timed as to assist each other and prevent the enemy from drawing troops from any one of his fronts to reinforce another.

The council was influenced in its decision by the following facts: the public mind had been adversely affected by the prolongation of the war and by the "war of attrition" typified in the Somme fighting, and it was feared that the German submarine would prevent the import into France of food and raw materials sufficient to sustain her in the fight. Further, the maintenance of combat forces at the front was becoming difficult due to the demands of agriculture and the war industries, and new German Divisions were being formed on the western front.

The chief object sought was the breaking of the German front across the plains of the Somme by the capture of Vimy Ridge in the north and the St. Gobain buttress in the south.

The council planned to have the offensive commence early in February 1917 with French armies attacking between the Somme and the Oise, at the same time as the British forces between Bapaume and Vimy. On February 20th the groups of armies in the center should attack between Pontavert and Reims. The attack were to cover a large front and drive through the enemy's first lines and capture his artillery positions which would result in the disorganization of the defense. Any break-through was to be exploited boldly and vigorously.

In the fall of 1916 it became clear that the caution tactics of General Joffre, known as "Nibbling" was not satisfactory to certain powerful groups in politics and a successor was looked for who would strike a decisive blow. Three commanders were considered, Petain, Foch, and Nivelle. Petain was known as the "Saviour of Verdun" and might have been chosen to succeed Joffre but for his plain spoken contempt for the politicians. General Foch had had command of an army in the Battle of the Somme, and as this campaign was considered as a defeat by the French, he was exercising nominal command only. He was actually engaged in making plans against a hypothetical German invasion of France through Switzerland. General Nivelle had served with distinction at Verdun and was known as a champion of the attack, and France longed for decisive action to rid her soil of the invader.

General Joffre was relieved from active command and on December 16, 1916 General Nivelle took over the command of the French Armies.

GENERAL NIVELLE'S PLAN.

After consideration of the plans of operations adopted at the Chantilly conference, General Nivelle decided that the front of attack should be slightly extended with the Aisne-Champagne sector as the location of the main blow to be struck.

On December 21, he informed General Haig of his new plan of attack which contemplated a break-through on the Aisne-Champagne front with the French Divisions at his disposal there.

To quote General Nivelle "The trench warfare we have been waging on the same ground for two years is only one of the numerous forms of war-a form which cannot last forever, because it cannot bring a decision.

The moment approaches when the decisive blow will be struck by the stronger and the more resolute."

On the Aisne the offensive was to stretch from Vailly to Reims with the capture of the Chemin-des-Dames as the first step toward gaining a bridge-head on the right bank of the Aisne.

The Germans had held this line since September 1914 when after retreating from the Marne they stopped the pursuing armies of Maunoury, French, and d'Esperey at the Aisne. East of Reims all the heights of the Moronvillers were to be carried. The offensive would be executed on a front of some fifty miles, double that of the allies at the opening of the battle of the Somme.

The tactics pursued, prior to Nivelle's taking command was a movement by steady stages to limited objectives and contemplated a break-through followed by open warfare.

General Micheler, who favored the policy of lightening mass attack, was chosen by General Nivelle to command the group of armies to be employed in the offensive. General Petain had criticised the plan on the ground that should the enemy front be pierced, the allies lacked sufficient forces to develop success, and therefore he could not be employed in carrying out the plans. As commander-in-chief, General Nivelle gave the time of, direction, and indicated the form of attack.

General Micheler, in command of operations, fixed the objectives and outlined to the army commanders the part their forces would take in the action. By a smashing attack the first assault was to capture the enemy's positions and the entire zone occupied by his artillery. Immediately, the breach was to be enlarged by large forces of maneuver troops. General Micheler sketched a line on the far side of the hills which overlook the north bank of the Ailette, reaching the plain of Laon on the north, and extending in an easterly direction, as the extent of the second days advance.

To assist in the opening of a breach in the center of the battle line the new French tanks were assigned to the center with Juvin court as their first objective.

Mr. Lloyd George had become Prime Minister of Great Britain and on January 5th, 1917 attended a conference of allied leaders in Rome. He proposed to give the British and French reserves to General Cadorna, the Italian commander-in-chief, it being his theory that a break-through to Vienna could be effected in the Julian Alps. This plan was not supported by the allied generals and was not adopted at the conference.

On his way home from Italy Lloyd George heard the Nivelle plan and was impressed by it. On January 15th, 1917 a conference was held in London and Nivelle's plan was explained to the British War Cabinet. Though there was some scepticism of its success the British and French Governments decided to carry out the offensive. General Haig, in command of the British forces, was to conform to Nivelle's general strategy but use his own methods in carrying this out. Should any differences arise, they were to be reported to the British War Cabinet.

TOPOGRAPHY.

The German line in the Aisne-Champagne possessed features of immense natural strength. The Aisne River is dominated on the north by the Craonne Plateau, whose heights are from 350 to 400 feet above the bottom of the Valley and consist of a number of sloping spurs attached at their northern end to a hog's back, 14 miles in length, along the summit of which ran the famous Chemin-des-Dames highway. At the Hurtebise farm near Craonne the elevation is 650 feet. This plateau is the outer rampart of Paris. Northward the ground slopes to the great northern plain and on that side it drops down sharply for more than two hundred feet into the narrow swampy valley of the Ailette river. Seen from this northern side it resembles a huge wall. On the southern side the plateau descends more slowly to the Aisne river which flows through the flat open bottom. The river is from one hundred and fifty to two hundred feet wide and some fifteen feet deep and can be crossed

only where bridged. The southern slope has five main spurs running out to the south, each cut by many ravines. The plateau is of limestone and chalk formation and had been turned into a veritable fortress by the enemy. The ravines and glens were forested with barbed wire and tunnels had been driven through the ridge for communication. The spurs had not been entirely denuded of their woods and caves in the limestone were made into underground shelters. Machine guns had been placed at every angle of fire.

From the summit observation was unobstructed and from here artillery fire could be brought on all bridges along the Aisne from Vailly to Berry-au-Bac.

At the eastern end of the Chemin-des-Dames the California plateau and the village of Craonne protect the entire Plateau north of the Aisne and defend the lowlands between Craonne and Neuf-Chatel. The California plateau overlooks the Ailette valley and the greater part of the Reims-Laon railroad.

To the south of Craonne is the Bois-de-Buttes and Bois-des-Baches, outguards to the Craonne massif. Each was a machine gun fortress with many connecting tunnels and galleries.

To the north of the Ailette is a low broad plateau and further on is the city of Laon on a small hill.

The gap between Craonne and the heights of Brimont form a gateway to the plains of Laon. The gap was covered by fire from the heights of Craonne and is commanded on the east by the heights of Brimont.

East of Reims lies high ground running through the old forts of Brimont, Witry, Berru, and Nugent and to the southeast is the hills around Moronvillers. The highest point in the Nugent l' Abbesse hills is 870 feet high, about 50 feet above the Moronvillers hills.

Mont Haut is the highest point in the hills and with Mont Cornillet formed the anchorage of the east flank of the German position around Reims. Long tunnels, with several branches, had been driven into Mont Cornillet and each was capable of holding one or more battalions. There were many fire positions from which machine gunners could rally in an attack and exits for supporting purposes or for counter-attack. From the summits of the hills the Germans had a view over the plain of Chalons and most of the movements of the French between Reims and the Argonne. The first German line was at the foot of the hills, the second about half way up the slopes and the third line was the fortified summits of Mont Cornillet, Mont Haut, and Mont Sans Nom.

POLITICAL SITUATION.

Preparations were being carried out for the offensive when the receding tide of the German withdrawal in early March left the allied forward dumps, narrow gauge railways, and big gun emplacements high and dry.

The pursuit was hindered by the withdrawal itself and by the desolation wrought by the Germans. Although, at first incredulous of the withdrawal, Nivelle was confirmed by it in his desire to attack as soon as possible with all his forces.

The middle of March saw the German retreat completed, the fall of the Russian Monarchy, and the entrance of America into the War seemed certain. The French Minister of War, General Laysutey, resigned and the Briand Cabinet fell. M. Ribot became the new premier and chose M. Painleve as his Minister of War.

The new Minister of War had not concurred in the appointment of General Nivelle as Commander-in-chief and he did not favor the offensive. Unknown to General Nivelle, he had talks with diverse commanders seeking their opinions as to the probability of success of the offensive and expressing his doubts of its success. While all the commanders questioned did not look for entire success, they would not advise that the offensive be cancelled.

Several British officers, including Sir Douglas Haig, were consulted and all favored an early offensive of strength against the enemy.

On April 3rd General Nivelle was called into conference with the Premier, the Ministers of War, Marine, Munitions, and Colonies, where the question was "Shall the offensive take place as scheduled" (Set for April 8th). The German withdrawal, the Russian revolution, and the entrance of the United States into the war were given as reasons for cancelling the offensive. After some discussion the decision made was that "the commander-in-chief should attack on the front which he had selected, at a time when he judged his preparations complete and on a day to be chosen by him.

Arrangements seemed completed, but, General Messimy, former Minister of War, now commanding one of the brigades to take part in the offensive, gave to M. Ribot a report purporting to express the opinions of officers of high rank in the French army concerning the offensive. The name of General Micheler, who was to

conduct the offensive, was included as one of these officers. The report stated that the offensive would gain only limited results and would result in heavy losses.

As a result of this report an extraordinary council of War was called at Compiègne, on April 6th with the President, the Premier, the Ministers of National Defense, the Commander-in-chief and the generals of army groups present. All army group commanders agreed that an immediate offensive was necessary and General Micheler in contradiction to the memorandum then before the council said "It is necessary to attack as quickly as possible, as soon as we are ready and the weather is favorable."

After several had expressed their doubts as to a break-through General Nivelle said "since I am not in agreement with either the Government or my subordinates, I place my resignation in the hands of the President of the Republic." Every one protested against the commander-in-chief's action and said commanders must not be changed on the eve of an attack of which the necessity was admitted.

General Nivelle withdrew his resignation and was informed that he would be given a free hand, with the reservation, not clearly expressed, that if; after 24 hours fighting, the results were indecisive and the losses too heavy, the operation should be broken off.

THE BATTLE

On April 15th, 1917 the French line, from west of La Fere, extended south to the Ailette which it crossed northeast of Vauxaillon. It passed east of Vauxaillon and continued south, passing to the west Laffaux. Thence, it ran southeast into the Aisne valley crossing the Aisne river near Missy-sur-Aisne. The Germans held the south bank from here to a point about a mile east of Chavonne. It then ran northeast crossing the Oise-Aisne canal as it ascended the south slopes of the Craonne plateau. From Trayon it ran east, then southeast of Craonnelle and recrossed the Aisne river east of Berry-au-Bac. It continued south between the Aisne-Marne canal and the Reims-Laon road to Courcy where it turned southeast and passed to the west of Forts Witry, Berru, and Nugent, thence southeast of Auberive.

In February a German raid in Campagne had captured a French Division Order pointing to an offensive in April and on the night of April 4th a French sergeant carrying papers giving the order of battle of the troops north of the Aisne and the various corps objectives was captured. The Germans made careful defensive preparations against the coming offensive.

German instructions of March 18th, 1917 issued by General von Schussler, commanding the 183rd Division north of the Aisne state "The first line must be defended at any cost and if it be lost the struggle must continue till it is recovered. Our principle fighting line is our first line."

In accord with the plans for the entire offensive, the British Offensive at Arras had commenced on April 9th. About the middle of April it was at its height using up German reserves and a vast amount of supplies when the attack along the Aisne-Champagne was launched on April 16th, 1917. It had been set for April 12th and was postponed to the 14th and then the 16th because of inclement weather, which hindered observation. A vast amount of work had been done in preparation for the offensive. Lines of communication and supply were expanded; as an example, 25,000 men were employed in the construction of narrow gauge railways and roads, behind the French lines.

On April 2nd the artillery preparation began with quiet registration, the 5th and 6th was counter-battery work, and the destructive bombardment began on the 7th, and due to postponement of the attack continued through the 15th. More than 3,000,000 rounds were fired by the French and to this bombardment the German guns replied with energy. Rainy weather and poor organization of fighting and observation planes prevented proper observation of the fire.

Rain and snow fell on the night of April 15th-16th, and, on the morning of the 16th at dawn the sky was clear, but just as the infantry attacked at 6:00 o'clock the mantle of snow again closed in on the battlefield. On the left the attack first encountered the enemy lines around the spurs running south from Laffaux. Between Vailly and Chavonne the enemy was driven across the Aisne and Chaonne was entered but by night-fall German counter-attacks had pushed the French back to the rivers edge.

Further east along the Plateau the main attack had as its first objective the gaining of the heights of the Chemin-des-Dames. From Fort Malmaison to Craonne this line had been heavily pounded by artillery fire, but when the French infantry came in the assault, they were met by strong machine gun fire from the

many shelters and emplacements along the spurs and ravines. Some of the caves and shelters had been penetrated by shells and their occupants killed by the high-explosive shells and gas shells. However, many caverns and quarries remained intact and in there and in the tunnel of the Oise-Aisne canal thousands of Germans were ensconced ready to counter-attack the assaulting troops. The 10th Colonial Division reached the Hurtebise farm and troops entered the outskirts of Craonne village.

French tanks here made their first appearance on a battlefield and had for their objective the enemy positions centering on Juvincourt. They headed the attack on this position which guarded the gap into the Laon plain, but as they never reached the open country their efficacy was not demonstrated. Mechanical flaws and lack of proper training in their use resulted in slow progress and frequent halts. From the high ground around Craonne the Germans had good observation and put a number out of action by well directed artillery fire. To enable the tanks to travel some distance, extra petrol had been carried and in many cases this was set fire by artillery.

Some of the tanks reached the outskirts of Juvincourt but the infantry gained slight advantage from this as there was a lack of cooperation due principally to inadequate training. Further advance of the infantry toward Juvincourt was stopped by machine gun fire from Craonne.

North of Reims, after heavy fighting, the French took Loivre, Bermicourt, which would threaten Brimont from the north, was carried but lost to German counter-attack in the evening.

German artillery fire had inflicted severe losses on the French reserves at some points where in coming up to the front lines, they had become bunched. On the left the reserves were kept on the south bank of the Aisne river to prevent losses.

On the 17th the battle continued and the weather became more atrocious. The wind blew in violent gusts and it rained and snowed. The Germans counter-attacked at Hurtebise farm, Ville-au-Bois, Louire, and Courcy and were everywhere driven back.

The Fourth Army under Authoine, belonging to Petains Army group, launched its attack against the strong German positions in the Moronvillers Hills. The attack here was to protect the right of the Fifth army on their left and to broaden the entrance into the plain of Laon for the center of attack. Owing to the strength of the German flanks a frontal attack was made in which two corps participated, the left under General Hely d' Oissel and the right under General Dumas. After a severe bombardment the attack began at 4:45 o'clock in the morning. The French pushed well into the hills and penetrated the German first and second lines and were in position just below the summit of Mont Cornillet and Mont Haut at nightfall.

On Wednesday, the 18th, the Sixth Army made gains between Laffaux Mill and Margival and took Mantuil-la-Fosse. Chavonne and Chivy were captured in the night and Vailly at noon of the 18th. Two Saxon regiments were captured here and many guns, both field and heavy.

The Tenth Army under General Duchene was put in between the Fifth and Sixth along the line Hurtebise farm to Craonne.

East of Reims the French captured Mont Haut and made additional gains on the surrounding slopes. During the fighting news was brought by French planes that reinforcement divisions were being brought in rapidly by the Germans.

On the 19th Laffaux was taken. The garrison of Fort Conde blew it up and retreated north along the ridge but were caught in the French barrage and few escaped. On the plateau the French had gained some three miles in the Chemin-des-Dames between Troyon and Hurtebise but had not been able to drive the Germans out of Craonne nor from the western end of the ridge.

In the Moronvillers the Germans counter-attacked with the new 5th and 6th Divisions but the French held the ground they had gained. On the extreme right Auberive had been taken by Degoutte's division.

From the 16th to the 20th the French had captured 21,000 prisoners, 183 guns, 119 trench mortars, and 412 machine guns. The enemy had lost all the crossings on the Aisne from Soissons to Berry-au-Bac and the spurs of the Aisne heights, with the French holding the center of the plateau at Troyon.

Of the 52 German reserve divisions on April 1st only one remained unengaged.

On the 19th the Minister of War, M. Painleve had visited the French Headquarters at Compiègne to inform himself of what had taken place and on the 20th General Nivelle was instructed to report at Parris to discuss matters.

General Micheler, on the 21st, wrote for authority to limit the action to local attacks, stating that his forces were not equal to the task before them. General Nivelle in reply ordered him to carry Fort Brimont and the ends of the Chemin-des-Dames not yet captured, and consolidate the captured heights in the Moronvillers.

A young French Deputy serving on the staff of one of the corps detailed to the attack on the Chemin-des-Dames informed the President of the Republic that there was much anxiety among the generals entrusted with this operation. A conference of Generals was summoned, and in the meantime the Minister of War suspended the attack on Brimont. The conference was in session from April 22nd to April 29th.

The German evacuation of Laon had begun. General Athoin's positions in the Moronvillers were not secure from counter-assaults and unless his gains were expanded they would be of little value for tactical or strategical purposes. The Craonne heights had not been cleared of the enemy and until this was done the Germans would have the observation points and could bar any passage through the Juvincourt gap.

The Minister of War had given to the French press figures on the losses suffered, which figures were considerably exaggerated. The figures when published produced low morale among the French people. It was stated that the first three days fighting cost the French 120,000 casualties with 25,000 dead, while the true figures were 75,000 casualties with 15,000 dead. Many of the wounded had suffered slight wounds only and the total of wounded was 6.55 per cent of the effectives engaged.

On the 29th when the conference terminated, the office of Chief of the General Staff at the Ministry of War was revived and General Petain was appointed to fill this office. By this, all orders for an attack of any nature must be first approved by the Chief of the General Staff at the Ministry of War. General Nivelle was asked to resign but refused stating that the resignation of the Commander-in-chief at this time would be considered by the Germans as a sign of weakness in the French Armies.

The Craonne heights were taken on May 4th and two companies dug in on the Craonne plateau. On the left at Laffaux, a division of dismounted Cuirassiers, with the support of tanks, had captured the mill on May 5th and on the 6th pushed up between the Allemant ravine and Laffaux Mill. On the right of the plateau the French took Chevreux on the northeast of Craonne and thus protected this observation point by an outpost. Using Fresh "shock Troops" the Germans counter-attacked along the plateau on the nights of May 6th to May 10th inclusive and during the day on the 9th and 10th. On May 16th General Petain was appointed to succeed General Nivelle as commander-in-chief.

The German counter-attacks continued but at all points they were driven back. In the Moronvillers the French, in order to consolidate their scattered gains and establish a line, attacked Mont Cornillet and points to the east with three new divisions. The Germans were driven from their strong holds consisting of an intricate system of trenches, tunnels, and galleries. In taking Mont Cornillet the Zauaves had raced, up the 250 yards of steep incline, to the summit in the face of heavy artillery and machine gun fire. The summit was passed and they began to descend the slopes to the north followed by engineers carrying materials for blocking the entrances to tunnels. Heavy shells had closed many of the entrances with debris,

Near the opening, heaps of contorted corpses showed that a wild rush had been made for the outer air. Investigation showed that the air shaft had been crushed in by a huge shell. Six hundred German dead were found in the tunnel where they had been asphyxiated by the blocking of the ventilating holes or by French gas shells.

CLOSING INCIDENTS.

During the remainder of May and the early part of June the French made small advances to improve their gains and the Germans made many attempts to recover lost ground.

These German counter-assaults show the tactical importance of such topographical features as the California plateau, the cockcomb of the ridge at Hurtebise farm the ground around Cerny, the apex of the salient between Vauxeillon and Lauffaux mill, and in the Moronvillers hills all the main summits.

Some forty-nine enemy divisions were used in counter-attacks against the Chemin-des-Dames and sixteen assaults by "shock troops" were made in the Moronvillers during a ten day period.

The period following the offensive was one of depression, in the army and among the people, mostly psychological, for now that United States was in the war, Victory seemed assured. However, the losses at Verdun and in the Somme, coupled with the failure of the Nivelle plan produced a marked reaction from the ferocious

of 1914, 1915, and 1916. Some small manifestations of mutiny in the army occurred, but General Petain displayed both tact and authority in handling the situation and good order and a rising morale were soon established.

ANALYSIS AND CRITICISM.

On assuming command of the French armies General Nivelle changed the allied plans and chose his own mission, which was to break the German front, bring an era of open warfare and inflict a decisive blow upon the enemy. He underestimated the strength of the enemy and relied too much on possible weaknesses that the enemy might develop. His aim demanded forces in the best of fighting condition but at the time of his command the French armies were out of temper, doubtful of their leaders and in a mood to listen to treasonable lies. The offensive was directed against the strongest natural obstacle on the Aisne-Champagne front and was planned and conducted without a proper understanding of the immense tactical difficulties involved. In order to increase the probability of success the offensive should have come as a surprise to the enemy. Little or no effort was made to keep it a secret and the enemy having warning of it made careful defensive preparations.

The London conference of January 15th placing General Haig under Nivelle had little to recommend it as it was not unified command. Haig was free to use his own methods and was still responsible to the British War Cabinet which reserved the right to interfere. General Nivelle suffered much from the interference of the politicians and was distracted by the many conferences he was compelled to appear before.

All his subordinates were not giving him their full cooperation and did not keep to themselves the plans of operation but on the contrary communicated to ministers facts of utmost secrecy.

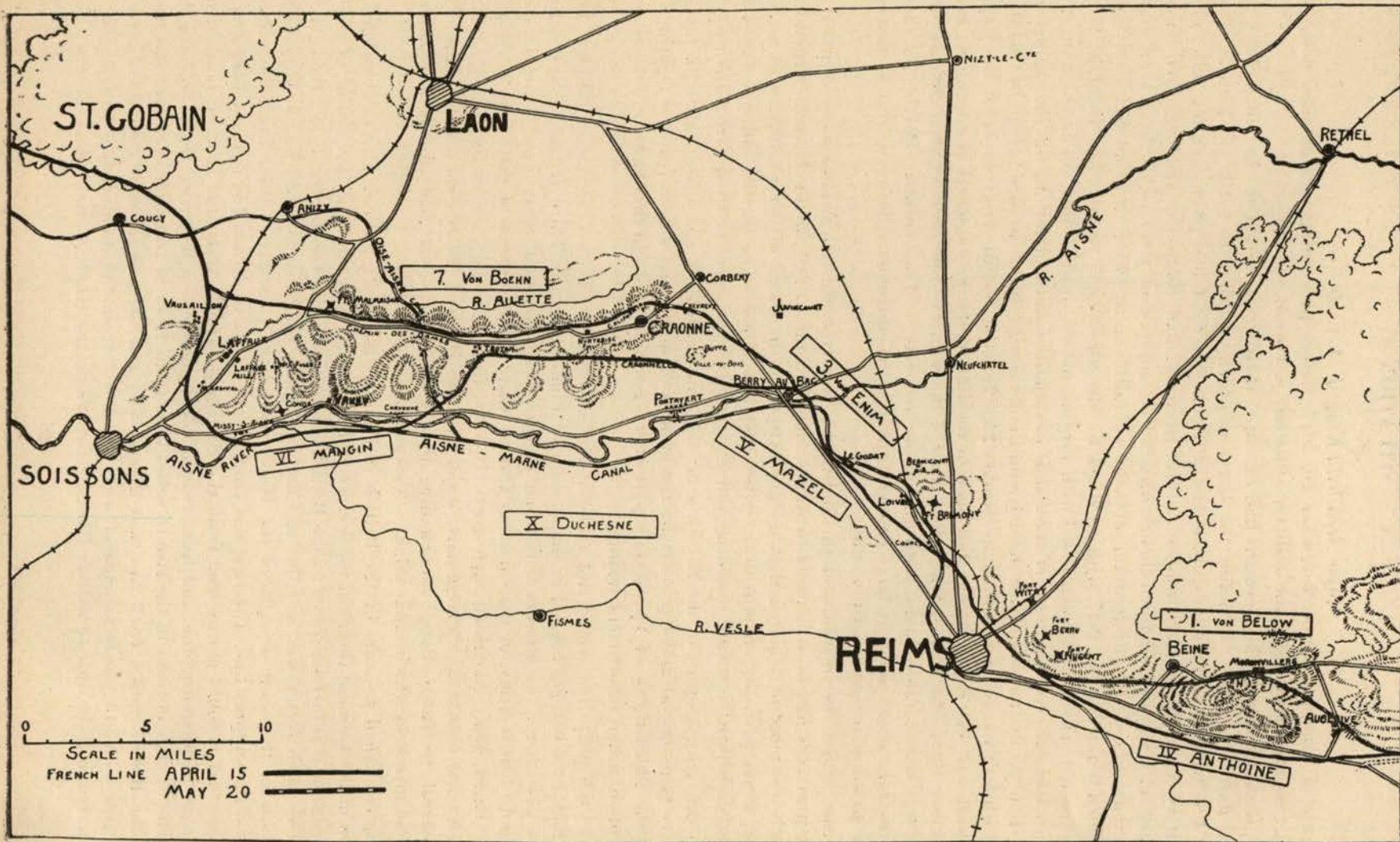
From the time the Minister of War visited Campiegne the decisions directing the French armies were the result of indifferent compromise between divergent wills; the armies were no longer commanded. By advancing to the Aillitte they could have saved the heavy losses incurred in clinging to the bare crest of the Chemin-des-Dames. The enemy still being close to the crest could render untenable observation posts and there was also present the danger of his launching a surprise counter-attack strong enough to drive the defenders back from the summit. To avoid this large forces were concentrated in rear ready for any emergency and this resulted in heavy losses. These losses were due to the suspension of the offensive and not to the offensive itself.

The offensive did not achieve the major objectives, La Ferre and Laon and the breaking of the German lines, and to that extent was a failure. It did destroy a large number of enemy divisions and cost him positions of immense tactical value. General Nivelle's plan was the first step from the tactics of attrition and while the principles embodied therein were sound it was unsuited to the terrain, the time and the many circumstances over which he had no control.

LESSONS.

1. The government must not interfere in the operations of the commander-in-chief of the armies. If it does not have confidence in him he should be replaced.
2. Cooperation between commanders and especially with the commander-in-chief by subordinates is essential to success in battle.
3. An offensive conducted in a faint-hearted manner costs more than a whole-hearted one.
4. An understanding of the characteristics of any weapon is necessary to its correct tactical use. The training in the use of special weapons or engines of war must be in conjunction with the infantry in order that full advantage may be gained from their use in battle.
5. Positive measures must be taken to prevent the enemy from gaining information of an impending attack.

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THE BATTLE OF CAMBRAI. SITUATION.

By

Major Archibald King, J. A. G. D.

The battle of Cambrai began November 20, 1917. Before proceeding to a detailed description of the Battle itself, let us briefly consider the military situation just prior thereto.

In the preceding spring, the Germans had executed their great retreat to the Hindenburg or Siegfried line. Across all northern France, including the sector in which occurred the battle of Cambrai, they had withdrawn from a line which had become sinuous and difficult to defend, had given up a few miles of ruined and worthless territory, had selected the strongest natural positions, had connected and organized them with the highest military skill, and had occupied them with armies composed of veterans of three years fighting. Such was the Hindenburg line. The last important offensive operation on the Western Front had been the Third Battle of Ypres, which began July 31, 1917, with an attack by the allies on a twenty mile front in Belgium from Dixmude to Warneton. This struggle continued with varying success until it died out in the mud in November after the British had suffered hundreds of thousands of casualties and had nothing but the capture of Passchendaele ridge to show for their losses. After the drive on Cambrai had been decided upon by the British high command, and while it was in preparation, on October 24, 1917, the Italian Army broke at the Caporetto, and in a retreat which was very nearly a rout, fell back to the line of the Piave, where the situation became stabilized on November 10th. The United States had entered the war, but our military strength had not yet been felt, and there was considerable doubt, both among our associates and our enemies, whether we should be able to transport across the ocean an army large enough to affect the outcome. Above all, it was not believed we should be able to do so for an indefinite time.

In the east, under the influence of the Bolshevik virus the Russian armies were disintegrating. Riga and the Baltic provinces had been reduced in August and September, 1917, by the German General Hutier in a campaign which was more of a march than a fight. Although the treaty of Brest-Litovsh was not signed until February, 1918, it was perfectly obvious to the allies that Russia was of no further military value, and that in the next spring, or before, Germany would be able to transfer large masses of troops from the east to the west.

Though the fighting spirit of the British army was unquenched, it was woefully short of man-power and wearied by three years of war and especially by the months of heavy and almost fruitless fighting in the mire of Flanders at the Third Battle of Ypres. Only part of its enormous losses in that battle had been replaced, and the replacements had had insufficient training.

Tanks, or self propelled armed and armored vehicles capable of traveling across country, had been invented. They had, however, got bogged in the swamps of Flanders in the Third Battle of Ypres, and had had no great success elsewhere. The officers of the British Tank Corps sought a terrain upon which they could prove to the world and to their army, at that moment frankly skeptical, the worth of their new weapon. The sector of the British Third Army contained such areas. Upon visiting head quarters of the Third Army to propose a drive in which tanks should take a large part, Major General Hugh J. Elles, commanding the Tank Corps, found that General Sir Julian Byng, commanding that Army, and his staff had already had under consideration plans for an attack in which tanks might advantageously be used.

The long continued pressure by the British in Flanders and less important attacks elsewhere had caused a concentration of the German forces in the sectors attacked and a corresponding weakening of the forces elsewhere. Knowledge of this fact suggested to the British commanders the feasibility of an attack on one of the latter fronts. One such sector was in front of Cambrai, where the German forces had been more particularly weakened because of the great strength of the Hindenburg line. It comprised three lines, the outpost line, the main system and the support line. The first was from 250 to 750 yards distant and in many places on the reverse slope of a hill so that it could not be seen from the British positions. About the same distance further to the rear was the main Hindenburg line, and from one to two kilometers still further back was the Hindenburg support line. The ditches in front of the fire trenches were from 12 to 18 feet wide. Ten feet was the Maximum "straddle" of the British tanks. Each line was defended by a belt of wire, in some sectors 150 yards, and never less than 50 yards wide. In places salients of wire jutted out from the main system and protected machine gun nests so located as to be able to deliver flanking fire along the front of the system. It was estimated that

to destroy this wire by artillery fire would cost twenty million pounds sterling in ammunition and take five weeks time. Still further to the rear and on the other side of the Scheldt river and canal, at a distance of from two to six kilometers, lay the last German defensive system, known as the Marcoing-Masniers-Beaurevoir line. This, and to a less degree, the Hindenburg support line, were in an unfinished state.

Notwithstanding such extremely strong artificial barriers, the Cambrai sector had, besides the known paucity of defenders, certain other characteristics favorable for tank operations. Directly behind the British lines were one large wood (Havrincourt wood) and several smaller ones, in which tanks could be concealed. As no severe fighting had ever taken place in this sector, the surface of the ground had not been so torn up by shell fire as to make the going difficult for tanks. Beyond the German lines, the ground was open, dry upland, sloping so that the proposed course of the tanks would be generally downhill. These advantages ceased, however, some six kilometers beyond the line separating the two armies, where the Scheldt river and canal, bordered with marshes and peat-bogs and crossed by but few bridges, interposed a serious barrier to tank operations, or indeed to any other.

THE PLAN.

The general plan of the British contemplated a surprise attack and a breach of the German defensive systems by a large number of tanks in conjunction with infantry but without prior artillery preparation, on a sixteen kilometer front southwest of Cambrai. It was planned, first, to take Bonavis ridge, the crossings of the Scheldt from Crevecoeur northward, the Rumilly-Seranvillers ridge, and Bourlon wood. The two ridges named would form a defensive flank to the southeast. Bourlon wood was a position of the greatest importance, since it was upon a height from which the ground sloped north to the marshy valley of the Sensee and commanded the rear of the Hindenburg and Drocourt-Queant lines for several miles to the north. These defenses were of the strongest possible sort, as the Canadians found when they took them by frontal attack nine months later. Second, through the gap thus formed it was proposed to pour a cavalry corps, followed by other cavalry and infantry, which should exploit the initial breach. On the right, it was proposed to extend the defensive flank on the line Crevecoeur-La Belle Etoile-Iwuy, while the cavalry pushed toward Valenciennes. In the centre and left, the cavalry was to capture the Arras-Cambrai road and then the crossings of the marshy river Sensee, which would effectually cut off the German garrison of the Hindenburg and Drocourt-Queant lines south of that river and result in their slaughter or capture, and deprive the Germans of those immensely strong defensive lines without the necessity of making a costly frontal attack whose success would be doubtful. The taking of Cambrai itself was to be an incident, rather than an objective. It was of importance only as a railroad junction and a German supply depot. It was not anticipated that all the territory through which the cavalry night raid could be permanently held.

It was calculated that 48 hours would elapse before German reinforcements could be brought up in sufficient numbers to stop the attack. It is obvious that the success of the plan required:—

(a) Surprise (otherwise the original breach could not be hoped for).

(b) The breach of all the defensive systems and the capture of the Scheldt river crossings and Bourlon wood the first day, or at the worst, early on the second day, so as to permit exploitation of the breach by the cavalry before reinforcements should arrive.

Such was the plan for the battle of Cambrai, the author of which, in so far as any one man can be the author of such a plan, is said by Lieutenant Colonel Fuller, the historian of the British Tank Corps, to have been Brigadier General J. Hardress-Lloyd, commanding the 3rd Tank Brigade. This plan received the approval of Field Marshal Sir Douglas Haig, the British commander in Chief, October 20th, 1917, exactly one month before the date set for its execution. Ought he to have approved it? A discussion of that most interesting question will be deferred to the end of this essay.

ORDER OF BATTLE.

The British troops scheduled to take part in the initial attack consisted of two corps, the IVth and IIIrd, five infantry divisions abreast. From right to left, these were the 12th, 20th, 6th, 51st, and 62nd. The 29th, was immediately in rear of the 20th and 6th and after they had taken the nearer objectives was to pass through them and push on beyond.

To assist the advance of the five divisions named, there were brought up the entire force of tanks of the British Army. Not one was elsewhere, not one was held in reserve. The Tank Corps knew that its very

existence depended upon the success of the attack; and, as its stake was so great, it played its hand to the limit. There were three brigades of tanks, 1st, 2nd, and 3rd, three battalions in each brigade, and 42 fighting tanks in each battalion, a total of 378 fighting tanks, plus 98 administrative and supply tanks, 476 in all. The fighting tanks were of the Mark IV heavy type, 26 feet 5 inches long over all. They were of two kinds, grotesquely called male and female. The former were 13 feet 6 inches wide and armed with two 6 pounder guns and four machine guns. Because of their 6-pounders, they were particularly useful against pill-boxes, dug-outs, and buildings the females were 10 feet 6 inches wide and armed with six machine guns. Their armament was, of course, useful only against personnel. Each type weighed 28 tons and was equipped with a 105 H. P Daimler 6-cylinder sleeve-valve engine. Some of the tanks were fitted with grapnels to haul wire out of the way of the cavalry; others carried bridging materials, three were fitted with wireless and one carried a telephone cable. A large number of sleds was also built on which certain tanks were to haul supplies. Two battalions of tanks supported each division, save in one case where three battalions supported two divisions.

On the left of the divisions named was the 36th, which was also to attack, though unsupported by tanks probably because the Canal du Nord, directly in front of its position, though unfinished and without water, could not be crossed by tanks. Still further to the left, in front of Bullecourt, a subsidiary attack, which was not expected to be pushed far, was to be made by the 3rd and 16th divisions. A similar attack was to be made on the right near Epehy. Many other British divisions were subsequently brought into the action, the numbers of which may be here mentioned as a matter of record:—Guards Divisions 2nd, 40th, 47th, 55th, 56th, 57th, and 61st Divisions. Besides the artillery belonging to the divisions engaged, four other artillery brigades were borrowed. Altogether, a thousand guns were made ready.

A cavalry corps, consisting of the 1st, 2nd, 4th, and 5th Cavalry Divisions, was at hand to push through the expected gap.

At one time or another twenty British divisions took part in the battle. A German writer states that these constituted one-third of the British Expeditionary Forces in France. There were also the three brigades of tanks, which were non-divisional troops and which numbered slightly over 4,000 men. No figures are given by any authority as to the total number of British troops engaged in the battle. A British division at this time had thirteen battalions. A battalion contained normally about 1,000 men, but many of those engaged were below strength. It is inferable from another statement of Marshal Haig that a British division numbered about 11,000. Taking this as the strength of a British division we have twenty divisions at 11,000 men, or 220,000, plus 4,000 tank soldiers, or a total of approximately 225,000 men actually engaged. Add those occupied in supply, corps and army headquarters troops, American engineers, and others, and I believe the total would not fall far short of a quarter of a million. There were not, of course, any where nearly so many engaged at any one time.

General Petain, the French commander in Chief, loaned Field Marshal Haig certain cavalry and infantry units which it was anticipated would be used to exploit the Breach, but which were not brought into action.

I have found no reliable statement as to what German forces held in the line at the beginning of the battle, though it is stated by all that it was lightly held. Balck, the eminent German tactician, states that the 20th Landwehr Division and the 54th Infantry Division, which had come from Flanders, were in line. Ludendorff says that the line was held by tired Landwehr divisions and that the leading troops of the 107th Division were just arriving from the Eastern front when the blow fell. Stegemann mentions two groups of divisions, the XIV Reserve Corps to the north under General Moser, and the XIII Corps guarding the western approaches to Cambrai under General Watter. The front was within the rear of the Second German Army, commanded by General Marwitz, which was one of the group of armies commanded by Prince Rupprecht of Bavaria. I believe there is no doubt that at the moment and point of attack, the English possessed a considerable numerical superiority over their enemies.

PREPARATION

The training of the units, both of infantry and tanks, which were to take part in the battle, was of the most thorough and minute character. New tactics and methods had to be devised to meet the new conditions imposed by the absence of artillery preparation and the presence of tanks working in conjunction with the infantry. But even in warfare there is nothing new under the sun, for one exercise is stated to have been suggest-

ed by a drill described in Xenophon's *Cyropaedia* and there ascribed to Cyrus, King of Persia (500 B. C.). In this day, none but an English gentleman, who has received the thorough training in the classics given in the English public schools and universities, would think of going to such a source to learn the modern art of war as applied to what was at that moment its most recent development.

Aerial Photographs were taken of the German defensive systems and the country back of them, so that the British might know just what they had to meet. The 6th Division even made far behind the lines a model of the ground on which it was to attack, upon which officers and men played the parts they were later to play in combat. Every battalion, company and platoon of the entire attacking force was given a definite mission and well nigh every man a definite job. Every truck was assigned a definite task and a definite method of accomplishing it. Daily drills were held in each unit in the nature of a rehearsal of the part it was to play.

It has already been mentioned that after the 6th and 20th divisions had taken the initial objectives, the 29th division was to pass through them to attack those beyond. The same method, sometimes called leap-frogging, was applied to smaller units. In the infantry, the first wave was to take and hold the first trench, the second the second trench, and so on. In some instances, there were as many as eight waves with eight separate objectives. Similarly, the machine guns were grouped into batteries which were to put down elaborate overhead barrages during (but not before) the initial attack, and then to leapfrog past one another to positions previously selected on the map or from reconnoissance in such manner that while one battery was advancing, another was always firing. The tanks also were handled in a similar manner. Some were given a nearer and some a more remote objective.

But the most interesting as well as the most necessary part of the preparation was the joint drill of tanks and infantry. It was indispensable that the infantry soldier should have confidence in the tank. One form of exercise therefore was for the tank battalion to invite the infantry, which it was to support, to construct the most elaborate field fortification it could devise, and to guarantee to crush or cross it. The tank officers, who since the war have exchanged the sword for the pen, claim that their corps never failed to make good their guaranty.

The infantry were also drilled in assembling behind tanks, in advancing behind them to attack, and in clearing up trenches under tank support. How were these done? Let us take the assembly. The British front line trenches were too irregular in trace to permit of their being used as a line of departure for the attack. A straight taped line was laid out on the ground behind the tanks in the preliminary drills, as in the actual battle which followed, to be used as a line of departure, with taped routes leading thereto. The tanks then went forward, followed by the infantry in columns of files. The infantry was divided into trench clearers, trench stops, and trench garrisons. The first were to follow the tanks closely, to mark with small flags the lines crushed through the wire by the tanks and to assist the tanks in driving out the enemy from his trenches and dug-outs, the second were to shoot him when he came out on the level, and the third to garrison the captured trenches.

But how were the tanks to cross the trenches, which it will be remembered were wider than they could span? The ingenuity of the tank corps officers was equal to this difficulty. Enormous fascines were made of about 75 ordinary fascines of brush each, and were each bound together with an iron chain, drawn taut by two tanks pulling in opposite directions. The whole was a cylindrical bundle of wood ten feet in diameter and 4½ feet long. It was planned that each tank was to go into action carrying on its nose one of these great fascines which when released by the crew from within, would roll off in front of the tank. Once released, it could not be picked up again. The entire enemy front was divided into sectors to each of which three tanks were assigned. The leading tank of the three, called the advance Guard Tank, unaccompanied by infantry, was to crush down the wire until it reached the first trench. It was not to cross it but to turn to the left and to shoot along the fire trench with its right broadside, thus keeping down the enemy fire. The next two tanks, called the infantry Tanks, were to follow, both making for one selected point. The second tank was to drop its fascine into the trench at this point, cross on it as on a stepping stone, turn to the left and work down the fire trench. Tank No. 3, was to cross on No. 2's fascine also and go straight ahead until it reached the second trench, Here it was to cast in its fascine, cross on it, turn to the left and work down that trench. The advance guard tank, whose fascine was still on its nose, now was to swing round, cross the first and second trenches on the fascines already

dropped into them and keep on to the third trench. There it was to deposit its fascine and cross on it. The two infantry tanks were to follow on the fascines now in position in each trench and fall in behind the advance guard tank ready for whatever might next need to be done .

CONCEALMENT.

It has already been said that the success of the operation was not to be expected unless the enemy should be surprised. The most extraordinary precautions were therefore taken to assure secrecy, not only from the enemy but even from all but the indispensable minimum of persons in the British Army, lest through spies, prisoners, or indiscreet remarks or writings, the Germans might get a notion what was impending. Tank officers coming into the sector on reconnoissance duty prior to the moving in of the tanks themselves covered their insignia and removed distinguishing marks from their automobiles, omitted calls of courtesy and avoided their friends. One is said even have concealed his features behind smoked eye-glasses. When the assembly of tanks began, it was explained on the ground that a tank training centre was being established. Headquarters of the Tank Corps, which was moved to Albert and in stalled alongside the Headquarters of the Third Army, was embellished with a sign, "The Tank Corps Training Office."

Equally elaborate measures were taken to prevent the Germans from learning anything by aerial or other observation of the concentration of men and materials. It required 36 railroad trains to move the tanks along into the area, beside the additional trains necessary to move the troops and the enormous stores of ammunition and supplies. As merely two items of what was required, I will mention 165,000 gallons of gasoline and 5,000,000 rounds of small arms ammunition. All detraining was done at night; and tanks troops, and supplies were so far as possible concealed in woods. For this purpose, Havrincourt wood, immediately behind the British line, was admirably placed. It hid one brigade of tanks and numerous troops and dumps. When woods were not available, camouflage was resorted to. A whole brigade of tanks was hidden under cover painted to resemble piles of brick and other supplies. Troops were quartered under camouflaged canvas erections and forbidden to leave them by day. All unusual movement on the light railways, roads, or in the air, was forbidden. No artillery registration was permitted, nor any increase in the usual rate or change in the kind of source of artillery fire. In order to avoid the possibility of disclosure by prisoners whom the Germans might take, the infantry troops who were to make the attack either relieved those occupying the trenches on the night 18th-19th, twenty-four hours before the battle, or else actually passed through those previously holding the line at the moment of advancing to the assault. As late as November 17th, the German Second Army officially reported that no attack was to be expected from the English opposite it and that no movement were noted.

On the night of the 18th-19th, the Germans made a trench raid and captured some English prisoners, and the English command was greatly worried lest the whole plan might be given away. It seems clear that the prisoners did disclose that some sort of an attack was pending. Balck says that as they belonged to division known to be already in line and could give no details, the Germans refused to believe them. Other authorities say that the information was received so late by the Germans that they had not sufficient time to profit by it to any extent. The former is probably the correct version of what happened, but at any rate there was no counter-preparation of any importance by the Germans.

THE FIRST DAY OF THE BRITISH ATTACK, NOVEMBER 20, 1917.

As soon as it was dark, at 5 o'clock P. M. on November 19th, the tanks came forth from the woods and from under their screen of camouflage and crawled forward to their line of departure. During the night of the 19th-20th, the delicate and dangerous task of marking the line of departure and routes thereto with tape was successfully accomplished. On these lines the infantry assembled in the latter part of the night. For reasons as yet unexplained, the Germans delivered a brief but fierce bombardment at 5:30 o'clock A. M., November 20th, on targets which had never been fired upon before. This caused some casualties among the infantry awaiting zero hour in the open on the taped line of departure, but there was nothing to do except to take the fire. Many of the English feared that this bombardment indicated the discovery of the intended attack; but this fear was groundless, as the German artillery ceased firing before six o'clock. There was no preliminary bombardment whatever by the British.

Zero hour was 6:20 o'clock A. M., and at that time the tanks followed by the infantry, moved forward, hidden by the mist, which fortunately for the British was heavy that morning, as well as by a jumping barrage

of smoke bombs mixed with high explosive shells. As soon as the attack was under way, the British artillery also executed counter-battery work and put a concentration of shrapnel on the bridges crossing the Scheldt and other sensitive points.

In the centre of the first line of advancing tanks was Brigadier General Elles, commander of the Tank Corps, in his own tank, the *Hilda*, flying the flag of his corps. The personal participation of a general officer in combat at the head of his troops is, of course, well nigh unheard of in modern warfare. General Elles' action reminds one of an admiral leading his fleet into battle on board his flagship, or of a king or chieftain of mediaeval times, charging in full armor at the head of his knights, like King Henry of Navarre at Ivry, as sung by Macaulay. But a general under forty, as was Elles may be pardoned for failing to be satisfied with the more humdrum, if more orthodox, course usually followed by his elders. It is said that becoming dissatisfied with the narrow field of vision allowed by the small eye-holes, he fought most of the battle with his head sticking through the hatch in the top of the tank, while he indicated suitable targets to the gunner below him by kicking him in the ribs.

The Germans were standing in the trenches when the leading British tanks approached, but so great was the moral effect of the tanks, such was the feeling of helplessness inspired in the German breasts by these monsters whose steel sides their bullets were powerless to penetrate, that they offered but slight resistance. The first, second and third lines of trenches of the Hindenburg system were crossed with the aid of the great fascines and quickly taken according to schedule. Beyond them was from two to six kilometers of open country reaching to the Scheldt, sprinkled with a few small woods and with villages up to that time but little damaged. In this territory the British were held up only at a few obstinately defended points.

On the right, there was a check at Lateau wood. As has been said, the seizure of the bridges over the Scheldt river and canal was of capital importance. At Masnieres the Germans blew up the bridge but it was not entirely destroyed. A tank attempted to cross upon what was left of the bridge but broke through and sank into the water, demolishing the bridge entirely. Nevertheless, at a later hour, the same day, a temporary bridge was erected by the British alongside the ruins.

The next river crossing to the north was at Marcoing. The same careful preparation had been made for the taking of this village as for the breaking of the Hindenburg Line. From aerial photographs maps had been made of the village and the route of each tank laid out through or around it. So well was this work done that the tanks and the infantry captured the bridge just as German engineers were about to explode a charge to destroy it. This was the only bridge taken intact. Further north, the Scheldt was not reached that day.

The opening thus made for further exploitation beyond the Scheldt was of the narrowest. The British held but two river crossings, at Masnieres and Marcoing, and one of them was but a temporary bridge. Nevertheless, over that temporary bridge went a squadron of the Fort Carry Light Horse from Winnipeg, Manitoba. It is only once in a blue moon in modern times that cavalry charges a battery and sabres the gunners, but the blue moon rose over Cambrai that day, for that is what the Fort Carry Light Horse did just east of Masnieres. Continuing further, they killed, captured or drove away a body of 600 infantry; and, finally, after nearly all their horses had been killed or wounded, took up a defensive position in a sunken road near Rumilly. There they held on, surrounded by the enemy, until dark, when with great difficulty and on foot they made their way back to the British lines.

Other small parties of cavalry passed over one or the other crossings and got into the very suburbs of Cambrai but had to fall back.

The main body of the British cavalry, one corps of four cavalry divisions, as well as the French cavalry lent by General Petain, was not pushed through, although some of it was moved up into the area taken by the British that day. Apparently this was not done because the two river crossings were considered too narrow a gap to permit the use of such large forces, and also because the checks suffered by the British at Flesquieres and at Ribecourt (more fully described hereafter) and that at Masnieres due to the blowing up of the bridge gave the Germans time to occupy that section of the unfinished Marcoing-Masnieres-Beaurevoir line in front of Rumilly before the English could do so.

Let us now turn to the progress of the attack on the first day, November 20th, farther north. A little to the north of Marcoing the ridge on which stand Premy chapel and Bois Des Neuf or Nine Wood was taken.

In the centre there was sharp fighting in Havrincourt. In Ribecourt German snipers came out of their hiding places and held up the cavalry hours after the infantry had passed through. But the most serious check was at Flesquieres, and it was due largely to the bravery of one man, a German major of artillery, who, serving a gun single handed, put out of action by direct hits at point blank range a number of tanks variously stated as from six to sixteen as they successively topped the ridge. His valor earned him special mention and high praise from his generous enemy, Marshal Haig, in his Despatches. It is stated that he was finally killed by a Highland soldier, who crept up on him and said, "You're a brave man, but you maun dee," and ran him through with a bayonet. In consequence of this check, Flesquieres was still in German hands at the evening of the 20th. On the left much difficulty was experienced in crossing the Canal du Mord, which in this region was unfinished at the outbreak of the war and was at the time of the battle a dry ditch, eighty feet wide, whose perpendicular brick lined sides had to be scaled with ropes, Notwithstanding this obstacle, the British pushed on, captured Graincourt, and just at evening got into Anneux.

As night fell on November 20th, the line of the British advance was as follows:— Gonnellieu-Lateau Wood -Masnieres-tongue of land in the bend of the Scheldt opposite Marcoing-Bois Des Neuf (all inclusive) -Flesquieres (exclusive) -Graincourt (inclusive) -Anneux (Through the village) -thence along the Cambrai-Bapaume national road to the old front line near Boursises.

The retention of Flesquieres by the Germans left them still possessed of an acute salient, of which Flesquieres was the apex, interposed between the British advance on the right of Masnieres and on the left to Anneux. Two of the river crossings had been taken, at Masnieres and Marcoing, and a small bit of land east of the Scheldt; but, save for a few small detachments, the cavalry had not broken through and the British had taken neither of the two dominating heights, the Rumilly-Seranvillers ridge on the right, or Bourlon wood on the left.

THE SECOND DAY OF THE BRITISH ATTACK, NOVEMBER 21, 1917.

On the following day, the British attack continued. On the right a little more ground was gained around Masnieres. The next river crossing upstream from the two already taken was Crevecoeur. There the British succeeded in crossing the canal but not the river, only to be thrown back some distance west of both by evening. The next crossing downstream from those taken on the 20th was at Noelles. There the British captured the bridge over the river but not that over the canal. As at no other places did they reach the river, and as at neither of the two mentioned did they succeed in crossing both river and canal, they were at evening on the 21st in no better situation than twenty-four hours before, so far as river crossings were concerned.

In the centre, Flesquieres, outflanked on both sides, was taken November 21st quickly by eight A. M. On the left, Cantaing was taken, the capture of Anneux completed, and finally toward evening Fontaine-Notre-Dame was also taken and a point reached on its eastern edge but five kilometers distant by direct road from the Grand Place of Cambrai. In the capture of all these villages, the infantry and tanks co-operated. On the extreme left, the British pushed their line north of the Cambrai-Bapaume highway as far as the southern edge of Moeuvres.

The line held by the British on the evening of November 21st did not differ materially from the outer line shown on the Map save that at this time the British did not hold any part of Bourlon wood and they did hold Fontaine-Notre-Dame. It will be observed that the attack had slowed up a great deal on the second day. On the right, nothing of any importance was gained, and in the centre and on the left the gains were scarcely so great as those of the first day. Only two river crossings were held, Masnieres and Marcoing, and the Germans held their final trench line (the Marcoing-Masnieres-Beaurevoir line) opposite those two. The gap which had been momentarily opened had been closed. Neither of the dominating heights, the Rumilly-Seranvillers ridge on the right, nor Bourlon wood on the left, had been taken. A rectangular salient 15 kilometers wide by 8 deep had been taken by the British but substantially all of it was dominated by these two heights. And worst of all, the 48 hours which the Germans needed to bring up reinforcements would elapse at dawn the next morning.

In his Despatches, Marshal Haig states at this time he gave serious consideration as to what should be his further course. On his right, he says, his advance had been stopped; and on the left, all his positions north of Flesquieres were untenable because of the enemy's still holding Bourlon wood. It was therefore impossible merely to consolidate and hold the ground already won. He had to decide either to withdraw to the ridge on

which stood Flesquieres or to continue the attack in the effort to take Bourlon wood. On the one hand were the considerations that his troops engaged were very tired, that he had few fresh divisions, and that enemy reserves would undoubtedly soon arrive in large numbers. On the other hand were a number of considerations. First, there was the natural reluctance of himself and his troops to relinquish ground so gallantly won. Important also was the anticipated effect of continued attack here in preventing the dispatch of German divisions to assist the Austrians in continuing their drive against the defeated Italians. But what seems to have been the decisive consideration in Marshal Haig's mind, which induced him to continue the attack, was the immense strategic and tactical advantages to be gained from the possession of Bourlon wood.

BOURLON WOOD.

In order that the tactical advantages which Marshal Haig hoped to gain from the possession of Bourlon wood may more clearly appear, and also because the combat for the next week was more the battle of Bourlon wood than the battle of Cambrai, it will be well to pause at this point and consider more in detail the geography of the region around Bourlon and particularly to the north of it.

The whole of this region lies in the valley of that river which is called Scheldt in Flemish and Dutch (ch pronounced like k), Schelde in German, and Escaut in French. English writers sometimes call it by one and sometimes by another of these names, but more generally employ the Flemish name Scheldt. It rises just to the southeast of this battlefield, flows, as we have already seen, along its eastern edge, passes the cities of Cambrai and Valenciennes, and then pursues a generally north and northeasterly direction across the whole kingdom of Belgium. It forms the port of Antwerp and after entering the Netherlands turns west, becomes a broad stream many miles wide, and falls into the north Sea at Flushing. From Antwerp to the sea it is one of the great rivers of Europe, bearing the largest ships of commerce on its bosom, but near Cambrai it is no more than what we should call a creek. It is, for its entire course in the region where we are concerned with it, paralleled by the Scheldt canal, which is a much more considerable obstacle than the river itself.

Some twelve kilometers northeast of Cambrai the Scheldt receives the waters of the Sensee, a river rising west of the line separating the two armies, crossing it, and flowing east to its junction with the Scheldt with whose general course it forms a right angle.

The Sensee, in its turn, receives a tributary at right angles to it, the Agache, which rises near Boursies, on the left of the British attack, flows past Moeuvres and north to the Sensee. Both the Sensee and the Agache, like the Scheldt, are paralleled by canals but the canal du Nord, in the valley of the Agache, as has already been remarked was for a part of its course at the time of this battle unfinished and without water. Because of its perpendicular brick-lined sides, it was none the less a serious obstacle. All three rivers are bordered by marshes, especially the Sensee. From these marshes and bogs the people of the country have for many years dug the peat for use as fuel. In many places considerable lakes, called clairs, have been formed by the removal of the soil peat.

To the west of Cambrai and midway between the Agache and the Scheldt in the ridge on which stands Bourlon wood. This forest crowned ridge is a remnant of another geologic stratum, all the rest of which has been eroded. It rises like an island above the gently rolling plains around it, being 111 meters above sea level, whereas the Bapaume-Cambrai road, just south, and the railroad just north, are at less than 60 meters elevation. Its general slope, on its north and south faces, is 5 per cent, at places as steep as 6½ per cent. It is much higher than any of the land to the rear of the Hindenburg line north and northwest of it in the valleys of the Sensee and the Agache, all of which it overlooks. In its central portion the top of the ridge is covered with woods. The longest dimension of the ridge is east and west, or at right angles to the Agache and the Scheldt, thus closing the space between them.

We thus have a square, roughly twelve kilometers on a side, bounded on the east by the Scheldt, on the north by the Sensee, on the west by the Agache (all three of which rivers are paralleled by canals, marshes, and peat-bog), and on the north by the wooded ridge of Bourlon.

Long before the world war, this square was well known in French military history as Caesar's camp. Caesar's Commentaries contain no definite mention of a camp in this area, but they do show that he twice passed through this region, in 57 and 55 B. C. It is well known that Caesar made a fortified camp every night. I have been unable to find any definite proof that he every camped here but the long continued use of the

name makes it seem probable that the presence of a Roman camp must be indicated by the finding of Roman relics or otherwise.

At a much later period, though still long before the World War, Caesar's Camp attained fame again. In 1793, the new-born French Republic was beset by the allied monarchical powers of which the chief were England and Austria. Its army of 35,000 men, under the command of General Kilmaine, took up a defensive position in Caesar's Camp. The allies, invading France from what is now called Belgium, approached from the direction of Valenciennes. Although they outnumbered him, the allied leaders did not undertake to make a frontal attack on so strong a position. While the imperial general, the Prince of Coburg made a demonstration on the east front of Caesar's camp and summoned Cambrai, then a fortified city, to surrender; the Duke of York, the English commander, made a wide turning movement to the east and south and approached the camp from the south, with the intention of attacking Bournonville, as the English did actually 124 years later. But Kilmaine's forces were so inferior that he could not hold the camp and an unduly extended flank toward Arleux, so he withdrew from the camp to Arras without a battle. In the pages of Jomini, sometimes disguised as to spelling, we read the same familiar names of Masnières, Cantaing and Fontaine-Notre-Dame, which we find in more recent history.

The importance of Caesar's camp in the present battle has been and will be further shown in the present essay, where for a week (November 23-29) the English attacked its southern face.

But once again did Caesar's Camp come into military prominence. In September, 1918, in the final retreat of the Germans, they opened the sluices and flooded the valley of the Agache, thus stopping the advance of the British, who this time were attacking the west side of Caesar's Camp.

Is it not remarkable that notwithstanding the tremendous changes in the art of war from the days of Julius Caesar to those of the French Revolution, and the scarcely less important changes from that time to the World War, in three wars so widely separated in time the same ground should be considered and occupied as a strong defensive position?

The reason why Bournonville wood was of such capital importance to Marshal Haig in the present battle was, as already indicated, that, even if the attack could be pushed no farther, it would give observation for artillery fire on the German lines of communication and back areas and the rear of the Hindenburg and Drocourt-Queant lines as far north as the Sensee. On account of the swamps of the Sensee to the north, so difficult would be the task of supplying the lines south of that river without using the roads at the north foot of Bournonville ridge that it seems not improbable that the Germans would have given up all territory south of the Sensee had the English succeeded in establishing themselves permanently on Bournonville ridge. So Marshal Haig confidently hoped. But even if the Germans had not done so, what better line of departure than Bournonville ridge could be desired for a further attack, either at once if sufficient troops could be secured, or the following spring?

Such an attack, if successful, because of the marshes of the Sensee, would shut in all the German troops holding the lines south of that river and result in their capture or slaughter, thus carrying out a part of the original plan of the Battle of Cambrai.

The weak point in Marshal Haig's plan, aside from the weariness of his troops and the paucity of reserves, lay in the fact that the Germans still held the Rumilly-Seranvillers ridge. Even if the English took Bournonville ridge, their rear on the south slope of the ridge and all their lines of communication leading thereto would be exposed to observed fire from the heights north and east of Rumilly. Could Marshal Haig hold the ridge under such conditions? To make his position satisfactory, otherwise than at great cost, he needed both the ridges mentioned. And assuming that he had men enough to capture Bournonville, could he take the other, still defended by the Marcoing-Masnières Beaufort line and approachable only through a very narrow bridgehead?

Nevertheless, Marshal Haig determined to go on. Let us see how he fared.

THE THIRD DAY OF THE BATTLE, NOVEMBER 22, 1917.

The British troops were, however, so weary and disorganized, that, notwithstanding Marshal Haig's decision to continue the attack, no new offensive movements of importance were undertaken on the 22nd.

On the night of November 21st, the order was given the British troops for an attack the next morning on Rumilly, but because of their exhaustion it was almost immediately countermanded. Nor was the attack

on Bourlon undertaken the 22nd, for the same reason. On the extreme left, west of Moeuvres, however, the British took a small height of some tactical importance called by them Tadpole Copse.

The Germans, on their part, were not inactive. They were of course bringing in reserves as fast as they could, and now felt strong enough to strike back. By a counter-attack in the afternoon of November 22nd, they recaptured Fontaine-Notre-Dame.

THE STRUGGLE FOR BOURLON RIDGE, NOVEMBER 23-29, 1917.

At 10:30 A. M., November 23rd, the 40th British Division, which had not taken part in the original attack, supported by 34 tanks, stormed and took Bourlon wood. Attempts were also made by the British infantry, supported by tanks, to take the village of Bourlon and to retake Fontaine-Notre-Dame. In each case the tanks entered the village and cruised about therein at will without the Germans being able to stop them; but the Germans retreated to the roofs and upper stories of the houses, beyond reach of the tanks and prevented the weary infantry from entering or holding the villages. The historians of the Tank Corps say that the attacks failed because the attacking infantry in some cases were new troops who had never co-operated with tanks before, and in no case was there opportunity for that careful joint drill beforehand which preceded the original attack. The tanks accordingly withdrew at night.

From this time on the tanks, for reasons just indicated, and also because of casualties, disorganization, and need of repairs, took a comparatively unimportant part.

From November 24th to 29th inclusive, the line separating the British and German armies was stationary and comparatively quiet on the right and in the centre of the salient. On its left or north side, from Fontaine-Notre-Dame through Bourlon wood and village, Moeuvres, and Tadpole Copse, the fighting was continuous and most sanguinary from November 24th to 27th inclusive. So many attacks and counter-attacks were made that it would be tedious and useless to undertake to relate them in detail.

The British several times attacked the villages of Fontaine-Notre-Dame and Bourlon and at time were in possession of the whole of one or the other, but never succeeded in staying for more than a few hours. On their part, the Germans attacked Bourlon wood five separate times in one day, November 24th, and again on subsequent days. Although the line swayed back and forth with the attacks and counter attacks, in general during the period from November 23rd to 29th, inclusive, it occupied the position shown on the Map, that is to say, the Germans held Fontaine-Notre-Dame, the eastern and northern edges of Bourlon wood, Bourlon village and Moeuvres; while the English held the greater part of Bourlon wood and on the extreme left the spur on which stood Tadpole Copse.

An inspection of the map will show that the British position on Bourlon ridge was far from satisfactory. True, they occupied the high ground, everything within the 100-meter contour, but they had failed after repeated efforts to hold the northern slope, from which they hoped to overlook the valleys of the Sensee and the Agache and whence they planned to launch a later attack to roll up the German line in those valleys. Furthermore, their hold on what they had was of the most precarious character. As Marshal Haig says, "As a result of five days of constant fighting, therefore, we held a strong position on the Bourlon Hill and in the wood, but had not yet succeeded in gaining all the ground required for the security of this important feature."

It is also to be remembered that the south or rear face of Bourlon wood and lines of communication leading thereto were exposed to observed artillery fire from the heights across the Scheldt river, north and east of Rumilly, as already pointed out.

The 28th and 29th of November were days of comparative quiet on the entire front. The tanks were all withdrawn for reorganization and repairs. Troops in line were relieved. The British were preparing for a further more deliberate and more powerful attack, by which they hoped to gain enough additional ground to make their position secure. What the German were preparing for we shall shortly see.

THE GERMAN COUNTER-ATTACK-ITS PLAN AND OBJECT.

The German counter-attack began on the morning of November 30th. It consisted in a drive at each of the flanks of the salient. Besides the natural desire to strike back, one of the principal motives for the attack was that Cambrai was a railroad junction of great importance to the Germans and was now so close to the British lines as to be within artillery range and within reach of a possible attack at a later date. General Marwitz had an ambitious plan, to launch two attacks simultaneously, one on each flank of the salient near

where it joined the old line as it existed prior to the battle, which should converge toward and meet at Trescault. His aim was no less than the capture of the entire 111and IV British Corps within the salient by thus cutting them off. Let us see how well he succeeded.

THE GERMAN COUNTER-ATTACK, SOUTHERN FLANK.

NOVEMBER 30-DECEMBER 7, 1917.

The German counter-attack was made with divisions only partly rested. It extended, so far as the south flank was concerned, from Masnieres on the north to Vendhuile on the south, a distance of 16 kilometers. A glance at the Map will show that this took in the southern flank of the salient made by the British drive and also a stretch of some six kilometers further south which had not previously been involved in the battle at all. This stretch constituted the northern half of the front of the 55th Division. This division was below strength, but was nevertheless holding a front of 12 kilometers, fully three times too long. The sector was supposed to be a quiet one, but the event shows how unwise it is to rely on such a condition continuing.

In preparing for this counter-attack the Germans employed the tactics so successfully used by General Hutier in his advance on Riga. The attacking divisions were assembled far back of the line, brought up by night, and hidden in woods or folds of the ground.

Preceded by an intense artillery bombardment of one hour only, the assault was made between 7 and 8 A. M., in numbers greatly superior to the British locally. The artillery fire, though severe, was not the rolling barrage which usually preceded a German attack, and the English did not even then think there was to be one. The English anticipated a strong counter-attack on the salient they had won; but because of the great tactical importance of Bourlon wood, they seem to have expected the main attack there, rather than on the southern flank. The Germans effected a complete surprise. The intense artillery concentration and fire from low flying aeroplanes forced the English infantry under cover and kept down their fire. Guided by pyrotechnics, while smoke mixed with the shells blinded their enemy, the Germans advanced first in small assault groups of riflemen, machine-guns and minenwerfers who established strong points. Then the gaps between these were filled by infiltration until the defenders found themselves cut off and surrounded by superior numbers.

The configuration of the ground aided the German tactics, as there were several ravines leading from the German lines to, across, and beyond the English lines, through which the Germans penetrated. Of these the most noteworthy is ravine 22, by which large numbers of Germans reached points well behind the English lines.

The British held their ground in Masnieres, but south of there their line gave back or broke altogether. The Germans quickly took Bonavis Ridge, the villages of Gonnelieu and Villers-Guislain; and largely through infiltration up Ravine 22, captured Gouzeaucourt at 9 A. M. This was one of the most considerable villages of the region and was three kilometers behind what had been the British front line before the battle and still farther behind the line at the date of the counter-attack. It was the site of a number of those military establishments which are placed only in positions of supposed security, but which were on this occasion completely surprised by the rapid German advance. Headquarters of the 29th British Division on the outskirts of Gouzeaucourt was taken and the commanding general and his staff escaped only after a rear guard action fought by a party of signalers, runners and servants collected by himself. Another general was surprised in his headquarters asleep. He awoke, made a rapid estimate of the situation, organized a similar covering force, fought a like action, and retreated in good order in his pajamas. There was a hospital in Gouzeaucourt about which amusing stories are told. It is said that a doctor was taking a bath in a tent in one of the portable tubs so loved by the British, when he heard shots. Putting his head out, he observed Germans coming down the village street at no great distance. The uniform in which he retreated was even scantier than that of the general, as he ran away as fast he could clad only in a towel wrapped about his middle. It is further related that when the Germans took the village, they placed a sentry at the door of the hospital but permitted its staff to carry on their duties. Another doctor invited the sentry inside to have a cup of hot English tea; but, while he was drinking it, a good part of the hospital force and such of the patients as could walk sneaked out and got away.

It was at and near Gouzeaucourt that the only American troops in the region came under fire. It will be remembered that among the first American troops to go to France were several regiments of railway

engineers. Some of these were at this time engaged in the laying and others in the operation of light railways in this region. Shortly after my own arrival in France, I fell in with a company which had been present at the battle of Cambrai but two months before. One of the lieutenants told me that the company was engaged in railway construction, that it had been going out to work armed, but that as the arms were in the way, and as the British gains were deemed sufficiently consolidated and assured, on this morning the arms were left behind. What was the surprise of this officer and his men, on glancing up while quietly at work, to see Germans advancing over the brow of the hill at no great distance; "What did you do?", I inquired. "Do;," said he, "What was there to do? we beat it." Some of the American engineers, however, are said to have taken part with the British in the fighting.

The situation was by this time extremely critical for the British. The Germans had made a clean break through all prepared defensive positions, had advanced to a maximum depth of four kilometers on a front of ten kilometers, all British telephone wires had been cut, units were fighting independently, and every gun in the immediate sector had been captured or put out of action.

The British recovered from their surprise and struck back quickly. Their Guards Division, which was in reserve, retook Gouzeaucourt at noon the same day, November 30th. The 1st and 3rd Tank Brigades had been withdrawn from the area entirely. The 2nd was in reserve. At 9:55 A. M., Brigadier General Courge, its commanding officer, received a telephone message that the Germans had broken through and that his tanks were wanted. His men were engaged in repairing and refitting their badly battered tanks, not a single one of which was then ready for action. Nevertheless, by 12:40 twenty-two tanks were sent forward, followed by twenty more at 2:00 P. M. When they reached Gouzeaucourt, they found it already retaken, but they joined in the further fighting which raged all along the southern flank the whole afternoon. There was, however, no further material change in the situation that day.

On December 1st, the fighting continued. The British Guards Division, supported by tanks, retook Connelieu and Gauche wood, and advanced as far as the western edge of Villers-Guislain. Severe fighting also took place at Masnieres, where nine separate attacks were beaten off. It was near this point that Colonel Forbes-Robertson, brother of the distinguished actor who took the part of the blind hero in "The Light that Failed," was himself blinded. It is said that he refused to relinquish his command; but directed his orderly to lead him, with a bandage over his eyes, to the firing line, where he spoke words of encouragement to his men.

With the taking of Bonavis ridge by the Germans, Masnieres was exposed to fire from three sides, so the British evacuated it on the night of December 1st-2nd.

During the next few days, the Germans continued to exert strong pressure on the southern flank of the British salient all the way from Marcoing to Vendhuile. On the 2nd, they retook Connelieu. On the night of the 2nd-3rd, the British evacuated their bridgehead east of the Scheldt opposite Marcoing. Around the farm of La Vacquerie the fighting raged for days, and the Germans finally took it December 4th. They continued to press forward slowly up the southeastern slope of Welsh Ridge, the ridge next beyond and parallel to Bonavis ridge which they had taken the first day of their counter-attack. The activity of both armies gradually died away through exhaustion and the line between them became stabilized about December 7th, running along the southeastern slope of Welsh ridge near the top, west of La Vacquerie, Connelieu and Villers-Guislain, and rejoining the old line existing before the battle near Vendhuile.

THE GERMANS COUNTER-ATTACK, NORTHERN FLANK, NOVEMBER 30-DECEMBER 4, 1917.

Between 9 and 10 A. M., November 30, two hours after their attack on the southern flank of the salient held by the British, the Germans began their counter-attack on the northern flank from Bourlon wood to Tadpole Copse. The tactics used in this attack were quite different from those on the southern flank and were merely a repetition of German assault tactics of the early years of the war. The assault was preceded by a heavy preliminary bombardment. This was followed by a rolling barrage, under the protection of which the infantry advanced to the assault in successive dense waves, in one sector as many as eleven. The attack was pressed with the utmost pertinacity and disregard of the immense loss caused by British artillery and machine-gun fire in the dense masses of German infantry. Repeated attacks were made during the day. The British fought a defensive action with the utmost bravery and were not forced back more than temporarily anywhere except on the

west bank of the Canal du Mord, south of Moeuvres, and even there their loss of ground was not serious.

The action on this front was marked by a number of instances of heroism. A company of the 17th Battalion, Royal Fusiliers, was attacked while in the act of withdrawing from an exposed saphead to the main line of resistance. The officer in command sent three of his platoons to organize the main line and with the remaining platoon fought off the enemy until this was accomplished and he and every man of the platoon were killed.

In the sector south of Moeuvres where the British had to yield ground one company of the 13th Battalion, Essex Regiment, was isolated. After fighting all day, a council of war was held at 4 P. M., attended by the two surviving officers, both lieutenants, the Company sergeant-Major, and the platoon sergeants, at which it was determined to fight to the last rather than surrender. Two runners were sent to notify Battalion headquarters of this determination, both of whom succeeded in getting through. No further word was ever had from any member of this company, though its fire was heard until far into the night, and it is believed that it perished to a man.

At another point three of a line of posts held by the 1st Battalion, Royal Berks Regiment, were encircled. When the ground was retaken two days later, the bodies of the men holding these posts were found surrounded and covered by heaps of German dead.

During the first three days of December vigorous fighting continued on this front, but without change in the lines of the two armies. December 4th was relatively quiet, and the only activity was that of the artillery.

It may be said by way of summary, that the counter-attack on the northern flank had no result beneficial to the Germans, save in so far as it prevented the British from strengthening their precarious hold on the top of Bourlon ridge. It will be remembered that this attack was to be one of the pincers which were to pierce the English salient from opposite directions, meet at Trescault, and cut off the III and IV Corps entirely. In this aim it failed completely.

THE BRITISH WITHDRAWAL FROM BOURLON RIDGE, DECEMBER 4-7, 1917.

On the night of the 4th-5th December, the British withdrew from Bourlon wood, and between that time and the 7th evacuated all of the salient north of the ridge on which stood Flesquieres as well as Premy Chapel ridge and the village of Marcoing to the east. The withdrawal was made in good order and with few casualties. The British machine-guns at this time leapfrogged backward to cover the withdrawal.

The German advanced into the region evacuated by their enemy only after several hours, delay and with great caution, but nevertheless suffered considerable loss from artillery fire as they felt their way across the open valley between the ridges of Bourlon and Flosquieres. As stabilized on December 7th, the line between the two armies ran slightly to the north and east of Flesquieres and Ribecourt.

Marshal Haig states that the German's possession of Bonavis ridge made his position in the salient north of Flesquieres untenable. Most of the country north of Flesquieres is defiladed from Bonavis ridge by the ridge on which Flesquieres stands, and the rest is from 9 to 11 kilometers distant, so it is difficult to see how Marshal Haig's words can be literally true. I think it is more accurate to say that the possession of Bonavis ridge by the Germans rendered Masnieres, Marcoing, and Noyelles untenable, and with the loss of these the salient left had no satisfactory defensive flank and was too acute to be safe. Besides, the whole of it was, as I have already pointed out, exposed to observed fire from the hills north and east of Rujolly.

On December 7th, the battle of Cambrai came to an end with the line between the armies stabilized as already noted and as shown on the Map.

RESULTS.

Comparison of the line between the contending armies in this area as it existed November 19th, before the battle, and as it existed December 7th after the battle is interesting. The old line, except for local sinuosities, was fairly straight. The new line shows two blunt, shallow salients, of which the base is the old line in each case. The northern salient is the ground gained by the British from the Germans. It is ten kilometers long by four deep at its deep. It contains three villages of no particular importance and the three trenches of

the Hindenburg line. The southern salient is the ground gained by the Germans from the English as a result of the battle, about seven kilometers long by three deep. It contains two villages, also of no particular importance, and the trenches and field fortifications of the English built before the battle. The English gains were therefore about twice those of the Germans.

A net gain of some twenty square kilometers of territory, having no particular tactical value, is a sorry showing as the final outcome of an operation so boldly and ambitiously, and yet so reasonably, conceived as Cambrai. Every one having the least acquaintance with military science knows that in such a struggle as the World War, the possession of twenty square kilometers more or less of the chalky uplands of Artois made not the least difference, so far as any effect on the result of the war was concerned. It was wholly immaterial whether the line ran to the north or to the south of Flesquieres in December, 1917. The following March, when the Great German drive swept the English out of all this region, the fact that they held a few more square kilometers than would have been the case if the battle of Cambrai had never been fought availed them not a particle.

The British took from the Germans 11,300 prisoners and 138 guns, and lost to them 9,000 prisoners and 166 guns. A German writer adds that 140 British tanks were put out of action, which seems probable. No figures have been published on either side giving the number of dead and wounded but they must have been several times the number of prisoners. Fuller makes a statement from which it is inferable that the British casualties on the first day were around 4,500. They must have been much heavier on both sides during the fierce fighting in and around Bourlon wood. The losses of the Germans may have been somewhat higher on account of the mass tactics employed by them in the counter-attack of November 30th.

We thus see that, so far as can be ascertained, the casualties of the two sides were not far from the same, with the advantage of a few thousand perhaps on the side of the English. Here again, considering the millions of men killed and wounded in the World War, this balance in their favor, if it existed, is negligible.

It is also claimed on behalf of the English that the Cambrai offensive prevented the Germans from sending more divisions to Italy, and thus lightened the pressure on the Italians who had been defeated at the Caporetto October 24th, only a few weeks before. To determine whether this argument has any validity it would be necessary to have access to the confidential plans of the German and Austrian war ministries and armies, and find out whether they did divert any forces intended for the Italian front. I can not, however, think that the contention is sound in the light of the circumstance that the Italian line became stabilized on the Piave November 10th, ten days before this battle.

It may also be said that to attack is to retain the initiative and to prevent the enemy from carrying out his plans, even if the attack does not succeed, and that by his bold offensive at Cambrai, Marshal Haig gained this advantage. If so, he gained it for ten days only, November 20 to 29th, for from November 30th on the initiative was definitely in the hands of the Germans. There is, furthermore, not the slightest evidence that the Germans had in mind any offensive on the western front at this time, or at any time prior to the following spring.

The battle of Cambrai must be set down as a drawn battle. As the British were the aggressors, as they had made ambitious and extensive plans, this is equivalent to saying that their plans failed. Why did they fail? The comments on the tactics and strategy of the battle which follow may throw some light on this question.

COMMENTS--TECHNIQUE AND MINOR TACTICS.

This battle shows us, as nothing else ever has, the possibilities of tanks. It shows their great power of crushing and crossing obstacles, their fire power, their great moral effect on enemy, infantry and the possibilities prize in their use. Looking at the battle from the opposite standpoint, it shows the absolute necessity when in a defensive position of protective measures against tank attack, such as anti-tank guns, barriers, land-mines, traps, etc.

It is impossible to praise too highly the originality and ingenuity which invented and thought out the British plan for breaking and crossing the Hindenburg line by means of tanks, fascines, and infantry, and the meticulous care with which the plan was worked out and drilled into the troops who were to carry it into effect. Even Marshal Hindenburg pays the British the rather sarcastic compliment of saying that on this occasion

their high command departed from the routine methods it had previously followed.

In this connection, a most important lesson for us to take to heart is the necessity of joint drill of infantry and tanks. The original British attack worked like clock-work. The several trenches were reached, crossed, and taken according to schedule in a short time and without much loss. But the original attack was made after thorough joint drill and rehearsal. The second day the British advance was much slower. That day the same infantry was operating with the tanks, but their operations had not been rehearsed together. Then other infantry divisions were brought in, which had not drilled with tanks at all; and, except the capture of Bourlon wood and Tadpole Corpse, there was no further progress by the British.

Marcoing was promptly captured before the Germans even had a chance to blow up the bridge there. That operation also had been planned carefully in advance. The tanks entered Bourlon village and Fontaine-Notre-Dame and traversed their streets at will, just as they did at Marcoing; but because of the lack of previous drill with the infantry, the latter could not co-operate effectively and the tanks had to withdraw.

The history of this battle proclaims with clarion voice the necessity for joint training of infantry and tanks. I have no hesitation in saying that any officer in command of infantry or tank troops who fails to improve every opportunity for such joint training is failing properly to prepare his command for war. Likewise, every superior officer in command of both sorts of troops who omits to direct such training is guilty of the same failure.

There has already been described in some detail the method by which the Germans conducted their counter-attack. That description will not be repeated here, but I pause at this point long enough to commend the infiltration tactics which they employed on the southern flank, and to recommend imitation of that method should the proper occasion arise in the future. As much can not be said for the mass tactics employed by the Germans in their counter-attack on the northern flank, which is unnecessarily wasteful of men, which did not succeed in this instance, and which probably never would succeed against a brave and alert enemy sufficiently armed with artillery and machine-guns.

The United States War Department has published as a public document a precis of the report of the British 2nd Division on its participation in the Battle of Cambrai. That division held a sector from Bourlon wood (exclusive) to a point south of Moeuvres during the German counter-attack. That report enumerates the chief factors which enabled the division to hold the line, beat off the Germans and inflict heavy losses on them. Those most instructive may be thus summarized:—

1. Effective use of the rifle, Lewis gun Machine-gun and Stokes mortar. The difficulty of quickly traversing the last was overcome by steadying the barrel between the legs.
2. The initiative and resource of platoon commanders, a direct result of through training in minor tactics.
3. The superiority of the British soldier in close fighting with bayonet, grenade, and rifle.
4. The value of immediate counter-attack, thus preventing the enemy from bring up machine-guns and consolidating the position. Such counter-attacks were undertaken on the initiative of platoon and subordinate commanders.

COMMENTS--MAJOR TACTICS AND STRATEGY.

Notwithstanding the failure of the British plan, it was in my judgment well conceived and does infinite credit to its author. It contained that mixture of boldness and forethought which is the highest form of military talent. It showed a careful study of the geography of the theatre of action and contemplated the skillful use of geographical features to accomplish military ends.

One of the lessons of this battle so plain as almost to seem not worth mentioning is the value of surprise. Both the English break-through of November 20th and the German of ten days later were the result of surprise and it is probable that neither could have been effected had the opposite party got an inkling of the attackers, intentions. Both the English and the Germans are entitled to praise for the thoroughness of their efforts to assure secrecy. From the standpoint of the army attacked, the battle shows the great importance of reconnoissance and of intelligence work.

The Battle of Cambrai also raises one other interesting question, namely, the proper organization and

tactical handling of machine-guns. It will be recalled that the British were held up a day at Flesquieres, a delay which contributed largely to the failure of the cavalry to get through and thus to the collapse of the whole plan of the offensive. A British officer who himself took part in the battle in a lecture at the First Corps School, A. E. F., at Gondrecourt, has advanced the view that this was in large part due to faulty handling of machine-guns. He said that in trench warfare the control of the machine-guns was retained in the division or brigade; but that, anticipating open warfare, before the battle began the machine-gun companies were distributed among the battalions. When the check came at Flesquieres, it was impossible to get artillery forward across the trenches taken but two or three hours before, there was no large united force of machine-guns available, and it was impossible, in the midst of battle, to withdraw companies from the battalions which they were supporting. His contention was that if at that time the British high command had had at hand a strong mobile force of machine-guns, Flesquieres could have been so smothered with fire that its capture would have been easy. He said that the like is true of Bourlon wood and the villages of Bourlon and Fontaine-Notre-Dame, on either side of it. These were all taken by the British but not held. Again the artillery could not get up but if a strong force of machine-guns had been there it could have been pushed forward immediately after the infantry to the further edge and on the flanks of that wood and those villages, laid down belts of fire and protective barrages, and beaten off the counter-attacks. He contended that the battle showed the wisdom of the British organization, whereby the machine-guns were then no part of the infantry, but a separate corps or arm; and said that the fault was that the British did not on this occasion adhere consistently to that organization.

The discussion of so broad a question as whether machine-guns are properly a separate arm would be wholly beyond the scope of this essay. Nevertheless, it is permissible to inquire whether, assuming the propriety of the inclusion of a machine-gun company in each infantry battalion, we have not gone too far in abolishing all machine-gun battalions. Does not this battle show how necessary a machine gun battalion in each division is for just such purposes, as were suggested by this British officer? Some of those who have served with the old machine-gun battalions think so.

But, assuming our present organization, the battle is instructive as to the proper handling of machine-guns. It shows the necessity of the division and regimental machine-gun officers, particularly the former, having a force in hand at all stages in the machine-guns of reserve battalions and using that force boldly when necessary. It shows that they must make use of machine-guns that their great fire power will be of the highest possible value to our troops as a whole, and not permit it always to be frittered away in local dog-fights of battalion against battalion and company against company.

Another lesson which this battle teaches is the comparative inutility, I will not say the uselessness, of cavalry. Cambrai was expected to be the great day for the cavalry, when it should at last come into its own, ride into the open, and justify its existence, notwithstanding its three years disguise. A whole corps of cavalry, consisting of four cavalry divisions, was assembled. What happened? The infantry and tanks burst a way across the trenches and the cavalry followed. What happened next? the cavalry was held up at Flesquieres, largely by one German major and his field-piece. They were held up at Ribecourt by snipers in the village, next by the breaking of the bridge over the canal at Masnieres. The engineers built a temporary bridge alongside and another bridge was taken intact at Marcoing, but the cavalry were held up finally by the fact that German troops beat them to the weak and unfinished last line of German defense, the Marcoing-Masnieres-Beaurevoir line. Only one squadron of the Fort Garry Light Horse and a few patrols of the Hussars got through; and, however gallant were their deeds, they had absolutely no effect on the outcome of the battle as a whole. The field-piece at Flesquieres, the snipers at Ribecourt, the broken bridge at Masnieres, and the half-finished trench system at Rumilly are just such obstacles as are bound to be met with by any advancing force in a future war. If those identical obstacles are not met, other similar ones will be. An attacking force can not expect to have its pathway smoothed for it. Yet those obstacles stopped a corps of cavalry, notwithstanding the fact that the infantry and tanks had broken three trench lines and conquered a small but real bridge-head for it.

Another lesson to be learned from the battle of Cambrai is the disadvantages of a salient. Marshal Haig drove one into the German lines that gave him interior lines, but this advantage was more than counter-balanced by the fact that the whole interior of the salient was exposed to observed artillery fire from three

directions. What is the best way to attack a salient? General Marwitz struck not at the head, but at the flanks and on the south at the hinge where the flank joined the old main line. There can be no question but that this was correct strategy. If he had struck at the head and been successful, the British retreat would have been direct and comparatively simple maneuver. An attack on the flanks of a salient at or near their junctions with the main line threatens the communications. Any army will turn back from its objective to fight for its communications. This mere threat, coupled with the advantages as to artillery fire already mentioned, compelled Marshal Haig to abandon the salient, won at the cost of weeks of preparation and thousands of British lives. If the Germans had been completely successful, if they had broken clear though on both flanks, two British corps would have been cut off and destroyed, whereas even complete success in a direct attack on the front of the salient would have entailed nothing worse for the British than a retreat. It is worth noting that General Marwitz's strategy here was the same as of Marshal Foch in his successful attack on the Chateau-Thierry salient and General Pershing in his on the St. Mehil salient the following year.

The last and by far the most important lesson to be learned from the battle of Cambrai, the one which is written in letters of fire on the pages of its history, is the necessity of having adequate reserves at hand and of using them at the proper time. In his Despatches, Marshal Haig admits that he was weak in manpower at the beginning of the battle, that he had insufficient forces for an operation of the first magnitude, and that on that account he debated whether not he should undertake this action. Marshal Haig could not create divisions by a wave of his paton, and if the divisions necessary for reserve did not exist, he can not be blamed for failing to have them at hand. In that case, the criticism must take a different form. He may then be justly criticized for initiating an offensive which from its very nature would require a considerable number of divisions to exploit an initial breach of the line and to hold Bourslon wood, the Bonavis and Rumilly-Seranviller ridges, and the much longer perimeter of the salient which it was hoped to create, against counter-attacks practically certain to occur.

But can it be said in behalf of Marshal Haig that he did not have under his command enough divisions to constitute a suitable reserve? He had in line at the start five divisions, with three others on the immediate flanks which made subsidiary attacks. He had one (the 29th) immediately in rear, which got into action the first day. He had four cavalry divisions present. That makes a total of thirteen divisions at hand. How many more, if any, he had in reserve, he nowhere tells us. But he does mention seven more as subsequently participating in the battle. It is hardly conceivable that some of these seven were not at hand, that he would have gone into action without one or two divisions in reserve; and if seven additional were put into action within the next two weeks, it is hard to see why three or four of them, at least, might not have been at hand at its opening.

Furthermore, Marshal Haig states that certain troops were loaned to him by General Petain to exploit the anticipated breach, but that they were not used. Why were they not used? Marshal Haig gives us no answer. It is true that there never was complete breach of all of the German lines, but all were broken save the last weak one. Surely General Petain would not have objected to some of them being used to break that as a necessary preliminary to the exploitation.

And what a difference three or four fresh divisions would have made on the second day when the British advance slowed up, and on the third, when it stopped altogether! With them, it is impossible to doubt that the weak final German trench line might have been broken, the Rumilly-Seranvillers ridge taken, and a gap wide enough for the cavalry opened. With them, the hold on Bourslon wood might have been made secure. With them, the capture of Bonavis ridge by the Germans might have been prevented or it might have been taken. In short, the presence of adequate reserves and their bold use at the proper moment would have wholly changed the course of the battle; and we should so far as the human mind can see, be now recording a British victory instead of a drawn battle from which they gained not the least advantage. An initial breach of the enemy's line is of no particular value, unless his line on either side of the breach is taken in flank and rolled up, unless troops are poured through the gap, unless that breach is exploited in some way. To do this generally requires troops other than those effecting the breach. At Cambrai either these were not at hand or they were not used. Which was the fact can not be definitely known until all the British military records are available; but I am disposed to believe both of these were measurably true, that there were not sufficient reserves at hand and that such as there were were not freely used when needed.

The lack of proper reserves, or the failure to use them to exploit the initial breach, was the more seri-

The fighting had strained the British resources to the utmost and Foch moved French divisions to assist, and on the 21st the French took over the Mt. Kemmel sector. The front now became stabilized and only a major operation on a large scale could overcome the combined Franco-British resistance. This was against the intentions of the German High Command, as with no surprise element the conflict would have become a battle of material, favoring the Allies on the defensive on high ground, and producing but minor results.

Ludendorf therefore decided to abandon the attacks, except for Mt. Kemmel, which in Allied hands made the position of his IVth Army untenable, due to flanks and rear exposed to constant artillery fire, and which he needed to safeguard the wings of his two armies and give him observation over Ypres. To prevent a diversion of French troops to the Flanders front, Ludendorf attacked at Villers-Bretonneaux (which will be treated separately as one of the operations of this period) in the Somme sector on the 24th of April, and at the same time resumed his attacks on Mt. Kemmel.

After an intense three-hour artillery preparation, picked German troops who had fought on the mountains of Transylvania, Serbian Albania, and the Alps of upper Italy, assaulted the Franco-British positions from Bailleul to the Ypres-Comines Canal, with the main object of taking Kemmel Hill by assault from the French, and by turning the British right at Wytchaete, separating the Allies. By 10 A. M. the hill and Kemmel village near it, were taken, although isolated French garrisons held out until a later hour. The British were pushed to Vierstraat, and later in the afternoon, as the attack surged northward, fell back to Vormezeele. The attack was resumed on the 26th, but came to grief when the Allies counter attacked, penetrating Kemmel village and taking prisoners, but they were unable to maintain their positions due to enfilade machine gun fire. On the 27th the Germans renewed their attacks, but unsuccessfully, due to Allied counter attacks.

The capture of Kemmel Hill was a menace to the British lines of communication, and on the night of 26th-27th the Allies readjusted their lines through Locre, Vormezeele, to west end of Zillebecke Lake.

On the 28th there was no material change in the situation, but at 5:00 A. M. on the 29th, after the usual artillery preparation, six German divisions attacked the French at Lacre, towards Mt. Rouge and Sharpensberg, and five divisions attacked in the British area. The thrust made in a heavy mass formation was successful for a short time, as the French counter attacked and the Germans fell back, though still holding Lacre, which the French regained next day. Simultaneously with this attack the Germans made an unsuccessful advance against the Belgians above Ypres.

The attack of the 29th was the last action of any consequence in the battle of Lys; the Germans adapted the defensive, as their losses in personnel and artillery were too great to permit further resumption of offensive operations for a time, and later the Allied counter offensive made that impossible.

THE BATTLE OF VILLERS-BRETONNEAUX.

A successful offensive in Flanders demanded that the British bear the burden of defense without French aid, and to that effect, April 24th, four German divisions, supported by tanks, advanced to assault under cover of a fog against the British lines at Villers-Bretonneaux. This attack, threatening Amiens, was designed to worry the French and keep them from aiding the hard pressed British in Flanders.

At 6:30 A. M., after a three-hour preliminary bombardment, the tanks broke through the British lines south-east of Villers-Bretonneaux, and, turning north and south, made an opening in the defenses for the German infantry, which gained possession of Villers-Bretonneaux and advancing westward was stopped at the east edge of Bois l'Abbe. Immediately to the south British tanks came into action, German tanks were driven back, and the advance stopped east of Cachy. At 10:00 P. M. the same night the British executed a successful counter attack, surrounded Villers-Bretonneaux, and after street-to-street fighting on the morning of the 25th of April regained the town, capturing nearly a thousand prisoners and a German tank.

THE SEICHEPREY RAID.

April 20th a local engagement took place between the troops of the 26th American Division, which were

advance for a time. At the extreme left no progress in the direction of Givenchy was made by the attacking VIth Army due to British counter attacks from Festubert, made to prevent the rolling up of the front.

In the meantime, in accordance with the plans of the VIth German Army, after an intense artillery preparation during the night of April 9th-10th, Von Arnim's VIth Army attacked at 5:30 A. M., and drove in the British outposts. Under cover of a fog augmented by smoke shells, the German infantry filtered into the British line between Ploegsteert Wood and Messines, and by noon took Ploegsteert Village, the south-east portion of the woods, captured Messines, and pressing north towards Ypres-Comines Canal stormed the Wyttschaete Ridge, but were driven back from the crest by a British counter attack. Possession of the Wyttschaete crest gave the British time to adjust their front and meet the grave situation at Ploegsteert.

The German advance south and north of Armentieres outflanked that town and forced its evacuation by the British who retired to the left bank of the Lys after blowing up the bridges.

Early in the afternoon of the 10th, the British recaptured Messines, cleared Wyttschaete Ridge, and by holding the flanks based on Wyttschaete and Givenchy presented a narrow front which restricted the German advance.

April 11th the Germans, with fresh reserves, recommenced their attacks on the whole front with heavy masses and working through the thin British defences entered Merville by 6:00 P. M., the British retiring to a position just west of the town. In the north Von Arnim's troops retook Messines, and as this attack in the Ploegsteert sector and the heavy fighting which developed at Steenwerck, made the British salient at Nieppe untenable, Plumer decided to withdraw on a line with Steenwerck thru Wyttschaete Ridge to Hollebecke, which held against all attacks, thus shortening his lines and economizing in men.

In the south of the pocket the front steadied as maintenance of positions at Givenchy and Festubert, and the arrival of reinforcements enabled the British to build up their defence. The Germans were now approaching the hills which gave the British the advantage of observation and artillery fire, and the advance of the attackers slowed up; the driving power of the VIth Army fell off and that of the IVth gained in spite of the difficulty of movement in a country ruined by the fighting of 1917.

At 8:00 A. M. on the 12th the Germans, throwing in fresh reserves, attacked from south of Estaires to Steenwerck, and forcing a gap near Bailleul, pushed towards Hazebrouck, but the British, collecting a miscellaneous detachment of pioneers and men from schools of reinforcement camps, checked the advance.

The next day the IVth Army, bringing up artillery at close range under cover of a fog, vigorously followed up their attack and gained Neuf Berquin. Here the outflanked British garrisons fought desperately to cover the arrival of Australian reinforcements, who, completing their detraining in the afternoon, took up a position in front of Nieppe Forest and closed the road to Hazebrouck. That night the British withdrew to the high ground between Bailleul and Neuve Eglise. On the morning of the 14th the Germans followed them to their new position and stormed the high ground of Neuve Eglise, which changed hands several times during the day and by midnight remained in German hands.

The 15th the Germans extended their attack to the left, and by 7:00 P. M. entered Bailleul, the British retiring on Meteren. During the night of the 15th-16th, in order to shorten his lines and free additional troops, Haig evacuated the Peperinghe salient before the Germans attacked, withdrawing on lines in front of Ypres, thus giving up the gains of the battle of Flanders in 1917.

The advance of the 15th was followed on the 16th by successful attacks from Meteren to Wyttschaete and by evening of the 16th the German line ran from Meteren, in front of Mt. Kemmel, and around Ypres. The objective of the IVth and VIth Armies of the group of Crown Prince Rupprecht were the heights north of the Lys from Mt. Kemmel to Cassel, the possession of which would have caused the abandonment of Ypres, created an awkward salient at Arras, probably caused the loss of Vimy Ridge, and enabled the Germans to shell Calais.

To accomplish this plan the Germans, after an intense bombardment, assaulted at Mt. Kemmel, and at the same time Von Arnim's troops attacked the Belgians north of Ypres to turn the Kemmel Range, but were repulsed. On the 18th the attacks were resumed from Givenchy to Merville, but the British held their lines and, except for unsuccessful attacks near Festubert, the fighting died down for a week.

His action to meet the threatening attack was limited by the fact that great masses of German troops were still concentrated on the Somme and were ready to take advantage of a weakening of British forces in that area.

THE BATTLE OF LYS.

The Lys offensive was planned by the Headquarters of the VIth German Army under General von Quast, and the plan provided for a main attack on the 9th of April by the VIth Army of seventeen divisions, with nine divisions in the first line, five in support and three in reserve. Opposed to this force Haig had eleven divisions of which one was Portuguese, and five had fought on the Somme.

The attack was to be launched against the 11th and 15th corps of the British Army, between Givenchy and Armentieres, and was to be extended on the 10th of April by von Arnim's IVth German Army of four divisions, with three of the first line and one in support, against the British 9th Corps of Plumer's IInd Army on the Witschaete Heights, between Ploegsteert Wood and Messines Ridge.

The Germans began the offensive on the night of April 7th by an unusually heavy and prolonged preliminary bombardment of the British area with gas shells, the shelling reaching its greatest intensity at 4:00 A. M. April 9th, when high explosive shells were added to gas. At seven o'clock, under cover of a fog which slightly hampered the movements, the Germans attacked the IInd Portuguese Division with the immediate object of capturing Bethune, and establishing a flank along the canal, to drive north-west to Merville and Hazebrouck.

The Portuguese, stale from long inaction and very poorly led, broke and fled, leaving a gap in the British lines through which the attack spread north and south. By 10 A. M. the three lines of trenches of the first position were crossed and the flanks of the two British divisions, who were on the sides of the Portuguese, were turned, and these divisions were forced to give ground. The strong defense put up by the advance posts, which fought though surrounded, prevented the envelopment of the German attack, and enabled the division in the south of the attacked area to make a stand with its main line of resistance running through Festerbert, with the right flank resting on Givenchy. The Germans went through the Portuguese so rapidly that the British hardly had time to man their secondary defenses. Under cover of cavalry and cyclists, two British divisions were moved into the gap created by the Portuguese, and the British resistance stiffened.

As the movement progressed, the German artillery support became inadequate as the heavy ground and ruined roads hampered the movement of guns and munitions, and British machine guns created heavy casualties in the ranks of the attacking infantry. Towards afternoon the advance began to slow up, and, due to many factors, the nature of the country, the condition of roads, and principally the character of the assaulting troops themselves, the surprise could no longer be exploited. The German divisions used in the attack were not shock, but trench divisions, inferior to those used in the March offensive, and showed but little inclination for attack. The infantry did not grapple with machine guns but stopped around supply trains, looted for food, and showed poor discipline, with but little corrective action by their officers.

In the north of the opening the Germans reached the Lys before noon, and by 3:00 P. M. succeeded in crossing the river at Bac St. Maur in small detachments under cover of machine gun fire and establishing themselves on the north bank, the British falling back on a general line covering Armentieres, and along the Lys through Estaires. By evening under cover of close range artillery fire of guns brought up for the occasion, the Germans crossed the Lys at Estaires but were repulsed by counter attacks. During the night the British, after an attempt to blow up the bridges, in which they were but partially successful, withdrew to the left bank of the Lawe.

Early on the morning of the 10th, under cover of artillery fire, the Germans resumed their attempts to cross the Lawe and the Lys at Lestrem and Estaires, but British counter attacks prevented them from holding their objectives. By evening, after fierce street-to-street fighting, the British lost Estaires and fell back to a prepared position north and east of the town. The Germans began broadening the salient and their attacks pressed the British to a point north of Steenwerck, where the British were reinforced and held up the German

THE OPERATIONS ON THE WESTERN FRONT FROM APRIL 9 TO MAY 26, 1918

—By—

Capt. Arcadi Gluckman, Infantry.

Before taking up the operations on the Western Front between April 9, 1918, and May 26, 1918, and in order that we may have a clear conception of the operations, it is necessary for us to consider the situation which existed on the Western Front on April 8th, 1918.

The Second Battle of the Somme came to an end on April 5th, 1918, with the Germans in occupation of the salient between the Somme and the Aisne, which compelled an Allied concentration along the sides of the pocket thus formed in their lines. The front ran from the Sea to Switzerland along Nieuport, Ypres, Lens, Villers-Bretonneaux, Montdidier, Noyon, Rheims, Verdun.

Ludendorff realized that further exploitation of his Somme success was impossible for weeks to come due to the lack of communications in the salient, the destroyed railroad and roads being in no condition for the movement of guns and munitions necessary for the attack. The French concentration between Noyon and Montdidier threatened the side of his salient, and fearing that Foch would counter attack, Ludendorff decided to retain the initiative and extend his offensive by an attack elsewhere. A further attack against the British seemed to him most advisable, as the battles on the Somme had left Haig without reserves.

Ludendorff's selection was the Flanders front, between La Bassee and Ypres, as the most promising theatre of operations for many reasons. The character of the country and the quality of the troops opposing the Germans in that sector were important factors in aiding him to arrive at his decision.

The high ground overlooking the British lines was in German hands. The British lines ran along flats intersected by small streams, canals and the Lawe and Lys Rivers, which, however, were no great obstacles due to dry weather caused by a rainless spring. The British lines of communication were poor, depending mainly on the only railroad in the sector, from St. Pol by Bethune and Hazebrouck to Calais and Dunkirk. Part of this railroad was single track, and some of it ran too near, and most, too remote from the trenches. In contrast to this the Germans were favored with good and extensive railroads behind their lines which enabled rapid concentration. From Ostend to Douai ran a double lateral line served by feeders from the east. Lille served as an excellent base for the operations and gave many auxiliary routes.

The quality of the troops opposing them favored the Germans; the British center was weak and weakly held, as Haig had been forced to withdraw ten divisions from Flanders and replace them with divisions exhausted by the fighting on the Somme. Moreover, a part of the British sector was held by the Portuguese, who were extremely poorly led, and who had not been relieved for a long time.

Although in order to retain the initiative, the offensive at this point was planned as a subsidiary operation to prepare a way for a further attack on the Somme, a successful penetration of twenty-five miles at this point would have compelled the Allies to abandon the Ypres salient, and forced a Belgian retreat from the Yser; a breakthrough the British lines would have rolled up their left wing with their backs to the sea, leaving the Channel Ports and the Paris-Calais road in German hands.

Ludendorff therefore prepared to attack on a narrow front, on a limited scale, with nine divisions to be reinforced as the operations progressed, with the object of pushing through La Bassee and Armentieres, capturing Bethune and forming a definite flank along the Aire-La Bassee Canal, then pressing north-west to capture Hazebrouck and the ridge of hills above Bailleul.

Haig was early informed of the signs of German activity north of La Bassee, and by the first days of April he knew that the enemy preparations for an offensive in that sector were nearing completion. Realizing that an attack was eminent, he moved divisions which had rested and reorganized after the Somme fighting to the Lys front, prepared to relieve the Portuguese on the 10th of April, and waited to receive the attack on a line held by depleted divisions. He also made arrangements for the evacuation of the Passchendaele salient, should circumstances require such a step. This would enable him to upset the German offensive plans there, and at the same time by shortening his lines, to economize his troops for use elsewhere.

2nd Brigade: Brig. Gen. B. B. Buck.
28th Inf.: Col. H. E. Eley.
1st Bn., 28th Inf.: Maj. G. F. Rozelle.
*2nd Bn., 28th Inf.: Lt. Col. R. J. Maxey.
3rd Bn., 28th Inf.: Maj. J. M. Cullison.

*Killed at Cantigny.

References.—A History of the Great War, by Buchan, Vol. IV.; Field Order No. 18, 1st Div., 20 May 18;—Annex to F. O. 18, 24 May Annex to F. O. 18 20 May 18; First Division History; America in France, by Palmer; Historical Report, Chief of Engineers; Final Report of Gen. Pershing; The American Army in the European Conflict, by De Chambrun; The History of the A. E. F. by Thomas; The Turn of the Tide, by Wise; Personal Accounts.

Map: page 361.

The hasty withdrawal of the French artillery shortly after the attack was justified by events elsewhere but was fundamentally responsible for the large number of casualties inflicted subsequent thereto.

The machine guns attached to rifle battalions were not used to support the attack but hurried forward to cover the consolidation. The early counter attacks proved the wisdom of this disposition.

The supporting groups of machine guns employed indirect fire, their targets not being visible from them. It is believed that this was the first time overhead, indirect fire of machine guns was ever delivered with American troops. These groups remained in their original positions throughout the period of consolidation despite the fact that German planes located them. Had they changed positions they would have been subjected to much less shelling and fewer losses.

The German counter attacks were not coordinated and lacked aggressiveness. They came from different directions and at different times. Had they come at the same time and been energetically pushed their chances of success would have been greatly increased.

RECONNAISSANCES.

The success of the operation was due in large measure to the thoroughness of reconnaissance. The personal reconnaissance, both by day and night, of officers and N. C. O's, enabled every unit to come up at night to its proper position for attack without confusion. Aerial reconnaissance aided the consolidation of the position on prescribed lines.

THE USE OF RESERVES.

The unintentional intermingling of the two reserve companies from the 18th Inf. with the front line units during consolidation illustrates the necessity, where practicable, of sending written messages unmistakably worded. The value of these reserves, as such, was thereby lost. It is doubtful if their allocation in the front lines materially strengthened those positions while their presence increased the casualties proportionately.

By breaking up and scattering the component parts of Co. L, 18th Inf., the effectiveness of the company was largely destroyed without materially increasing the strength of the 2nd Bn. Co. L should have been held intact.

SUMMARY.

The United States had been at war over a year when the battle of Cantigny was fought. During this time she had put forth the greatest effort of her existence in preparation for the conflict. Nevertheless, on May 28, 1918, when the First Division engaged in the first American battle, it was only with material aid from the French that America could cope with the arms of a first class power. The lesson is obvious.

Neither the strategical nor the tactical results obtained could justify the attack with its losses certainly foreseen. That the political and psychological factors were paramount is shown by the violent character of the enemy reaction. Cantigny was the only Allied offensive operation along the front at a time when German successes were being everywhere recorded. The net results were fully equal to the most sanguine expectations and provided a happy augury for the future. This comparatively insignificant operation gave food for thought to the German command. Now for the first time American troops had taken part in the main battle the marked success of which proved electrical in its effect upon the Allied morale and established a standard for aspiration by all future American organizations.

ORGANIZATIONS AND COMMANDERS AT CANTIGNY.

1st Division: Maj. Gen. R. L. Bullard.
Chief of Staff, 1st Division: Col. Campbell King.
G-3, 1st Division: Col. Geo. C. Marshall.
Div. M. G. O., 1st Division: Lt. Col. F. S. Bowen.
Comdr. M. G. Groups: Maj. L. E. Hohl.

A large number of losses were caused by overcrowding in the vicinity of the regimental C. P. The shelling of the quarry nearly caused its evacuation and the reassembly of every one therein at the C. P. A platoon of Engineers with its company headquarters, the regimental aid station with its stream of wounded, some French groups, German prisoners and various odds and ends all contributed to the crowded condition and resulting in confusion at regimental headquarters.

One squad carrying water in close formation in the open was machine gunned by an enemy airplane and the entire squad killed.

The most intense fire followed the appearance of low flying enemy planes and, at regimental C. P., the use of T. P. S.

IV. COMMENTS AND LESSONS. DISTRIBUTION OF FORCES.

This attack was carried out on a front of about 2200 yards. The greatest depth attained was about 1200 yards. An entire regiment at war strength (about 250 men per company) was employed with 9 companies in the assault echelon. On both flanks the Germans were left in commanding positions, viz: the spure west of Fountain-sous-Montdidier and the Bois de Lalval. Their artillery was not penetrated, thereby permitting all their guns to concentrate upon the American positions, accurately known and hastily prepared. While the captured position was organized in some depth, the front lines were heavily held and further reinforced. Heavy casualties resulted.

In the light of later day experiences the force employed was perhaps large for the mission. The troops occupying the captured position were too many and the front lines too densely held. In consolidation the front was held by a continuous line. It is believed that small groups well placed along the front, covering the intervals between by fire, could have defended the position as well with fewer men. These factors doubtless added considerably to the casualty list. On the other hand this was the first American offensive. The situation demanded uncompromising success at all costs, the number of troops employed and their disposition had to provide an ample factor of safety to insure this.

PLANS.

The plans as worked out by the division staff constitute a marked example of the extremity to which minuteness of detail may be applied to preliminary arrangements for combat. They are practicable only in sector warfare of the most limited type. They also illustrate the maximum authority which a higher unit commander can exercise over a lower in the administration of his unit in combat. The total elimination of the brigade from any part in the plans left that office with little or no function. Nevertheless the brigade commander proved a source of considerable annoyance to the regimental commander by his insistence on being constantly informed as to the progress of the action. This complete subordination of the smaller unit commander, which may have been justified by circumstances, is not in general productive of the best results.

The great secrecy maintained was necessary to success. Its effectiveness is attested to by the small number of casualties inflicted on the Americans during the attack proper, and by the fact that, although the Germans took two prisoners the night before they were surprised and unable to make dispositions to meet the attack.

EXECUTION OF THE PLANS.

The three days allowed for special training and rehearsals seem to have been ample. The attack as a whole was carried out as planned and, in spite of the failure of the two left companies, was successful.

The close distance at which the Americans followed the rolling barrage contributed largely to their immediate success with so few casualties. The tanks and flame throwers were properly used and their effectiveness proved their worth.

mations was launched from the Bois de Framicourt accompanied by heavy preparatory and barrage fire. The first wave got under the artillery S. O. S. line but was driven back by rifle fire. The other waves were broken up by artillery fire.

Evacuation of the wounded was most difficult due to the heavy enemy shelling which continued throughout the night May 28-29. During the night the two front line platoons of Co. A were swung back into the Bois Fontaine. The three platoons of Co. C in battalion reserve went into the area held by Cos. B and D as reinforcements. The regimental commander issued verbal orders for Cos. F and L, 18th Inf., in regimental reserve, to move up into positions in readiness to support the 2nd Bn., 28th Inf., against counter attacks. Through error these companies reported to the 2nd Bn. commander for duty and were used by him as reinforcements. Co. F, 18th Inf., relieved Co. F, 28th Inf., and the latter went into battalion reserve in the area in rear of the strong point. Co. L, 18th Inf., was broken up, one platoon being assigned to each of the four companies of the battalion. One company of the 18th Inf. relieved Cos. L and K, the latter passing into battalion reserve. Co. I moved up into the gap on the left of Co. M May 29th.

Two more small counter attacks were made, one at 6:00 A. M. and one at 7:00 A. M. Both were broken up by artillery fire.

All day the enemy artillery fire continued and consolidation progressed. At 5:45 P. M. the second heavy counter was launched preceded by artillery preparation. It was directed toward the left of the line. The 3rd Bn. was hard pressed but the attack was repulsed.

During the night of May 29-30 Co. D was relieved from the front line and sent to battalion reserve in the old front line west of Cantigny.

MAY 30TH.

At 5:30 A. M. a very determined and final counter attack was made. Preceded by heavy preparatory fire and accompanied by a rolling barrage, the enemy advanced from Bois de Lalval in two waves. Rifle, machine gun and artillery fire all combined in breaking up this last effort to retake the position. Hereafter enemy fire decreased until nightfall when the 16th Inf. relieved the most of the 28th Inf. in the sector.

MAY 31ST.

The sector began to return to normal and the relief of the 28th Inf. was completed that night.

CASUALTIES.

The exact number of casualties which occurred during the battle of Cantigny is difficult to determine.

During the first day 225 German prisoners were taken and this number was increased to 255 as the village was mopped up. Between 275 and 300 German dead were lying within the American lines, 500 more were estimated killed in the severe counter attack, not counting those killed in back areas. Counting dead and wounded it was believed that the two German regiments involved were rendered incapable of serious offensive operations for the time being. 16 machine guns, 1 minenwerfer, and about 500 rifles were captured.

The losses in the 28th Inf. were reported to be:

	OFFICERS	MEN	TOTAL
Killed	13	186	199
Wounded	31	636	667
Missing	1	...	1
	45	822	867

These include over one-half the officers and one-third of the men actually participating in the action. Of these not over 100 occurred prior to the withdrawal of the French artillery.

The losses in the entire division probably doubled the foregoing.

Co. I, battalion reserve, sent one platoon forward to construct a strong point at the cementery. The remainder of the company went forward to the old front line trenches. During this move it suffered several casualties from machine gun fire from the left front.

None of the battalions employed their attached machine guns to support the attack. They were, however, later used to good advantage in repelling counter-attacks and in consolidation.

No use of the 37 mm. guns or stokes mortars either during or after the attack can be identified. At least one mortar was found abandoned in the territory of the 3rd Bn. In the 2nd Bn. they got up but were not employed.

The machine gun barrage proved effective, both in keeping the enemy down and in raising the Infantry's morale.

Co. D 1st Engineers lost 3 officers and 30 men just before H hour by artillery fire in the quarry within which they were assembled. Nevertheless, it moved out and constructed strong points as required. It was later reassembled and used as a reserve, finally being put into the line as infantry where it stayed until May 30th.

The tanks and flame throwers successfully accomplished their mission, the latter proving to be particularly effective in cleaning out the enemy from the cellars of Cantigny.

The Infantry plane marked out the line and carried back its reports repeatedly and accurately.

In spite of all plans, runners and pyrotechnics proved to be the only successful means of communication between the regimental C. P. and the assault battalions. Even the wire ladders consisting of 6 wires all connected laterly at 50-foot intervals, which were specially constructed, were shot out almost constantly. For only one five-minute period during the day did the 2nd Bn. have telephone communication. The pigeons at regimental C. P. were all killed by shell fire. The T. P. S. and T. S. F. functioned at all times but drew so much enemy fire that their use was later abandoned.

The carrying parties in each company performed their missions efficiently, later bringing up water, rations, etc. It was found necessary, however, to organize additional carrying parties.

From German sources it was found that the attack had fallen upon a battalion of the 272nd Regt. which had just completed a relief at midnight May 27-28, and on a battalion of the 271st Regt. which had been in line six days. Both battalions had lost heavily. The shelling had been severe. All their means of communication had fallen down. The tanks had prevented many machine guns from going into action and the German barrage was late.

SECOND STAGE—THE CONSOLIDATION.

The objective was reached as per schedule at 7:20 A. M. by all units except Cos. L and K. The most difficult part of the operation was now to follow, that of consolidating and holding the captured position.

Two feeble and unsuccessful counter attacks were launched by the enemy against the Bois Fontaine at 7:30 A. M. and 9:00 A. M., respectively.

The rapid progress of the German attack in the direction of Chateau Thierry necessitated the early withdrawal of the French supporting artillery, which had to this time done effective counter battery work. The German batteries were thus freed and about noon the pounding of the newly-won position began. Their fire, directed by air planes, was most effective and the casualties began to grow. The American machine gun groups and rear areas suffered heavily, as did the 26th Inf. on the right. At this time enemy machine gun fire became pronounced, particularly on the flanks.

In the meantime consolidation progressed as rapidly as possible. Wire was put up, trenches dug, and strong points constructed.

Groups of Germans who had been imprisoned in the ruins of Cantigny began to dig their way from the cellars and take up sniping. This continued for two days later and mopping up parties were kept busy.

At 5:10 P. M., May 28th, the Germans launched a small counter attack from the Bois de Framicourt which was broken up by artillery fire. At 6:45 P. M. the same day a heavy counter attack in wave for

III. THE BATTLE.

FIRST STAGE—THE ATTACK.

At 4:45 A. M., May 28, the artillery began to verify its adjustment, each battery firing a few shots at its prescribed time. At 5:45 A. M. the artillery preparation for the attack began.

The sun came out on a clear day and at 6:45 A. M., H hour, the machine gun groups opened fire, the rolling barrage started, and the infantry went over the top. The assault companies each had two platoons in assault closely followed by two in support, each platoon deployed in two lines of skirmishers. Reserve companies followed in lines of squad columns. The leading elements followed the barrage at from 50 to 100 yards, so close in fact, that a few casualties resulted therefrom. The tanks passed on through the front line. As the enemy position was crossed the reaction therefrom was so slight that scarcely any casualties occurred. From the regimental O. P. formations during progress were so regular that, except for the artillery fire, it appeared like a well executed parade ground maneuver. It is probable that there were not more than 80 or 90 casualties in the regiment from the jump-off to the final objective.

Co. A, pivoting on its right flank swung two platoons out in the open and connected with the right flank of Co. B. as it advanced. In so doing all three of the officers of Co. A were killed and the command of the company fell to the 1st Sergeant.

Co. B pushed straight through to the objective. On arrival there its two support platoons found no cover available in their position against machine gun fire from the right front and moved on up, merging with the assault platoons.

Co. D pushed on through the southern part of Cantigny to its objective, mopping up that portion of the town as it passed through.

Co. C sent one platoon to the vicinity of the Chateau in Cantigny to construct a strong point while the other three platoons took position in the old front line trenches west of the town.

The three assault companies, H. E. and F of the 2nd Bn., assisted by the tanks, pushed straight on thru the village to their objective; the two assault platoons of each company establishing themselves on the outpost line and the support platoons on the line of resistance.

Co. G, battalion reserve, followed generally in rear of Co. E. When the two forward platoons reached the road running north from Cantigny the right platoon swung to the right, passing south down the main street and mopped up as far as the square in the center of the town. The left platoon moved toward the right front until it reached the north-east exit where it swung south-west down the main street and mopped up that portion of the village as far as the square. The two rear platoons moved on to construct a strong point in the triangle formed by the two main streets in the northern part of the village.

Lt. Col. Maxey, commanding the 2nd Bn., was killed just as he reached the road to La Follie line by some Germans who had been passed by on the right flank of the battalion. The command of the battalion fell to Capt. C. R. Huebner commanding Co. G.

In the 3rd Bn., Co. M went forward and established itself on its objective with two platoons on the outpost line and two platoons on the line of resistance. Just what happened in Cos. L and K is not clear. It seems that both made feeble efforts to start on time but neither established itself beyond its own wire on the 28th. Enemy machine gun fire from the Bois de Lalval influenced Co. K in its failure. Early reports indicated that the 3rd Bn. had gained its objective, but aerial photographs of the front line gotten out about noon, May 28, showed the positions of Cos. L and K unchanged.

The Bn. commander, 3rd Bn., was at once ordered to report to the Regimental Commander at the Regimental C. P. where he was directed to go forward with his battalion to its objective that night. This attempt also failed, due to machine gun, artillery and rifle fire from the direction of the Bois de Lalval. The line was finally brought up and the existing gap closed by the 16th Infantry after relieving the 28th Infantry on May 30th. Co. L advanced its right only slightly by pushing out small groups. Several stragglers came back masking the fire of the machine guns on the left flank.

Brigade C. P. was at Survillers where it was to remain. Regimental C. P. was to be located in the south-east part of Bois des Glands de Villers (20.8-31.3) where a special dugout was to be constructed. Battalion C. P's were to be located as follows:

1st Bn: Initial, at quarry (21.2-31.4); final, in sunken road south-east of Cantigny.

2nd Bn: Initial, just east of Bois St. Elois (21.2-31.6); final, in northern part of Cantigny.

3rd Bn: Initial, at (21.1-31.7); final, in clump of trees at (21.2-31.6).

Division C. P. to be in north-west corner of Bois de Cantigny. Regimental O. P. was to be near regimental C. P.

Some heavy mortars were to be in the Bois des Gland de Villers, many of the heavy howitzers were to be near Rocquencourt, while the remaining artillery was scattered over the rear.

The consolidation of the conquered ground was to embody: first, a line of surveillance or outpost line held by groups of rifles and automatic rifles located in shell holes; next, about 150 yards in rear, a line of resistance along which trenches were to be dug and wire put up. Three strong points were to be constructed, one by the 1st Bn. near the Chateau in the eastern part of Cantigny, another by the 2nd Bn. in the woods in the north-eastern part of the village, and the third by the 3rd Bn. at the cemetery. Each strong point was to consist of 2 trenches in the shape of a cross garrisoned by a platoon from the reserve company of the battalion reinforced by 4 machine guns. Each battalion had with its reserve company one platoon of new replacements organized as a 5th platoon of the company. These men carried iron screw stakes and accordion or drum spiral wire for use in the strong points. This work was performed in the assault companies by the Engineers.

ENEMY ORDER OF BATTLE:

Occupying the position over which the attack was to be made were the 272nd and 271st Reserve Regiments of the 82nd Reserve Division. The 272nd held the northern half down to the northern edge of Cantigny. The 271st occupied the village itself and the southern half of the sector. These regiments were then rated as second class on a scale of four. Each regiment had one battalion in the front line and each battalion held one company in reserve. The strength of the companies averaged about 160 men. The 272nd Regiment had one battalion in reserve in the Bois Lalval and the 271st had one battalion in reserve in Bois de Framicourt. The other battalions were in rest areas about 12 kilometers in rear.

EVENTS PRECEDING THE ATTACK.

On the night of May 26-27, the 2nd Bn. 28th Infantry relieved a battalion of the 18th Inf. in the Bois St. Elois. On the same night enemy artillery fire blew up the regimental dump. Exploding munitions and pyrotechnics caused a platoon in support near by to break and run.

At midnight May 26-27 the Germans began an intense bombardment of the entire American sector and at 6:30 A. M. on the 27th delivered a series of three raids along the front under cover of a rolling barrage. A dense fog prevented signal communication and phone lines were shot out, consequently the American artillery failed to give support in time. However, the raiders succeeded in reaching the American positions at only two points, in Bois Fontaine and to the left. In the sector of Belle Assise the attack was driven back by our infantry who occupied his trenches in the Bois Allonge by a counter-attack and took 4 prisoners. Two Americans were captured.

The night of May 27-28 the 1st and 3rd Bns. of the 28th Inf. came up in trucks to Rocquencourt, detrucked at 11:30 P. M., marched up and took their positions in line for the attack. The exact location of each unit had been previously staked out. All units were in position by 3:30 A. M. except one company which came in at 4:57 A. M. The night was clear but the usual light fog came on with morning. Firing during the night was normal on both sides.

in the captured position: one-half platoon to remain in the regimental reserve in the vicinity of the quarry near regimental C. P.

The supporting machine guns were to be organized into three groups for indirect fire as follows:

24 guns from 1st M. G. Bn. in Bois Fontaine to fire on western part of Bois de Voyaux and then lift to area about 200 yards north of Fontaine-sous-Montdidier.

Eight guns from 3rd M. G. Bn., located in Bois Belgrand to fire on southern edge of Bois de Framicourt and then lift to a line above 1,000 yards beyond and parallel to the objective.

24 guns from 2nd M. G. Bn., and M. G. Co. 16th Inf., located in Bois St. Eloi and vicinity to fire on Bois de Lalval and then lift to south-western edge of that woods.

All machine gun fire was to open at H. hour and continue on first targets until H. 35 minutes; to open on second targets at H. 45 minutes and continue until H. 1 hr. 15 minutes. Thereafter fire was to be delivered on a previously arranged S. O. S. line when called for. The rate of fire was 150 rounds per minute for the first 5 minutes and thereafter 60 to 75 rounds per minute.

An artillery preparation of one hour was to precede the attack, five being directed principally on enemy machine guns, shelters, centers of resistance, and support positions. The attack was to be accompanied by a rolling barrage moving 110 yards every 2 minutes. A halt of 2 minutes in the barrage was to allow for change and reorganization. Neutralization and interdiction fire was to be delivered on all positions commanding the zone of action, assembly points and routes of approach. All artillery fire was to be continued for 30 minutes after the arrival of the Infantry on the final objective. Counter battery fire was to be delivered by the Corps Artillery from H-2 hrs. to H-3 hrs. and thereafter be held in readiness to fire on any enemy artillery which might react.

The French division on the left was to execute an artillery demonstration on its front and later assist in the attack by fire.

The group of 12 tanks was to accompany the assault on the 2nd Bn. They were to operate along the western and northern edges of Cantigny. They were to leave Bois St. Eloi at H-10 minutes, pass the line of departure at H-3 minutes and withdraw after the Infantry had reached its final objective and all resistance within their reach in Cantigny overcome.

French planes were to co-operate with the Infantry in reporting its position. Front lines were to be staked out 10 minutes after arrival at objective and whenever called for by plane. For this purpose one bengal flare was carried by each man, and when required every fourth man was to light his flare.

The plan of communication called for the use of panels, pyrotechnics, telephone, radio, T. P. S., runners and pigeons.

A regimental dump was to be established in Bois Roberval. Battalion and company dumps were to be established along the front. One-fourth of the supplies were to be in the regimental dump, $\frac{1}{2}$ in battalion dumps, and $\frac{1}{4}$ in company dumps. Supplies at dumps were to include ammunition, rations, tools, water, pyrotechnics, alcohol, etc. An Engineer dump was to be established in the quarry near regimental C. P.

Field and combat trains were to proceed to Tartigny on J-1 day. The regimental distributing point was to be Bonvillers.

Wounded were to be disposed as follows:

Non-transportable to Bonvillers; slightly wounded to Froissy; gassed to Vendenil.

Battalion aid stations to be located as follows:

1st Bn: Bois de Cantigny.

2nd Bn: Coordinates (21.2-31.3).

3rd Bn: Bois St. Eloi.

Military police were to be stationed along line Plessier-Villers Roumelle-Broyes to collect stragglers and to direct wounded and prisoners.

Prisoners were to be sent to the south-east corner of Bois des Gland de Villers.

withdrew to an area about Maisoncelle where a location one kilometer east of the town had been selected for training. The terrain chosen was similar in all respects to that of Cantigny. Thereupon was laid out a reproduction of the German defensive system. Jumping off trenches were marked out, strong points indicated, the objective outlined, and all salient features represented. In addition a large sand table was constructed to scale showing in great detail all known characteristics of the position.

Three separate rehearsals were carried out; the first with all officers and non-commissioned officers, the second with all personnel of the regiment, and the third, "a dress rehearsal," included all units involved. Each rehearsal was followed by a critique in which all mistakes were discussed and every phase of the operation brought out. In the meantime officers and certain non-commissioned officers were sent back to the front lines during short periods for both day and night reconnaissance. All officers down to and including platoon commanders were issued bound folders containing the following: 2 large, close-up photographs of Cantigny and the approaches thereto, aerial photographs of the town, both oblique and vertical, 3 maps of the sector including one large scale map of Cantigny showing in minute details the character, condition and organization of the buildings, streets, defenses, etc., therein. Nothing was left undone in order that very individual might know his part.

The Staff arranged for every item of the attack. Indeed, so thorough were the plans and orders issued by the Division Staff that, when submitted to the French Corps Commander for approval no changes were found necessary. No written orders were issued below the division. The brigade had virtually nothing to do with the operation. Regimental orders, such as were given, were verbal. It is worthy of note that Division orders prescribed all articles of clothing and equipment to be carried by individual soldiers, leaving optional with the regimental commander the designation only of the particular individuals who should carry the long handled shovels.

While this was in progress the supporting troops were also making their special preparations. Artillery registrations were carefully and methodically made. The Engineers and the 18th Infantry were constructing a jump-off trench with another dummy trench parallel thereto in order to deceive the enemy. Emplacements were being prepared and ammunition gotten up. Practically all of this work had to be done at night.

DISPOSITIONS FOR THE ATTACK.

The dispositions for the attack were to be as follows: The 1st, 2nd and 3rd Battalions 28th Infantry, right to left, were to constitute the assault. The 1st Battalion to have Cos. A, B and D right to left in the assault echelon with Co. C in reserve. The 2nd Battalion to have Cos. H, E and F right to left in the assault echelon with Co. G in reserve. The 3rd Battalion to have Cos. M, L and K in the assault echelon with Co. I in reserve.

Cos. F and L 18th Infantry were to be in regimental reserve but could be used only on approval of the brigade commander. One battalion of the 18th Infantry in rear of the Bois des Glands de Villers and another in the vicinity of Villers Tournelle were to be available as reserves in an emergency.

One company of machine guns was to be attached to each assault battalion as follows:

M. G. Co., 28th Inf., to the 1st Bn.

Co. C, 3rd M. G. Bn., to the 2nd Bn.

Co. D, 3rd M. G. Bn., to the 3rd Bn.

These companies were to be divided up and platoons or sections attached to each rifle company.

The six 37 mm. guns and the twelve stokes mortars were to be attached to various rifle companies of the assault battalions.

The section of flame throwers was to be attached to the units designated to mop up the village.

Co. D 1st Engineers was to be disposed as follows:

One platoon to follow the assault echelon and to lay out and assist in the consolidation of the line of surveillance; one platoon to lay out and assist in the consolidation of the three strong points to be organized

NATURE OF DEFENSES:

Cantigny was a virgin battle ground. Here a short time previously the French reserves had stopped the German onslaught and the intense artillery duels which followed had prevented either side from digging any line of trenches or putting up any wire. Fresh shell holes dotted the landscape. The front lines had been stabilized in the wheat fields lying along a shallow valley.

The Americans at once began in earnest the consolidation of the sector. Shell holes were connected up into trenches and wired during the nights. Support lines were constructed about one mile back along a crest and reserve positions established farther to the rear. The Engineers and Infantry working together organized and strengthened all positions, connecting them up with communication trenches.

The sector extended from just north of Mesuil-St. Georges to just north of Cantigny and was held by one brigade in the line with the other brigade in reserve about eight kilometers in rear. French units were on the right and left.

The town of Cantigny stood in the center of a salient in the German front lines opposite the left half of the American sector. It was fortified and strongly held. An elaborate machine gun defense had been organized. The German support line ran through the Bois de Talvol and the Bois de Framicourt. A reserve line was established some 12 kilometers in rear. A comprehensive knowledge of the German dispositions was obtained from aeroplane photographs, intelligence reports and by patrols.

Although the sector was settling down some when the First Division took it over, it was still more active than any the Division had previously occupied. The mission of the Division was a semi-aggressive one. The artillery firing, which was quite heavy, soon assumed a severe character on both sides. The Americans were able to exchange shot for shot with the Germans but were unable to equal them in percentage of gas shells. At one time approximately 12,000 shells, mostly gas, fell on Villers Tournell in three hours and inflicted severe casualties on a battalion of the 18th Infantry there. The Germans usually held the supremacy of the air. Coincident with the American improvement of the sector went the German consolidation. They were constructing trenches and a good system of strong points. The average of 3,450 shells a day fell on the American front. As more ammunition became available the American fire increased until an average of 10,000 rounds per day were fired.

PLANS OF ATTACK:

Many plans were evolved for an offensive action in which the Americans were to participate. One aimed at the reduction of the entire Montdidier salient by a combined French and American attack. It was decided, however, that this must be a purely American operation. The plan finally approved by the French high command was for one regiment to take and hold Cantigny by the elimination of the salient there. The French division on the left was to make a short advance in order to conform to the movement. As finally executed the French advance was eliminated.

There were no strategical reasons for this attack. The tactical advantages to be gained were few and purely local in character. The moral effect was the big, outstanding feature. The psychological time had come for America's entrance into the main struggle. It must be a dramatic one with far reaching consequences.

The 28th Infantry was chosen to make the attack. For this purpose it was reinforced by Company D 1st Engineers, Companies C and D 3rd Machine Gun Battalion, 3-37 mm. guns and 6 stokes mortars from the 16th Infantry and one section of flame throwers and one group of twelve Schneider tanks from the French. Supporting the attack were 64 machine guns from the 1st, 2nd and 3rd M. G. Bns. and the M. G. Co. 16th Infantry. The artillery support consisted of all the divisional artillery augmented by 132-75s, 36-155s, 178 heavy guns and howitzers, and 40 trench mortars from the French; a total of 386 guns, 200,000 rounds of artillery ammunition were accumulated. French airplanes and observation balloons were to co-operate in the attack. The plan provided for elaborate training and rehearsals of the entire operation. The 28th Infantry being the front line at that time had to be relieved for the purpose. Accordingly the 18th Infantry began to relieve the 28th on the night of May 22-23. The relief was complete on the night of May 25th and the regiment

in France had been frustrated with terrific losses. German submarines were making deep inroads on Allied shipping. The man power of the Allies had passed its peak. Their morale was low. Fear and discouragement began to crop out in their ranks and at home.

The Germans had given wide publicity to their great 1918 offensive on the Western front and German offensives had been usually successful. Their morale was higher than it had been for some time. Her divisions released from the Eastern front were to give her numerical superiority on the Western front.

GERMAN OFFENSIVES:

This was the situation when the long heralded German offensive broke on the Western front on March 21, 1918. By the end of March the 5th British army was almost annihilated. A separation of the French and British armies was narrowly averted before Amiens. An advance of 56 kilometers had been made.

The second German onslaught began on April 9th. Again the British were severely struck and forced to give way 40 kilometers in the vicinity of Annetieres and the Lys river.

AMERICAN PARTICIPATION.

The crisis of the war had been reached. Self preservation had forced unity of command upon the Allies and on April 3rd Marshal Foch was made Commander in Chief.

General Pershing had insisted throughout on organizing and operating with a purely American army. He had persisted in this policy in the face of considerable Allied opposition. However, the new turn of events was so far reaching in its possibilities that General Pershing gave up for the time being the occupation of the American sector and placed all his forces at Marshal Foch's command. Thereupon the First Division was ordered to move from the Dusanville Sector near Toul to a position in reserve at Cham-mont-en-vexin about thirty kilometers northeast of Paris.

The entry of the United States into the war had produced great enthusiasm among the Allies, but as time wore on and no material American effort was in evidence along the battle front their enthusiasm waned. They began to grow critical with impatience. The value of a few American forces which were available was problematical. The 26th Division, which had relieved the 1st Division north of Toul, had suffered the loss of 179 men and 24 machine guns in a disastrous raid at Seicheprey on April 20th. Germany was contemptuous of our untrained and untried army. In May, 1918, Ludendorff still had some five months of campaigning ahead of him and he did not believe that America would be able to throw any material weight into the Allied scales before winter. The Allied need for help at this critical hour made it imperative that the United States make some material effort at the earliest possible time. By the middle of May the quantity arrival of Americans seemed assured, but what kind of soldiers would they prove to be? The time had come for America to act. The stage was set for the trial and Cantigny was the vehicle.

The first Division arrived in the Gisors area, about 75 kilometers back of the Montdidier front on April 8th. Here, in reserve, it underwent a period of recuperation and training in open warfare. On April 17th it started for the front and on the night of April 24th relieved the French in the Cantigny sector north of Montdidier on a front of about four kilometers.

GEOGRAPHIC FEATURES:

Here the division found conditions quite different from any it had heretofore encountered. Fields of young wheat covered the ground. Here and there patches of sparse woods were turning green. The buildings, recently deserted, were not in ruins. The country was generally open and undulating, the soil was of a chalky formation. The Cantigny plateau dropped off abruptly toward the south with the town nestled in the center of its forward edge. This plateau screened the country in its rear. Its possession afforded excellent artillery observation and positions and was a necessity in covering reserves for an offensive in that region. The German view from Cantigny prevented day movement within the sector forward of Mesuil St. Georges-Villers-Tournell. At this season of the year the days were very long and the weather warm and sunny. The roads were in good condition.

THE BATTLE OF CANTIGNY.

—By—

Captain Paul B. Parker, Infantry.

The battle of Cantigny was the first American offensive operation of any significance in the World War. Any study of this battle aiming toward a true understanding of its cause and effect, must of necessity be prefaced by a brief resume of the events leading up to it together with a historical summary of the 1st Division of the American Army.

I. EVENTS LEADING UP TO THE BATTLE OF CANTIGNY.

AMERICAN PARTICIPATION:

Because of the failure of the German government to desist from various alleged atrocities President Wilson called a special session of congress and that body, on April 6, 1917, declared that war against the United States had already been initiated by Germany. Soon thereafter the Allied governments sent missions to the United States for the purpose of working out the most expeditious means of cooperation in the war. Marshal Joffre of the French mission who was highly regarded throughout America, urged early and actual participation of American troops on the western front in France. Accordingly, it was decided to organize and send a combat division overseas at the earliest practicable time.

General John J. Pershing was selected as commander of the American Forces in France and assumed his duties as such on May 26, 1917. In company with a small staff he sailed for Europe on May 28th and after a short stop in England, arrived in Paris on June 13th.

THE FIRST DIVISION:

The First Expeditionary Division was organized from units of the Regular Army the majority of which were then stationed along the Mexican border. These units were brought up to war strength (about four times their former size) by transfers from other Regular organizations and from volunteer recruits. This force was assembled at Hoboken early in June, 1917. The four Infantry regiments sailed from New York on June 14 and arrived at St. Nazaire on the 26th. From then on the other contingents began to arrive. By January 1918 the Division was sufficiently organized to take the field, but it was not until January 1919 that the last unit of the organization had been landed in France.

During its early stages the Division was split up and trained under French control in the area about Gondrecourt, Meuse. Organization, training and equipment occupied the months of July and August. In September the Infantry units were assembled and training continued on broader lines. On October 20th one battalion of each regiment entered the trenches of the front lines in the quiet Sommerville sector on the Lorraine front. Each battalion remained ten days in the front line. This occupation was entirely under French control and gave the troops their first experience under enemy fire.

On November 20th all the combat units of the Division were assembled in the Gondrecourt area and the long period of intense winter training begun. During this time American open warfare methods were liberally injected into the work.

The First American Sector was taken over from the French north-west of Toul by the First Division on January 19, 1918, but it was not until February 5th that the command passed to the Americans. This had formerly been considered a "quiet sector" but under Americans it was considerably livened up and before the end of its occupation by the Division experience was obtained in all phases of vigorous trench warfare.

II. THE SITUATION IMMEDIATELY PRECEDING THE BATTLE.

GENERAL SITUATION:

Few rays of hope pierced the dawn of 1918 in stunning blow. The Allied attempts to gain a decision

Ludendorff could not have known had thinly held was the Allied line in front of Amiens on the 28th when he directed the attack on Arras. If the twenty divisions that were sent in to this attack had been used farther south in a drive for Amiens the much south for break thru might have been accomplished.

It is a question whether or not it would have been better for Germany to have remained on the defensive thru 1918 and attacked with unimpaired reserves in 1919. If Ludendorff had done this it is doubtful if America would have been speeded up and it is very probable that the Allies would not have united under one supreme commander.

The British and French defended themselves well but they could not withstand the German onslaught until sufficient reserves had come up.

The British had not been reenforced from home and their line which was too greatly extended for their strength was too thinly held. This prevented organizing of sufficient reserves.

Adequate defenses were not constructed in the rear and consequently when the British were driven out of their insufficiently manned front lines they had nothing to fall back on.

The failure of the commander of the Seventh Corps to properly understand his orders when he did not halt at Bray but continued his retreat seems inexcusable. This lapse of his almost prevented the Allies from stopping the German advance. If he had linked up with the left of the Vth Army which was at Proyart, Ludendorff might have been stopped on that line and Amiens would not have been placed in such serious danger as it was later.

Lack of unified command was another fault of the Allies at the commencement of the Drive.

LESSONS

Surprise is still possible, in spite of aeroplane reconnaissance.

Undivided command is vitally necessary.

Reconnaissance during battle must be kept up and all possible information secured of the enemy's strength and dispositions.

Adequate defenses must be constructed in the rear.

Artillery support and transport must keep up with infantry.

Troops in the field must be properly reenforced and kept up to strength by those in charge at home.

That it is dangerous to place too much dependence on the supposed protection of natural barriers.

References.—Ludendorff's Own Story; A History of the Great War, by Buchan Vol. IV; Sir Douglas Haig's Despatches; Out of My Life, Vol II; by Hindenburg; History of the World War, Vol. V, by Simonds; A Short History of the Great War, by McPherson; The Encyclopaedia Britannica. Vol. 32.

The attack was renewed again on the 5th on southern front and for a moment on the front north of the Somme. A little ground was gained between Bucquoy and Dernancourt but at great cost. The same results were obtained in the south.

Attacks southwest of Montdidier and in front of Noyon were repulsed by the French on the 6th. The French withdrew the troops from north of the Oise and retired across the river south of Chauny to line Normeziere-Pierremande.

There was another lull on the 7th and on the 8th, the French fell back under pressure to the Ailette on the extreme right.

AMERICAN FORCES ENGAGED

The 12th Engineers were attached to the British Vth Army until March 21st. When this army fell back, they barely saved their personnel and part of their property and from March 28th to April 12th they were engaged in the construction of defenses near Terresnil, north of Amiens.

The 14th Engineers were with the IIIrd Army having been used in the construction of light railways behind the lines. They participated in the defense of this army and during its retirement March 21-26 had seven men wounded.

Headquarters and Cos. B and D of the 6th Engineers were under instruction at Doingt when the German offensive broke. On the 22nd they retired to Chaulnes arriving there on the 23rd. They then moved on to Moreuil and rested there on the 24th and 25th. On the 26th they were ordered to Demuin and assigned to the construction of a defense position there. They were then incorporated in Carey's Detachment and moved to a point in the line near Warfusee-Abancourt and extending to the north side of the Bois de Taillaux on the 27th. Trenches were consolidated and they assisted in the holding of them until relieved on April 3rd.

RESULT OF OFFENSIVE.

Ludendorff carried his front forward almost forty miles and had recovered more than all the territory lost in the battle of the Somme in 1916 and in the Hindenburg strategic retreat in 1917, in all about 1,500 square miles. He was within easy gun range of the important city of Amiens and had almost destroyed the British Vth Army. While he had not realized all of his hopes, he was still in a position to do so as he had a superiority of thirty divisions in the West and a fresh mass of manoeuvre of twenty five divisions.

In one respect Ludendorff signally failed. He had hoped to divide the Allies but instead he bound them more closely together for it was this drive that made the Allies realize that there should be one supreme commander and caused them to appoint Marshal Foch to that important post. His drive also tended to speed up America.

LOSSES

The Germans claim to have captured 90,000 prisoners, 1,300 guns and 100 tanks. The German casualties were approximately 250,000 men while those of the Allies were probably 50,000 less. Most of these losses were suffered by the British. The Germans also lost heavily in aeroplanes as about 100 were shot down during the last ten days of March by French and British pilots. The Allies lost about one third that number of planes.

CRITICISMS.

The German plan of action was sound and the sector selected for attack was well chosen as there is no doubt that the Allied lines were struck at their weakest point.

As shown by the ground gained, the new German attack scheme was highly successful.

The point of attack was well concealed from the Allies until the last moment.

There is but little adverse criticism that can be made of them. However, their guns and transport did not keep pace with the advancing infantry. This is excused to a certain extent when the extreme difficulties that had to be overcome in order to advance over this shell-torn battlefield are considered.

On the morning of the 27th the Germans attacked everywhere south of the Somme. Lassigny and its heights were captured and Davenescourt was taken. Montdidier was entered. They crossed the Somme between Chipilly and Cerisy and turned the position at Proyart forcing the left of the Vth Army to fall back leaving Proyart, Framerville, and Morcourt in their hands.

North of the Somme the British situation was better. Altho Albert had been entered, the Germans could advance no further. There were other small successes farther north.

RESULTS OF FIGHTING FROM 28TH TO APRIL 8TH.

The capture of Amiens was now the chief objective of the Germans. Ten miles west of the Avre ran the Calais-Paris railway. If the heights beyond the Avre could be taken, this railroad could be destroyed. If this could be done before the arrival of the French reinforcements, there would be a clear road to the city. They were now a long distance from their base and their artillery support and speed was necessary. During the night of the 27-28, Warfusee-Abancourt and Bayonvillers were captured and the Germans forces were astride the Amiens-St. Quentin road. They attacked hard at Marceleave and pressing south turned the British right by capturing Contoire. The British fell back and by nightfall were everywhere on the old Amiens defenses.

The 28th marked the end of the British Vth Army. They replaced by the IVth Army under Gen. Rawlinson. Gen. Gough was detailed to construct new defenses in the rear.

The Germans were forcing the line backward steadily to the Avre and the Doms but south of Montdidier they were halted by a counter-attack. French reserves were coming up and a French Colonial Division went into the line west of Montdidier.

On this same morning von Below started an attack for Arras. The front of the assault extended across the valley of the Scarpe from Gavrelle to as far south as Puisieux. The immediate objective was the capture of Arras and the recovery of Vimy Ridge. The larger purpose was to free the German armies from a front now growing too narrow for them.

Below had twenty divisions disposed for attack. Before the zero hour the British artillery broke up masses of the Germans assembling on hills in front of them. There was no fog at this time to assist the attackers and they suffered tremendous losses. German troops attacked with commendable bravery and in some places in six lines shoulder to shoulder. Their bravery, however, availed them nothing and the attack was a complete failure. This check marked the end of the main battle as far as the front north of the Somme was concerned.

In the meantime had attacked in the Flanders sector, with the object of capturing Messines Ridge. They gained a partial footing on the Ridge but were prevented from advancing further thru Ypres toward the Channel.

On the 29th the Germans attacked from Demuin south and the French were driven out of Mezieres and during the night Moreuil Wood was won. This was retaken by the British on the morning of the 30th. On this day the Germans won the ridge west of the Avre at Aubvillers, Cantigny and Mesnil St. Georges and retook Monchel and Ayencourt.

The French retook Guivesnes and south of Montdidier reentered Monchel and Assainvillers on the 31st. Fayolle was now strongly reinforced.

On April 1st the British won back some of the high ground north of Moreuil and in the evening were relieved by the French who took over the front as far as Thennes on the Luce.

There was a lull on the 2nd and 3rd.

On the 4th von Hutier made a last attempt to break thru at the junction of the French and British for Amiens. The British lines generally held. Fayolle had to face fifteen divisions which pressed him back west of the Avre behind the ground on which are located Castel, Morisel, and Mailly-Raineval. Farther south his lines held.

The German were now close to the Paris railroad but this was not so important as the French reserves had now come up.

now had two infantry and one cavalry division in line. The British right was forced back to near Guiscard and the French north of the Oise were forced behind Chauny so that in the evening the Allied line ran northwest covering Guiscard and Libermont.

The Germans extended the gap at Ham forcing the British back toward the Libermont canal. The Somme was fordable most anywhere due to the dry weather and in the evening the line held by the British ran from Guiscard northwest to Morchain crossing the Libermont canal and along the Somme to the Peronne bend. Peronne had been captured by the Germans.

In the northern sector at dawn the Germans were at Bus, Lechelle, and Le Mesnil and during the morning reached Saily, Rancourt and Clery. This compelled the evacuation of Bertincourt. Balastre and Rocquigny fell in the afternoon while the Germans entered Combles also. The right and center of the IIIrd Army fell back to the line Bazentin-Le Sars-Grevillers-Ervillers. Bapaume was also captured. The British now found themselves on a bad emergency line that was without fortifications and with many gaps that the British found the Germans exploring. The Seventh British Corps which had formed the left flank of the Vth was now attached to the IIrd Army as it was north of the Somme and separated from the rest of the Vth Army.

RESULTS OF FIGHTING ON THE 25-26-27-

The main German effort on the 25th was between Ervillers and the Somme, and the front between Montaubon and Ervillers was soon crumbling. Orders were issued to fall back to the Ancre line and the IIIrd Army fell back to the Bray-Albert-Beaumont Hamel-Bucquoy-Ablainzeville-Boyelles line. Reinforcement were now reaching the IIIrd Army area and the German thrust was weakening due to difficulties of transport over old Somme battle grounds.

Guiscard fell into German hands on the night 24-25. A strong attack made by the Germans east of Noyon on the morning of the 25th resulted in the capture of that town and the line east of it was forced to retire south of the Oise. A gap was found in the British line and the Germans entered Nesle. The British were forced back to the south bank of the Ingon river and west of Libermont canal. The night of the 25th found the British front in a series of overlapping salients with the French farthest east. North of the Somme the right wing of the IIIrd Army rested on the Ancre.

The Allies now found themselves in a very critical position. It seemed almost certain that the Germans would separate the French and British at Roye and also separate the British IIIrd and Vth Armies on the Somme. The Allied Governments at last realized the handicap of a divided command and Marshal Foch was announced on the morning of the 26th as the Supreme Commander of the Allied Forces in the West altho his actual appointment did not come until some time later.

On the 25th Gough made up a scratch reserve composed of stragglers, The personnel of a machine-gun school, Canadian and American Engineers, and others, which he placed under the command of Brig. Gen. Carey. They became famous as Carey's Detachment. On the 26th they were assigned to prepare the old lines of the Amiens defenses from Mezieres by Marcelcave to the Somme at Hamel. They became one of the principal elements which finally held the German drive.

The left of the Vth Army was ordered to retire to a position Le Quesnoy-Rosieres-Provart and link up with the IIIrd Army at Bray. Farther north the Germans poured thru a gap between Beaumont-Hamel and Puisieux and occupied Colincamps with machine guns. The position was retaken, however, by the New Zealand division with the aid of the new whippet tanks which were used here for the first time.

The line south of the Somme ran from Proyart by way of Rouvrois to Guerbigny. Von Hutier was now only five miles from Montdidier and it was his intention to make a speedy capture of this place separating the French and British and preventing the detrainment of French reserves. The German front of assault was also being narrowed.

In the retreat of IIIrd Army, the Corps Commander of Byng's right flank misunderstood his orders and did not halt on the Bray-Albert line but continued his withdrawal to the Ancre. The result was that on the evening of the 26th his right rested on the Somme at Saily-le-Sec while the left of the Vth Army was at Proyart five miles farther east.

During this day the XVIIth Army made but small gains against Byng's IIIrd Army.

South of the Omignon a gap opened in the British lines and the Germans poured thru here and broke the third zone around Vaux and Beauvois. All of the British reserves had been thrown in and with the exception of one French division which arrived in motor busses and some French cavalry, there was no help available for the Vth Army, Petain still believed the attack to be but a feint but he ordered the French Fifth Corps to take ground on Gough's right.

In the meantime the gap could not be stopped so the British front had to withdraw.

Before midnight of the 22nd, the Vth Army was ordered to fall back to the bridgehead east of the Somme. The bridgehead was to be linked up with the IIIrd Army at Equancourt on the left and with the troops still holding out on the Crozat canal on the right. Byng had to abandon the Cambrai reentrant and fall back due to this retreat of the left of the Vth Army and his right now rested at Equancourt. Gaps occurred in the line during this retreat, in the south at Ham and in the north at Mory in the IIIrd Army center.

Gough was now in a very serious position. The Crozat canal line was yielding and his right flank was in very great danger. He had fallen back to positions where the defenses were very weak and he was receiving reports that the country behind the German lines was packed with fresh troops. He could expect no reinforcements, therefore his only course was to abandon the bridgehead at Peronne and fall back behind the Somme.

Early on morning of 23rd the Vth Army was ordered to fall back gradually to the river line which it did in the face of incessant attacks from superior German forces. Von Hutier had begun by increasing his hold west of the Crozat canal. He forced a crossing at Jussy and got his tanks over, and by noon was advancing along the west bank. A French division failed in a counter-attack on Tergnier.

Farther north von Hutier's men entered Ham in the early morning and crossed the Somme there and at Pithon. British resistance was strong enough in the afternoon to prevent them from advancing further on the south bank of the river. By the middle of the afternoon the center of the Vth Army was across the Somme and most of the bridges had been destroyed. Von Hutier tried to cross at Offoy and Bethencourt but failed Rocquign. Evening saw the center and left of Byng's Army heavily punished by British guns as his men descended the slopes.

Gough's left was just covering Peronne on the higher ground near Nurlu and Equancourt. During the morning it was forced to fall back leaving a gap between it and the IInd Army, which had been holding well. Later it was forced west of Peronne across the Tortille around Bouchavesmes and Saily-Saillisel, and was slowly giving ground to the advancing Germans.

The immediate strategic German objective was now the separating of the two British Armies.

This gap caused the right of the IIIrd Army to retire and it was forced back to a position East of rmy firm but endangered by the retirement of the right.

On the evening of this date the German bulletins announced the completion of the first stage of the battle claiming 25,000 prisoners and 400 guns.

On the morning of the 23rd, the shelling of Paris commenced from long range guns located in the Forest of St. Gobain not far from La Fere and Laon. It was the intention of the Germans to confuse and terrorize the French and fill them with despair. They failed signally. The emplacements were soon located by the French airmen.

The French now agreed to take over the lines south of Peronne and Petain sent in the French Third Army to take over the south side of the German wedge toward Montdidier and Amiens. This army was near at hand but it did not provide sufficient reinforcements so the French First Army was recalled from Lorraine and ordered to extend on the left of the French Third Army. As it would take several days for these reinforcements to arrive, Haig called on the commanders of the British Ist and IInd Armies for assistance. They gave ten divisions. Haig also hoped to be able soon to use a Canadian Corps on the Somme.

On the morning of the 24th, the fog was as thick as ever. This days battle had two main features-the fight for the Somme crossings and the effort to fill the breach between the IIIrd and Vth Armies. Most of the pressure on the IIIrd Army was south of the Bapaume-Cambrai road. On the right of the Vth Army the French

which was a well-wired resistance section. In this resistance section were well-placed redoubts about two thousand yards apart with machine-guns so placed that an advancing enemy would be drawn under crossfire. The intervals between redoubts were to be protected by barrage fire from field guns and corps heavy guns. This forward zone was expected to resist to the last man and would receive no support unless for a necessary counter-attack. Its purpose was to break up an advancing enemy.

Behind the "Forward Zone" at a distance of from one-half to three miles was the "Battle Zone". It was arranged on the same plan as the forward zone except that it had no outposts. It was a defense in depth with redoubts and strong points.

A mile or two in its rear was the "Final Defensive Zone" which was less elaborately fortified and was not completed when the battle began.

The British believed that the battle zone would prove impregnable against an attack that was broken up by the forward zone. No adequate alternative positions were prepared in the rear but due to the extended front and the limited number of troops the preparation of defenses was hardly possible.

OPENING OF BATTLE.

Shortly before five o'clock on March 21st, the German guns opened up on all British positions on a fifty mile front extending from Croisilles to the Oise. Shells fell on positions twenty miles behind the lines, the back areas being drenched with gas. The shelling was not confined to this front alone as the Allied lines east and north-east of Rheims, north of Arras, north between La Bassee and the Lys, Messines and Ypres, received attention while Dunkirk was bombarded from the sea. The British reply was ineffective due to low visibility.

The German advance was favored by a heavy fog that did not thin out until nearly one o'clock. The British front line was practically cut off from the supporting second line and machine and field guns had to be trained on an invisible enemy who was so numerous that he could not lose direction. By ten o'clock the German advance was general along the whole front.

By noon, with the exception of points held at Le Verguier, Epehy, and Flesquieres, the German infantry had reached the British battle zone and at Ronssoy had penetrated it.

In the afternoon the fighting was gravest south of St. Quentin, the Germans capturing Quessy and the south end of the Crozat canal. Around Roupy and Savy they attacked with tanks.

The Germans met the stiffest resistance in the IIIrd Army area and the heaviest fighting of the afternoon was around Demicourt, Doignies, and north of Beaumetz. Lagnicourt fell and it was believed that the Germans would break thru between Noreuil and Croisilles. They were held at St. Leger and on the left bank of the Sensee.

The Germans had attacked with thirtyseven divisions in the first wave but before dark sixtyfour divisions had been employed against thirtytwo British divisions. The greatest total advance had been made against the British right. No counter-attacks could be made due to lack of reserves.

That evening the British line in the IIIrd Army area had been pushed back to line Beaumetz-Morchies-St. Leger-Croisilles. The Vth Army was pushed back to Epehy-Roupy and on its right had retired behind the Crozat canal. Most but not all of the canal bridges were destroyed during the night.

RESULT OF FIGHTING ON THE 22-23-24.

On the morning of the 22nd there was the same dense fog as on the day previous.

The main German effort was directed against the British Vth Army especially at the critical points of the Cologne and Omignon valleys and the Crozat Canal.

Early in the morning von Hutier reached the canal at Jussy and by one o'clock had crossed at Quessy and was going forward. Tergnier was captured before dark. At the gate of the Cologne river, Marwitz was as far west as Roisel. Le Verguier fell by ten o'clock and Villers-Faucon to the north of it soon afterward Roisel and Epehy were now threatened from the rear. Almost all of the Vth Army was in the third defensive position by afternoon. Epehy had been abandoned and the troops on its left had been brought back with difficulty to the third line between Nurlu and Equancourt.

East of Verdun von Gallwitz had a holding army and the Grand Duke Albrecht of Wurtemberg had a similar one in Lorraine and Alsace.

Reenforcements from the Eastern front brought the German army to strength of close to three million men. Ludendorff is generally credited with having close to two hundred and ten divisions of Infantry at the end of March, one hundred and ten in line and one hundred in reserve. Haig estimates one hundred and ninetytwo divisions.

It is estimated that nine hundred and fifty field batteries, seven hundred and one heavy and fiftyfive heaviest batteries were brought up. In addition to these there were the few Austrian heavy batteries which, however, were inadequately supplied with munitions. There were approximately twenty to thirty batteries to each kilometer of front.

German general headquarters were moved from Kreuznach to Spa with an advanced post at Avesnes. The Emperor was announced as in command as this victory was intended to revive the prestige of the royal house.

GERMAN IMMEDIATE OBJECTIVES.

The XVIIth Army was to attack in the direction north-east of Bapaume while the IIInd came west on the northern bank of the Omignon brook. The XVIIIth was to attack on both sides of St. Quentin, and the VIIth on the line south of the Oise. The XVIIth and IInd Armies were to cut off the British in the Cambrai reentrant and then push forward westerly with the left flank of the IIInd on the Somme, in the direction of Arras-Albert and roll up the section of the British front. The XXIIIrd army was to gain the line of the Somme south of the Omignon brook and the Crozat Canal. The possibility of broadening the attack on the north toward Arras and on the south toward the left bank of the Oise was anticipated.

BRITISH DISPOSITIONS.

The IIInd Army under General Plumer was on the extreme British left while on his right was General Horne with the Ist Army. The IIIrd Army, under General Byng, was next in line holding a front from just north of the Arras-Douai road to near Gouzeaucourt. The extreme right flank was held by the Vth Army under General Gough, the front extending from near Gouzeaucourt to the Oise.

The IIIrd Army consisted of four corps (ten divisions in line and five in reserve). Gough also had four corps but his line was much more extended. He had eleven divisions in line and two infantry and two cavalry divisions in reserve.

The British front had no natural defenses except on its right where it ran along the Oise and in this sector was very thinly held. The river, however, did not present much of a barrier as the early months of the year had been very dry.

The British front had been very dangerously extended as Haig had been compelled to take over about twentyeight miles from the French.

As Haig had not been reenforced from home, he was holding a line from one hundred and twentyfive to thirty miles long with approximately the same strength that he had two years previously when his front was only eighty miles in length.

FRENCH DISPOSITIONS.

The French armies were in three groups under de Castelnau, d'Esperey, and Fayolle, with Petain in supreme command. Haig and Petain arranged provisionally that if the western side of the salient was attacked, the British reserves would be held mainly at the disposal of Byng's III Army while the French army south of the Oise would extend its front to assist the Vth Army.

BRITISH PLAN OF DEFENSE.

In addition to constructing defenses, Haig had to train his army for defensive warfare. He also had to adapt it to a new grouping of units as, due to lack of reenforcements from home, he had to alter the strength of his divisions from thirteen to ten battalions.

The British defenses were organized in a Zone System. In front was a "Forward Zone" consisting of two sections, the foremost of which was a line of outposts to give the alarm and then fall back on the second

(e) Unified Command.

The Allies were divided in command, Haig being in command of the British and Petain of the French. If one were attacked it would be natural to assume that the other would be slow in coming to his assistance. Haig felt that his chief concern was to cover his communications to Great Britain while Petain's chief thought was to cover Paris.

(f) Concealment of sector intended for attack.

In March, 1918, the German lines in the West extended from the North Sea in a south-easterly direction to the Swiss border, forming, on a large scale, a salient from Verdun to the North Sea. The apex of this salient was a few miles southwest of Laon. The German concentration in the angle of this salient made it impossible for the Allies to determine until the last moment against which sector the attack was to be made, as both the Champagne and the Ypres areas were threatened. Petain especially feared an attack on the Aisne and thru Switzerland by way of Belfort.

DISADVANTAGES OF THE GERMAN PLAN.

The chief disadvantage was the time element as Ludendorff must attack and reach a decision before the arrival of large forces of the Americans.

GERMAN PREPARATIONS.

The plans for the great battle were issued by the German High Command during the latter part of January, 1918. Reinforcements were brought up from the Eastern and Italian fronts, every available unit being concentrated for this last supreme effort. All divisions intended for the attack were taken out of the lines in January-February for special training. As aircraft support for the attacking infantry special battle aeroplane flights were formed to dive and fly along the ground to attack the enemy lines. Batteries were placed in position during the night and thoroughly camouflaged. By firing a minimum of shots at carefully lengthened intervals, they had determined the exact ranges without arousing the suspicions of the enemy. Five days before the battle commenced many German divisions were still a long distance behind the front lines. It was necessary to bring them up at night by forced marches.

On March 20th, along the whole front of attack, the guns and trench mortars with their ammunition were in position behind the foremost trenches and in many places even in front of them. The attack divisions were crowded together in anti-aircraft shelters behind the jumping off places in the foremost lines. The bulk of the railway transportation was concentrated behind the Arras-La Fere line.

Feints and preparations for further attacks were made in the following sectors:

- (a) Between Ypres and Lens by Rupprecht's armies.
- (b) Between Rheims and the Argonne by armies of German Crown Prince.
- (c) On old battlefields of Verdun by armies of von Gallwitz.
- (d) Between Saarburg in Lorraine and Ste. Marie-aux-Mines and in Sundgau by armies of Duke Albrecht of Wurtemberg.

No hostile counter-measures hindered the preparatory work.

GERMAN DISPOSITIONS AND STRENGTH.

Two new German armies were created and placed in the line. They were the XVIIth Army under Otto von Below which was placed between the VIth and IIInd opposite Arras, and the XVIIIth under von Hutier which was placed opposite St. Quentin and La Fere between the IIInd and VIIth. For the decisive action the XVIIth and IIInd armies were to remain in the army Group commanded by Prince Rupprecht of Bavaria while the XVIIIth army joined the Group commanded by the German Crown Prince.

The boundary between the XVIIIth and the VIth on its right was about half-way between Lens and Arras, and that between it and the IIInd on its left was approximately at Moeuvres. The boundary between the IIInd and XVIIIth was formed roughly by the Omignon brook and that between the XVIIIth and VIIth was just south of La Fere.

The XVIIth Army consisted of five corps (twentythree divisions) while the IIInd Army under von Marwitz was of the same strength. The XVIIIth Army consisted of four corps (twenty-three or four divisions).

THE GERMAN OFFENSIVE.

MARCH 21 TO APRIL 8, 1918

By

Cap. Walter R. Mann. Infantry

THE GENERAL SITUATION.

At the end of February, 1918, the general situation from the German standpoint was very good. In the East, Russia had collapsed and was bound by treaties to Germany while Roumania and Italy had been defeated. The Allies, on the Western front, had given up the offensive and were content to remain on the defensive until the American forces arrived in sufficient numbers to take a decisive part in the war. The submarine campaign had not been as effective as anticipated and American troops were arriving in France slowly. Until they arrived in larger numbers, England and France would have to fight alone, so that the time seemed ripe to launch a great German offensive in the West and gain a decision there.

THE GERMAN PLAN.

The ideal objective to the German High command was to break thru to open warfare. To do this, three sectors for attack were considered. The first was in Flanders between Ypres and Lens. The second was between Arras and St. Quentin or la Fere, and the third was on both sides of Verdun, leaving out the fortress.

Tactical considerations favored the second or centre sector, so Ludendorff decided to attack between Croisilles, south-east of Arras, and Moeuvres, and omitting the Cambrai reentrant, between Villers-Guislain and the Oise, south of St. Quentin. He figured that the weakest point in a line held under divided commands would be at the junction of these commands.

By striking at this junction, he intended to isolate the British army by rolling up its right and driving it into the sea or into an intrenched camp where he could hold it with a few troops while he swung around on the French and defeated them. He was prepared to let circumstances decide for him the best methods to secure this result as the battle developed.

ADVANTAGES OF THE GERMAN PLAN.

This plan had the following general advantages:

(a) Troops outnumbered the Allies.

The collapse of the Eastern front enabled Ludendorff to transfer to the Western front a large number of troops and as Austria could now take care of herself some batteries of heavy artillery were borrowed from her. Six divisions were also brought up from the Italian front. In addition there was half of the 1920 class of recruits from which to draw. There being an intricate network of railroads within the German lines, it would be an easy matter to achieve local predominance.

(b) Possession of the initiative.

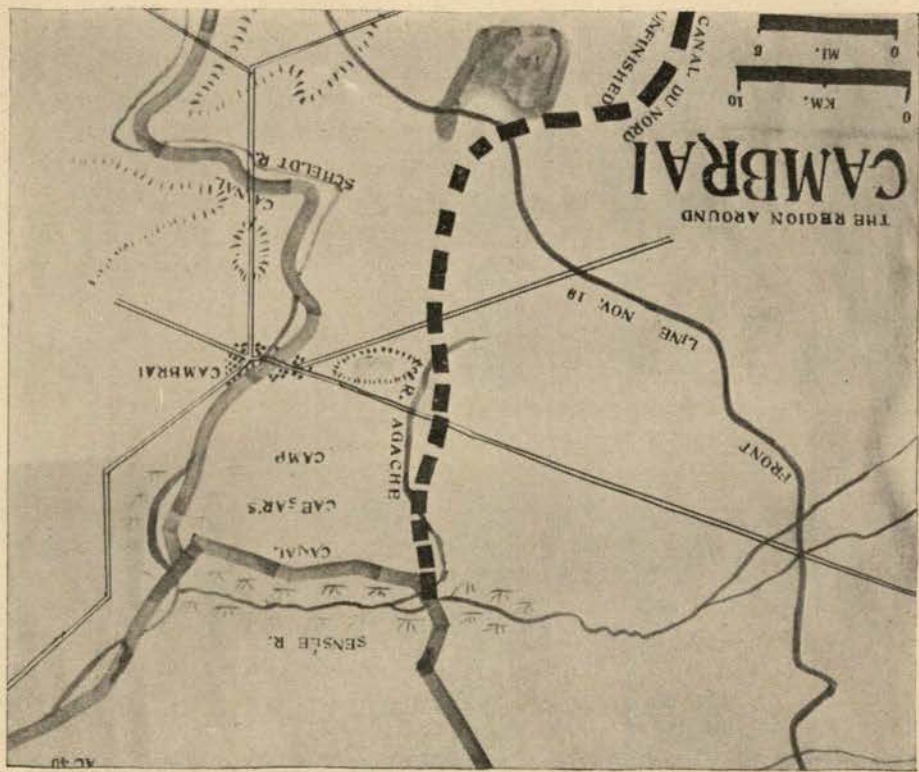
The Allies had resigned the offensive and were awaiting enforcements believing that Germany would wear herself out if she attacked. Ludendorff knew that he could strike when and where he chose.

(c) Troops more highly trained for the task in hand.

The German troops were fresh from successes in Russia, Roumania, and Italy where the new German offensive tactics had been successfully employed. The British were not fully trained for defensive warfare.

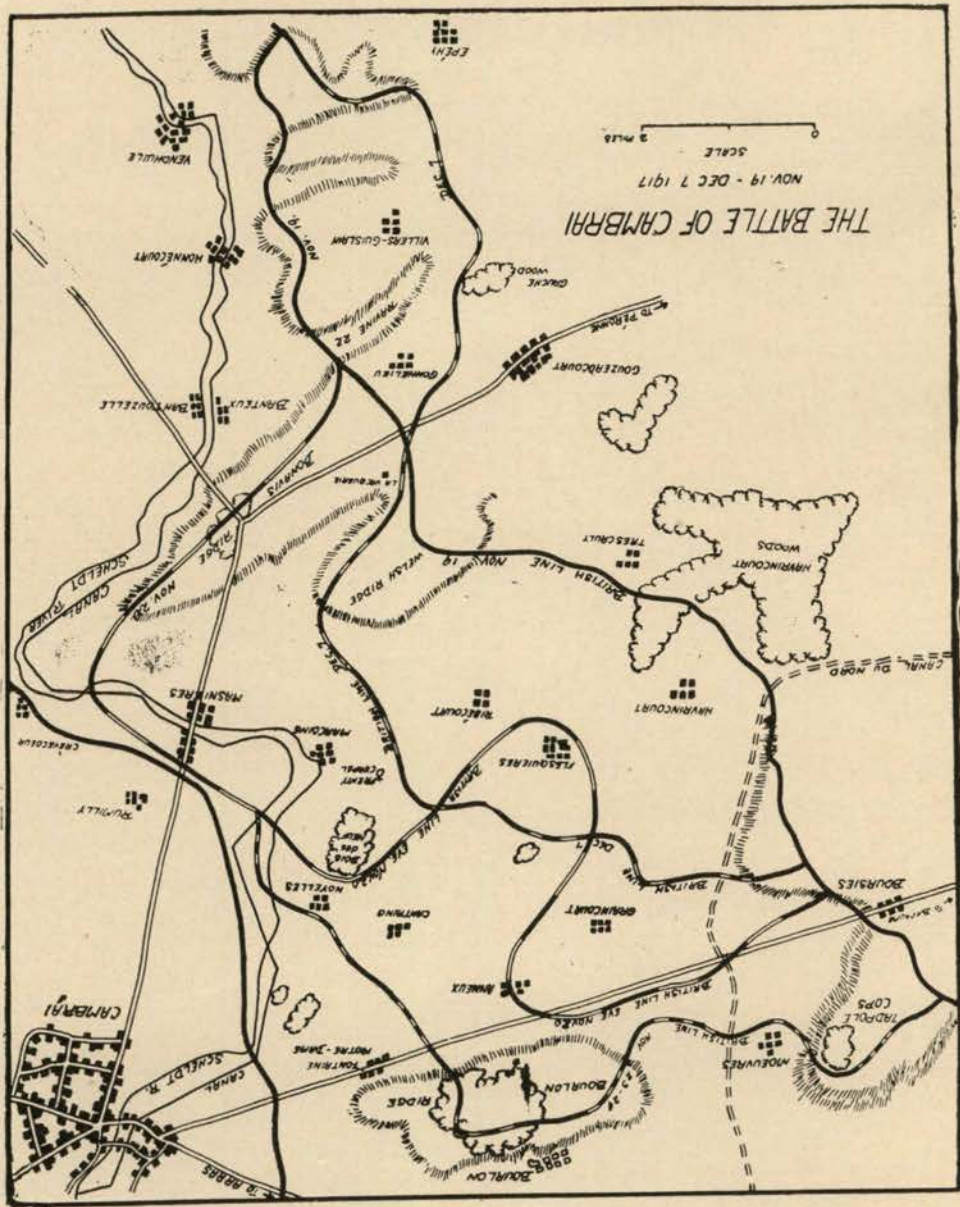
(d) New method of attack.

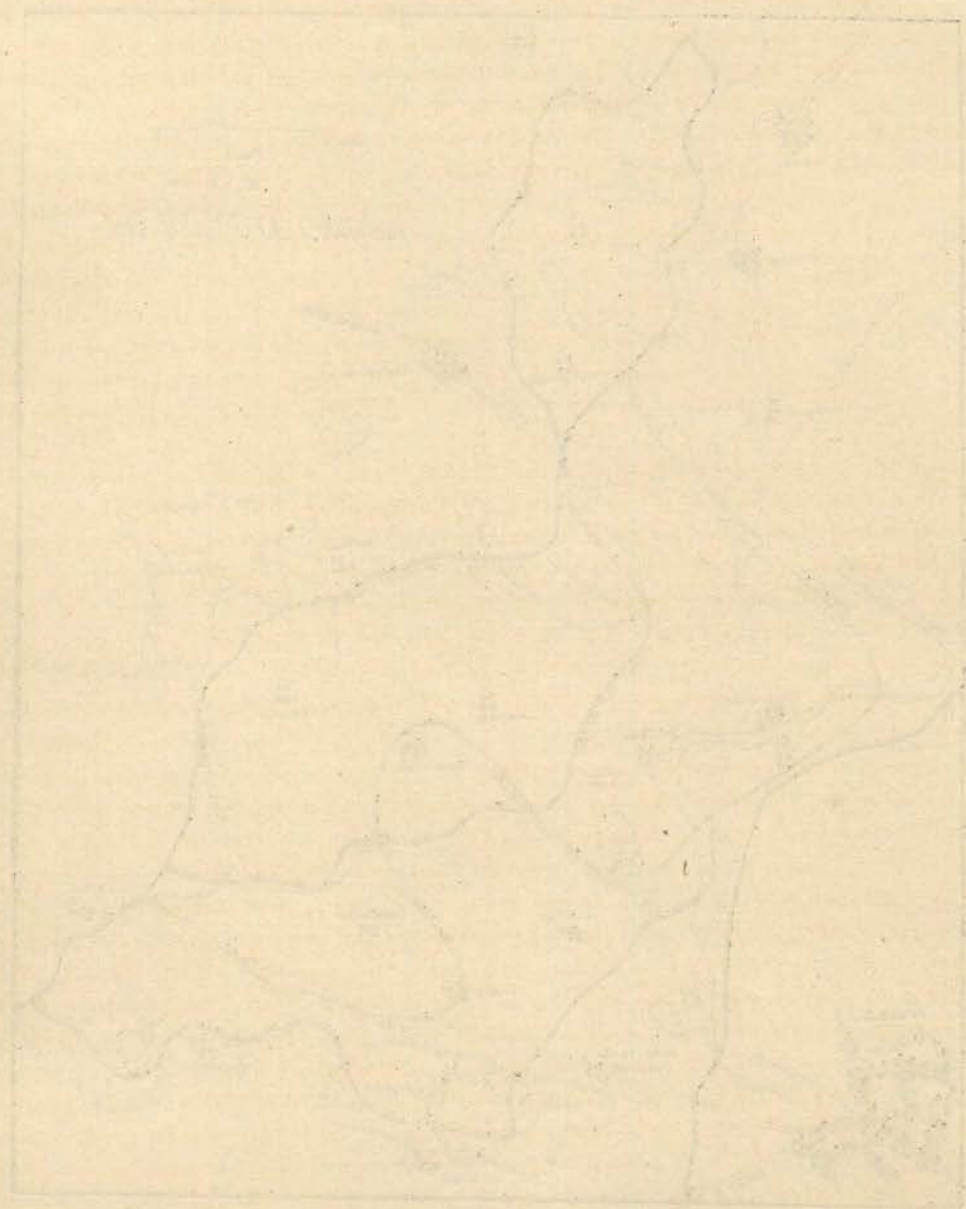
This was based on the highly specialized training of certain units. There was an absence of long artillery preparation and the preliminary massing of troops near the front of attack. Troops were brought up by night marches just before the zero hour, the attack being preceded by a short intense bombardment and the enemy's back areas and supports being deluged with gas. The attack was to be made by small clusters of picked troops advancing in open order with trench mortars and machine guns and with field batteries in close support. These troops were to make gaps in the line thru which others would come and each section of defense was to be outflanked and encircled. When one division reached the end of its strength, another fresh one leap-frogged over it. Troops had unlimited objectives and carried iron rations for several days. The attack was characterized by surprise, violence, rapidity of execution, manoeuvre, and extreme depth of penetration sought.



ous error on the part of the British because they could scarcely hope to make so complete a breach in the same way again. You may not surprise an alert enemy twice the same way. The British in effect threw away the advantage of surprise inherent in their new weapons, the tanks, through this very failure to have and use sufficient reserves. For the tanks might never hope for so complete a surprise again, nor has one in fact occurred.

Such, then, is the real reason for the failure of the British plans, and the one great lesson to be learned from the Battle of Cambrai is: Begin no action without adequate reserves; and, when the opportunity comes, use those reserves boldly.





in a training area at Seicheprey on the southern side of the St. Mihiel salient, and a German raiding party which, though of minor importance, is interesting because of the fact that it was the first action in which American units larger than a platoon fought unassisted, and because prisoners had been lost by them.

At about 5:15 A. M. on the morning of April 20th, after an intense artillery bombardment of the two trenches which lay between their lines and Seicheprey, and of the village itself, three German battalions, in three columns, proceeded by storm troops and protected by box and rolling barrages, advanced on Seicheprey from north-east, north and north-west. Their intention was to raid the village and retire on the trenches to the north of it, which were to be organized and held.

Meeting with but slight resistance from the dazed garrison in the trenches, the raiders rapidly penetrated the village and, destroying the first station, kitchen, dugouts and the battalion command post, retired to the trench just north of Seicheprey, taking with them the papers from the Battalion C. P. and over one hundred and fifty prisoners.

The next day the Germans abandoned the ground they had won, before the Americans had completed their plans for a counter attack, and retired to their own lines.

NOTE—A German assault battalion, "Sturm Battalion," consisted of four companies of one hundred men each, "Stussgruppen," six machine guns, a company of bombers, a company of flame throwers, and one battery of accompanying field artillery.

OTHER OPERATIONS.

After the arrival of French reinforcements to the Flanders front, the battle of Lys came to an end, and both sides started to straighten their lines, improve their communications, rest their troops and perfect their discipline.

From the end of April to May 26th only minor operations and local attacks, incident to the improvement of positions of both sides, took place, which for convenience may be listed chronologically; at Hinges May 3rd, Merlancourt May 5th, Vormezele and La Clytte May 12th, at Mt. Kemmel May 10th-11th, La Basse May 12th, and at Merville and Ville-sur-Ancre May 19th, 1918.

ANALYSIS AND CRITIQUE.

In analyzing the operations between April 9th and May 26th, it is evident that the German High Command had but partially succeeded in its object of the Lys offensive. The principal causes of the offensive lay in Ludendorf's desire to maintain the initiative gained by the Somme offensive, and to destroy the British army. At the end of the battle the initiative lay with the Germans, but the offensive had failed to totally eliminate the British forces from the field. Though the British army was greatly weakened, had sustained terrific losses, and though Haig had been forced to reduce eight of his divisions to mere cadres, the British army was still to fulfill its mission.

However, the offensive had yielded the Germans over 27,000 prisoners, 450 guns, thousands of machine guns and mountains of stores; had eliminated the Portuguese from the field, and caused a movement of strong French forces northward, preparing a way for a new offensive in the south. Although a new salient had been formed by the territorial gains, it was somewhat counterbalanced by the shortening of the lines at Ypres, and the possession of the mountains of Kemmel and Wytchaete gave the Germans an initial point for further attacks and made possible the delivery of artillery fire against the Bethune coal mines, and the railway lines at Hazebrouck and Peperinghe.

Though tactically the battle was a success, it was a strategic failure, for by turning what he meant to be a secondary into a major operation, Ludendorf wasted his reserves, weakening his chances of future offensives, without achieving his principal aims. Starting with seventeen divisions, Ludendorf was drawn into a major operation in which forty-four divisions were used by the end of April in a limited area, where his power of maneuver was restricted and on ground where he could not exploit the advantage gained by the Somme operations.

The German practice of selecting men for the creation of storm battalions, lowered the quality of the remainder, and was responsible for a decline in the quality of troops that directly affected the tactics used in the offensive. Towards the end of the battle it is noticeable that the Germans abandoned their new tactics of infiltration which could be used only with highly trained, well disciplined and fresh troops, and were forced to rely on shock action of masses, and therefore the tactics used had deteriorated in proportion with the inferiority of troops and losses sustained.

There is no criticism to be made of the British operations. With insufficient and tired forces they held the flanks of the sector attacked, and offering a narrow front, restricted the offensive, preventing a break thru which would have been disastrous.

LESSONS TO BE LEARNED.

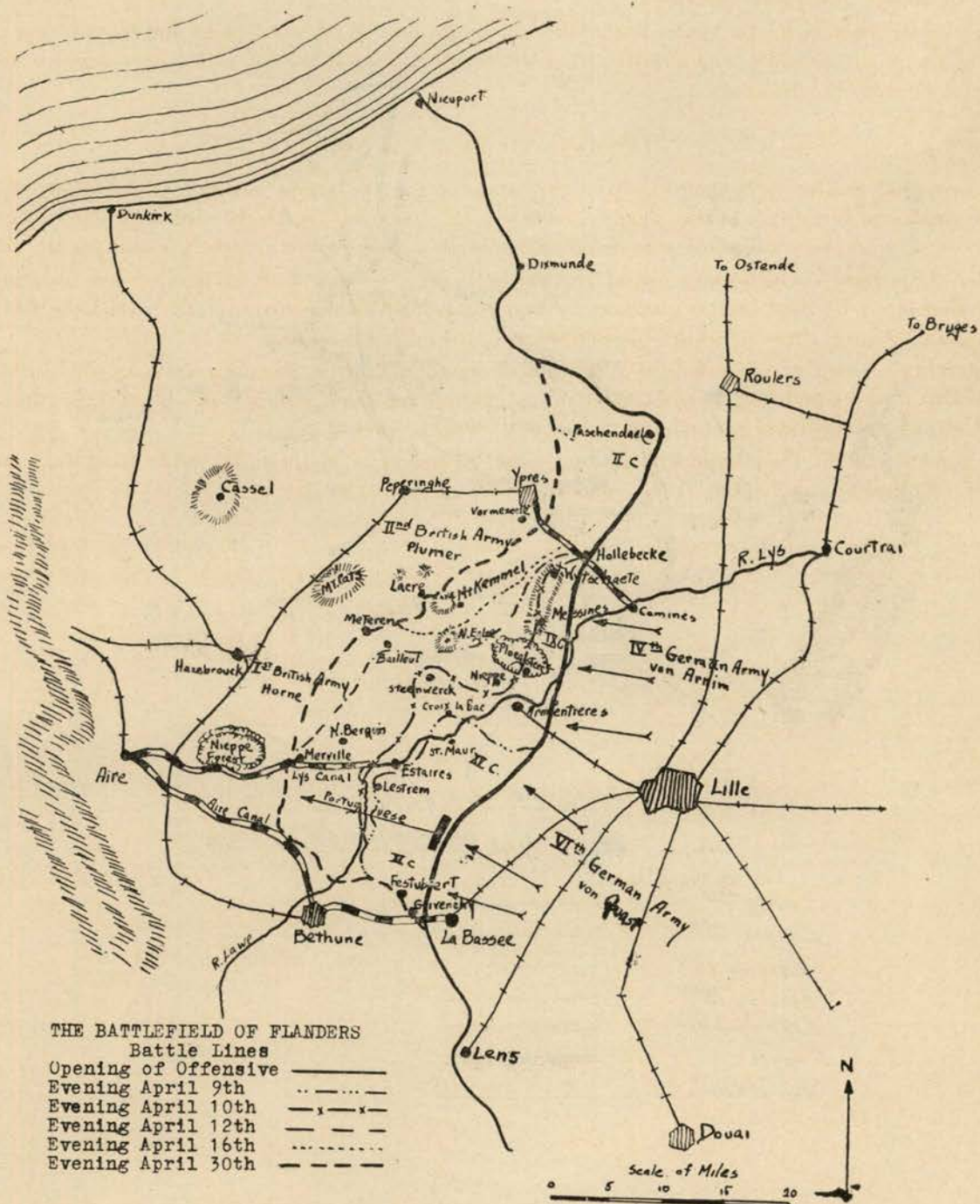
The principal lessons to be learned from the study of the operations covered, is the great effectiveness of counter attacks in forming a strong flexible defense. Organization in depth with a proper disposition of local reserves so as to allow room for maneuver and counter attack, forms a powerful and elastic defense.

No less important is the proper use of smoke shells prior to an assault. These should form an important proportion of shells used in the preparatory fire, screening the maneuver of the attackers, hiding their movements, and helping them to secure their objectives with minimum losses.

In operations which may involve the reduction of strong organized positions, infantry should be trained to operate with tanks, which can furnish effective and mobile artillery support on almost any ground, in reduction of strong points based around the fire of automatic weapons.

The last but not the least important lesson, is the necessity of maintaining strict discipline, and a high state of training and morale, among troops who are to be successful in battle.

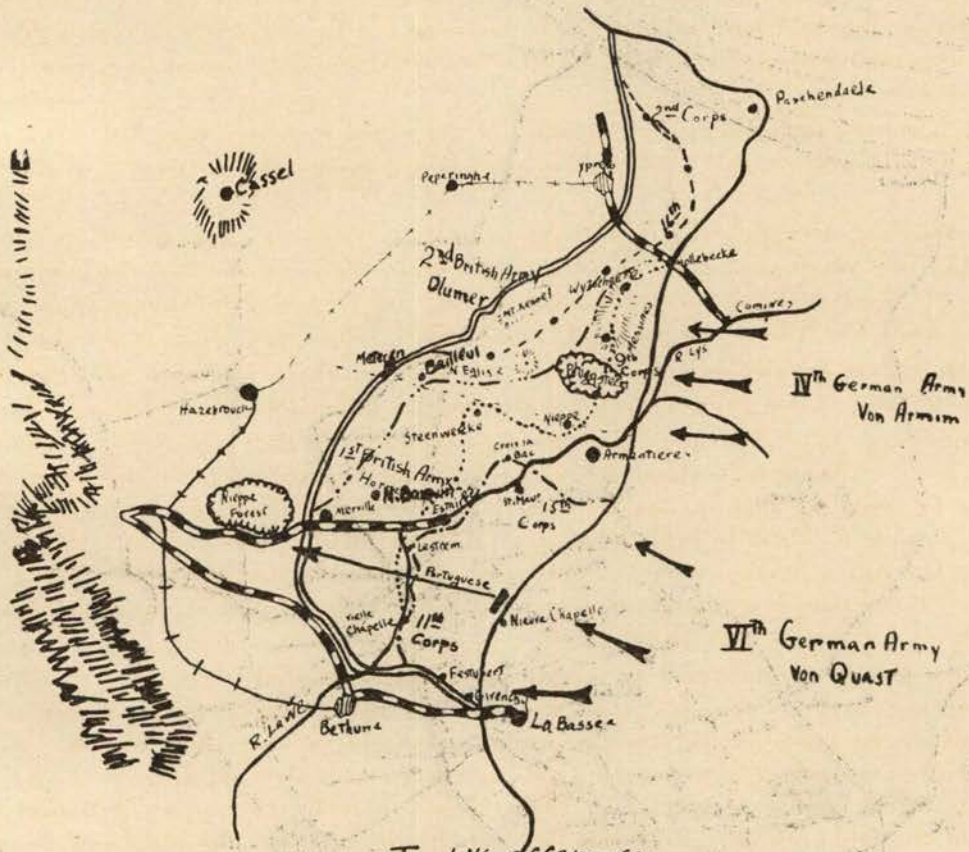
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THE BATTLEFIELD OF FLANDERS

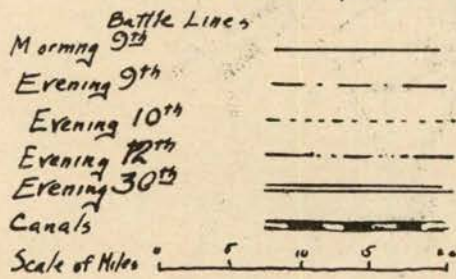
- Battle Lines
- Opening of Offensive —————
- Evening April 9th
 Evening April 10th -x-x-
 Evening April 12th -x-x-
 Evening April 16th -x-x-
 Evening April 30th -x-x-

Scale of Miles
 0 5 10 15 20



The Lys offensive

German Attacks April 9th - TO 12th of April 1918



OPERATIONS ON THE WESTERN FRONT.

MAY 27 TO JUNE 8, 1918.

—By—

First Lt. David A. Bissett, Infantry.

GENERAL SITUATION.

The German army had just completed two very successful offensives against the British front; the first on March 21st and the second on April 8th. In these two offensives the Germans had succeeded in driving deep salients into the British line and had inflicted heavy losses on the British army, thereby weakening and demoralizing it to considerable extent, so much so, in fact, that Foch had been forced to send several of his reserve divisions to its assistance.

General Foch had been put in supreme command of the Allied Army on April 3rd, 1918, which was the first time that the Allied forces on the Western Front had been placed under the control of one supreme commander.

The Allied numerical strength was at its lowest while the German was at its maximum. On the Western Front the Allies had one hundred and sixty-two divisions while the Germans had two hundred divisions. The battle line on the Western Front formed a great salient, the Central Powers operating on the inner lines of this salient while the Allies were operating on the much longer outer lines of the salient.

The United States was rapidly sending troops to the Western Front, but up to this time they had not arrived in sufficient numbers to be given serious consideration by either the Allies or Central Powers.

During the offensives of March and April ten British divisions had actually been eliminated as divisions. Foch had not been in supreme command of the Allies long enough to have his forces co-ordinated to such an extent that he could use them as one centrally controlled army. He had been given command at the most difficult time possible in which to bring about co-ordination. The armies had been and still were suffering severe defeats. The Allied reserves were practically exhausted and he had only a very few French divisions which could be used as reserves, and these were concentrated back of the Somme front, which Foch considered was the logical place for the next German offensive.

The Allies were greatly outnumbered on an extremely long front and were thus compelled to hold the naturally strong positions with as few troops as possible. The Heights of the Aisne, known as the Chemin-des-Dames, were considered as one of the strongest natural positions on their line and they were therefore holding it very lightly and using it as a rest area for their worn and depleted divisions. The Allied forces holding the Heights of the Aisne were as follows: On the left, holding the Chemin-des-Dames and Craonne Plateau was part of the 6th French Army under General Maistre, with only the 11th Corps composed of four divisions under General Maud'huy in the line; on the French right, from Craonne to Bermericourt was the British 9th Corps under Sir A. Hamilton-Gordon, with three divisions in the line; on the right of the 9th Corps, around Rheims, lay the French 5th Army, with one division in the line north of Rheims. The British divisions were depleted and worn out from the previous two months' fighting, and had been sent here to rest and reorganize, as Foch had called it "a quiet place on the Aisne." Thus there were only eight Allied divisions to hold a line of thirty miles. The weakness of this sector was known to the Germans, who, realizing the importance of the position, immediately prepared to take advantage of the weakness and strike their next blow at this point. This is said to be the first and only time that Ludendorff out-guessed Foch.

The successes of their armies in the West in March and April had keyed the Germans to a high pitch of confidence and the German leaders were clamoring for a continuance of the attack which they thought would surely end the war by disrupting the Allied forces and breaking the "war will" of the Allies. This, however, was the voice of the leaders and cannot be taken as the true voice of the people who were war weary and desired peace more than conquest.

Ludendorff had a large and well trained army of manoeuvre which he could rapidly concentrate for a blow at any point he desired, and having the advantage of superiority of numbers and interior lines, he expected to bring the war to a victorious conclusion during the summer of 1918. After the offensive of April he had renewed his shock troops and had begun the preparations for the next blow, which was to fall on the

French front in the latter part of May. About the 20th of May, the army group of the Crown Prince, which lay to the north and east of the Heights of the Aisne, had mustered forty-four divisions for the offensive, twenty-nine for the assault and fifteen in reserve.

On the right from Berry-au-Bac to the Ailette was Von Boehn's 7th Army, and on the left from Berry-au-Bac to Rheims Von Below's 1st Army, the entire force lying wholly on the north and east of the Craonne Plateau.

GERMAN PLAN.

Ludendorff's general plan for the campaigns in the spring of 1918 was first to cripple the British Army, then attack the French Army and cripple it, and then, in one great and final offensive, to separate the British and French forces so that they could be defeated in detail and thus bring about the end of the war.

In the offensive in March and April he had succeeded in crippling the British Army to such an extent that it could be of no assistance to Foch, thus carrying out the first part of the plan. He now directed his attention to the French forces.

To separate the British and French forces the vital terrain was the Somme, so he resolved to strike first in a different area, with the object of exhausting Foch's reserves and stripping bare his center. To accomplish this he must choose some vital point in the French lines which was sufficiently remote from the center to make reinforcements difficult. Thus the ideal point for next blow was the Heights of the Aisne. It was the nearest point to Paris and it was a path to the Marne, and an advance beyond the Marne would cut the Paris-Chalons Railway and imperil the whole French front in Champagne.

It is commonly believed that Ludendorff's aim in the offensive of May 27th was the capture of Paris; however, from his plan it may be seen that this was not the case; the capture of Paris was to come later. At the time the offensive was launched his aim was to draw Foch's reserves away from the center and cripple the French Army, and a drive toward Paris would cause Foch to throw in his reserves more quickly than at any other threatened point in the line. To divert Foch's reserves from the British front and the Somme it was necessary to advance beyond the Aisne at least as far as the Vesle, and the Vesle River was the limit of the attack as Ludendorff had planned it.

In the preparation for this offensive he could concentrate troops in this angle of the great salient of the Allied lines, so that he could strike at either flank or at the front from this concentration, thus keeping the Allies in darkness as to the actual point at which the blow would fall, and having renewed his shock troops, he could again use the tactics of March and April, to which Foch as yet seemed to have found no answer.

Ludendorff planned to create a broad pocket in the direction of the Marne. If this was successful, in furtherance of his general plan, he intended to make a similar pocket on the right toward Compeigne, and finally, in a great combined movement, to unite these two pockets with the Montdidier salient and so separate the British and French forces and sound the doom of Amiens and Paris.

On May 27th he planned to attack on a front from the Soissons-Laon Highway on the west to the Heights of Rheims on the east, and divided this front in general into three sectors; one mass of troops to attack south across the Craonne Plateau and Chemin-des-Dames to the north bank of the Aisne; a second mass to break the Juvencourt Gap and advance west astride the Aisne—these two masses to be formed by the 7th Army under Von Boehn; the third and much smaller mass to push west across the Sapignuel Heights, north of Rheims, from Fort Brimont. He calculated that if any one of these three forces was successful it would ultimately mean the success of the entire offensive, as the Allied troops on either side of the successful force would be menaced in flank and rear. However, as it turned out all three attacks were successful.

TOPOGRAPHY.

In general, the area of the Third Battle of the Aisne lies along the first escarpment of the Paris Basin, which at this point runs practically north and south. It consists of a rolling plateau country, cut by several streams which run in a general east and west direction.

Beginning in the northern part of this area we have first the Ailette River, with its comparatively lowlands, flowing westward to the Oise. South of the Ailette we have the rugged heights of the Chemin-des-Dames, running in an east and west direction from Craonne on the east, at the narrowest point, to the north of Soissons at its broadest point, the heights north of Soissons being somewhat lower and less rugged than those of the Chemin-des-Dames proper near Craonne.

South of the Chemin-des-Dames we have the Aisne River, flowing westward to the Oise. The valley of the Aisne cuts the escarpment from the vicinity of Bery-au-Bac to Soissons, and forms a rather narrow valley with comparatively high ground on either side. South of the Aisne lies another line of heights, much broader and lower than those of the Chemin-des-Dames, which run in a general east and west direction and are bordered on the south by the Marne River. This broad plateau is cut by several smaller rivers, the most important of which is the Vesle, which flows northwest to the Aisne and cuts the plateau from Rheims to just east of Soissons. Also in the western part of this plateau is the Ourcq River, which rises near Fere-en-Tardenois and flows west and then south to the Marne.

The Marne River in the south is by far the largest and most important of the rivers of this area, and although it has a broad valley, the main part of this valley is to the south of the river, while the north bank consists of an irregular line of high ground.

All the larger rivers in this entire area, of course, have many small tributaries which serve to cut the plateau into many smaller ridges and valleys, some of which are wooded and others practically treeless.

This area is an old fighting ground: Napoleon and Caesar had campaigned over it; the Craonne Plateau had been Nivelle's first objective in April, 1917, and it was here that the war of position first started when Von Kluck dug in after the first battle of the Marne in September, 1914. Considered as a fighting front it consists of three distinct sectors: first the Chemin-des-Dames north of the Aisne; second the valley of the Aisne, known as the Juvencourt Gap; and third the heights to the north of Rheims, known as the Sapigneul Heights, crowned by Fort Brimont.

Seen from the north the Chemin-des-Dames seems almost like an artificial wall as the crest line is practically even and the northern slopes are very steep. It is one of the most important natural defenses of Paris.

THE THIRD BATTLE OF THE AISNE.

In the preparations for the offensive of May 27th, Ludendorff had far exceeded all previous records in the speed and secrecy of his concentration. The great German war machine was working perfectly and never during the whole campaign did it move so noiselessly and so fast.

On May 26th the Allies had no knowledge of the impending attack until about five P. M., when the French learned from two German prisoners that the Germans were going to launch a gigantic offensive the next day. This, of course, did not allow even the semblance of the necessary time to make preparations to counter the blow.

At one o'clock on the morning of May 27th the Germans began a terrific bombardment, principally of gas shells, which covered the entire Allied front from the Ailette to Rheims. This bombardment was extremely intense and lasted until four A. M., when the infantry began their advance, assisted to the east of Craonne by tanks. In about two hours they had driven the French from their position on the crest of the ridge.

The attack was delivered by twenty-nine German divisions in the assault, and was pushed with equal force along the entire front of thirty-five miles. It involved the 6th French Army and the British 9th Corps and a part of the French 5th Army. The 11th Corps of the French 6th Army was forced back on the southern slopes of the heights early in the morning and was pressed back continuously during the day. By the afternoon they were back on the Aisne five miles from their original position on the Chemin-des-Dames. At eight A. M. three French divisions from the reserve were thrown in and attempted to hold a line on the south bank of the Aisne covering the river crossings, but were overwhelmed. The German advance was so rapid that they were able to cross the river on the bridges which the French had not had time to destroy. By nightfall of

the 27th the left of the 11th Corps was back to the Vesle and on the right they had been forced back across the Vesle to the north-east of Fismes.

During the day of the 27th the British 7th Corps was also forced back a great distance, especially on its left, where it fell in the path of the center of the German drive. On the right the 21st Division, between Cormicy and Bermericourt, with the French Colonial Division on its right, lost very little ground, although it was forced back to its second position. The 8th Division around Berry-au-Bac was forced back to Bouffignereau, and the 50th Division around Craonne was forced back across the Aisne almost to the Vesle. By evening the 9th Corps had been forced back to a position facing west and northwest between the Aisne and the Vesle and linked up precariously with the French northeast of Fismes.

The evening of the 27th the Allied line ran from the Ailette near Leully, by Neuville-sur-Margival, to the Aisne at Conde, and then in a crescent on the southern bank across the Vesle at Graine, thru Quincy and Mont Notre Dame, south of Fismes, then northeast to Bouffignereau, Cormicy and Bermericourt.

Strictly speaking the Allied line had not been broken, as there was still contact between units all along the entire front. However, in so far as being capable of a resistance worth considering by the Germans it was completely broken. The Germans had advanced an average of ten miles and captured fifteen thousand prisoners in one day's fighting.

The center of the attack had been more than successful and had exceeded all the plans and hopes of the German High Command, but on the flanks at Soissons and Rheims it had not been so successful, in fact, had been almost a complete failure, as no gains of any importance had been made in either of these areas. Ludendorff realized that by each succeeding day's advance he would be forced into a continually narrowing salient and so turned his attention to the flanks. He pushed the attacks here on the 28th in order to broaden the salient. On the extreme right between the Aisne and the Ailette he pushed the French back, captured Sancy and a line from Pont St. Mard, by Terny to Bray, then southeast by Venizel, Serges and Lerges. In the center the French were south of Thuys, Chery and Courville, and on the left the British 9th Corps had been forced to a position well south of the Vesle by Crugny to Muizon, while on the extreme left Ft. Brimont had been taken and the French 5th Army had been pushed back to the Heights of St. Thierry. Soissons was now in a very precarious position as the Germans were on the heights overlooking it to the north and were close to the city in the river flats to the south and east.

During the first two days of the battle, the 27th and 28th, the three British divisions of the 9th Corps that were in the line, the 21st, 8th and 50th were cut to pieces. The 8th Division lost seven thousand men out of a total of nine thousand infantry, which gives some idea of the losses and was the condition not only of the British 9th Corps but of the French 11th Corps as well.

On May 28th, in the region of Montdidier, the American 1st Division attacked and took the town of Cantigny and held it against determined counter attacks. Although it had no direct bearing on the operations we are now considering, it would have been well for Ludendorff to consider this action seriously at it was the first time that the American troops had been used in offensive action and they proved that they were more than equal to this kind of fighting. Although he considered them poorly trained and unskillfully led it was the American troops who later proved more than a match for the best divisions and were ultimately the deciding factor in bringing about his defeat.

Another incident which may well be mentioned here was a conference held back of the German lines on the evening of May 28th, attended by the Kaiser, the Crown Prince, Von Hindenburg and Ludendorff, in which it was decided that the attack would be continued. The attack had exceeded all expectations and in two days the German army had gained the limits of the objectives as outlined by Ludendorff in his original plan. This virtually meant that the Germans, surprised by the extent of their victory, had decided to transform what had originally been started as a diversion into a principal operation, with Paris as its ultimate goal. It is thought by some historians that Ludendorff was opposed to this plan and desired to adhere to his own plans as originally made, but was forced to accept it under pressure from the Kaiser and Crown Prince, who desired above all things the capture of Paris for political and dynastic reasons.

Ludendorff's attempt to broaden the salient on the 28th had not been the success that he expected, so on

the 29th he renewed his efforts with increased vigor. He reinforced both flanks with fresh divisions and pushed the attack. In the morning they attacked the city. On the left Von Below with increased forces, only to be driven out a short time later by a French counter attack. The Germans again attacked in the afternoon and this time were successful in forcing the French out of the town and holding it. The French were forced back to the plateau west and south of the city. On the left Von Below with increased forces, attacked the British and French forces on the upland of St. Thierry, which he succeeded in taking.

While the more important flank attacks were taking place the center had also attacked and advanced during the day. There was a general falling back along the entire Allied line and on the night of the 29th the Allied line ran from La Neuville, north of Rheims, well to the south of Muizon and Crugny, south of Arcis-le-Ponsart, through the station in Fere-en-Tardenois, and then northwest by Cuiry-House and Septmonts, south of Belleu, to the West of Soissons, west of Juvigny, to Pont St. Mard.

The next day, May 30th, the attack was pushed along the entire line center and flanks. This may be considered the second main attack of the battle, and was launched in conformity with the plan of operations decided on at the conference on May 28th. It had two distinct aims: the first to reach the Marne, and the second to broaden the salient by destroying the pillars on the flanks at Soissons and Rheims. The first was accomplished with comparative ease, as by evening the Germans were in possession of about ten miles of the north bank of the Marne, between Dormans and Chateau-Thierry, and had established a few posts on the south side.

The second aim, however, was not so easily accomplished. The attack on the heights west and south of Soissons failed. On the left flank Von Below captured La Neuville and a part of Betheny, but was stopped in front of Rheims. That night the Allied front lay from Rheims, by Virgny and Ville-en-Tardenois to Dormans, then along the north bank of the Marne to just east of Chateau-Thierry, then north-west by Oulchy, Missy-au-Bois, to the west of Soissons (May 29th line, thence by Guny to the original line of Pontoise.

The German army had now advanced over thirty miles in seventy-two hours, in the center, had occupied about ten miles of the north bank of the Marne, captured about forty thousand prisoners, about four hundred guns and an immense amount of war material, including cannon of all kinds, railroad and artillery of the heaviest type, extensive munitions depots, railway trains, hospitals and aviation fields. However, history shows that many seemingly great victories were in reality severe defeats to the so-called victors and Ludendorff realized that his present successes were fast assuming the proportions of just such a victory. He had used up most of the divisions of the Crown Prince's reserves, and though Prince Rupprecht had about twenty more and Wurtemberg and Gallwitz at least four that they could spare, this was all he had left of his mass of manoeuvre, with which to resist an Allied offensive and to launch the final blow which was to be on the Somme. He was now in such a position that it would not be safe to discontinue the attack. The battle must be continued or he gains relinquished.

"It is an accepted rule that a salient on a formed front should not be in depth more than one-third of its base." Von Boehn had far exceeded this proportion by forming a salient with a depth equal to its base, so Ludendorff was forced to halt the center and make every possible effort to bring the flanks into line.

By far the most dangerous wing was the German right, which roughly followed the high road from Chateau-Thierry to Soissons, and if Von Boehn could advance on this wing he could broaden the borders of the salient. Also, if he could outflank the Soissons Heights from the north he could undoubtedly destroy that gate-post of the salient. Accordingly, on the morning of May 31st he "formed front to a flank" and drove hard in the direction of the forest of Villers-Cotterets, and at the same time launched a determined attack south along the line from Guny to Pontoise. To the north of Soissons he succeeded in driving the French back from the southern bank of the Oise and Aisne Canal. To the south of Soissons he succeeded in advancing down the valley of the Ourcq as far as Neuilly-St. Front. The night of May 31st the line in this area ran from northeast of Chateau-Thierry through Verdilly, Torcy, Neuilly-St. Front and Vierzy to Missy-au-Bois, joining the May 30th line southwest of Soissons. The heights to the west of Soissons were still occupied by the French and the salient had not been broadened.

On June 1st Von Below attacked at Rheims, assisted by tanks, and was at first successful, but a coun-

ter attack by the French drove him back and captured four of his tanks. North of Soissons Von Boehn made a half-hearted attack which gained nothing, while south of the town the French counter attacked and won back some ground and brought the German advance on the south bank of the Aisne to a stop.

On June 2nd both German armies made resolute attempts to broaden the salient by breaking down the gate-posts. Von Below with five divisions attacked at Virgny, southwest of Rheims, but failed to advance. Von Boehn attacked on the right wing from Chateau-Thierry to Soissons and succeeded in occupying that part of Chateau-Thierry that lies north of the Marne, and the high ground north of the river and southwest of the city. To the north of Chateau-Thierry he advanced his line to Chezy-en-Arzoie, Trosnes and Faveralles, thence north along the eastern edge of the forest of Villers-Cotterets to Chaudun. Here his advance down the valley of the Ourcq was stopped, as the French had brought up reserves in this area and had formed a line that they could defend.

Foch had been slow to reinforce the front as he must first make sure that the attack was not a feint. It would have been fatal for him to have used up what few reserves he had to stop an enemy diversion and then have the main attack launched at some other point. He still believed that the main attack would be on the Somme, which was the logical place, and where later what was intended to be the final blow did fall.

On May 30th Foch had ordered the 10th Army to Villers-Cotterets and had brought the 1st Cavalry Corps under Robillot to the Ourcq. Also, about this time, owing to the scarcity of reserves, the decision was reached to use the American divisions now in France as combat divisions, and the American 2nd and 3rd Divisions were ordered to the Marne front. The 7th Machine Gun Battalion (motorized) of the 3rd Division arrived at the front at four P. M. May 31st and assisted the French in holding the bridges over the Marne at Chateau-Thierry. The remainder of the 3rd Division arrived the following day, June 1st, and was split up and put into small gaps in the French lines in and around Chateau-Thierry. The 2nd Division arrived at Meaux on the night of June 1st-2nd and were put into the line in support of the French to the west and north of Chateau-Thierry.

June 2nd the French counter attacked along the line of heights from Faveralles to south of the Clignon and recaptured all of this line with the exception of the town of Faveralles, which was still held by the Germans. Von Boehn's forces in this area reached the limit of their success on this date. He continued his efforts here for another week, but all attacks failed and he made no progress.

June 3rd the Germans made determined attacks at Torcy, where they tried to push down the valley of the Clignon; at Faveralles; and on the Chaudun Plateau southwest of Soissons, where Von Boehn tried to turn the forest of Villers-Cotterets by its northern end. The fighting was heavy at all of these points but the French had been reinforced and were able to hold the lines they now occupied. June 4th there was comparative quiet on the entire front and on June 5th the Allies repulsed several attempts of the Germans to break through at isolated points.

The Crown Prince had used forty-one divisions in the battle and had practically exhausted his reserves. However, the reserves of the neighboring group commanders had not been used, and the situation for the Allies was still very grave. The Allied line had been greatly lengthened and was very weak at numerous points. Paris was only about forty miles from the front, and around Paris were the chief munitions factories of France, which was more important than the fact that Paris was the capital. It would be extremely hard, if not impossible, for France to replace these factories at this time.

On the other hand Ludendorff was also in a very difficult position. His attempts to break down the gate-posts and broaden the salient had failed and he was now in an extremely deep and narrow salient, with nothing but tired out divisions to hold the lines, while opposing him were the active French and American divisions. His lines of communication to the rear were very poor, and owing to the lack of railroads the supply of the 7th Army was very difficult. Also, owing to the fact that the salient was so deep and narrow, the Allies had observation well to his rear from many points on the flanks of the salient and could continually harrass his lines of communication with long range artillery.

The Allied lines along the south bank of the Marne and to the west and north of Chateau-Thierry were in a very disadvantageous position. The German lines on the north bank were just over the crest of

the line of hills with woods behind them, while the Allies were in the open with no woods behind them and on much lower ground. Accordingly, an attack was ordered along the line west and north from Chateau-Thierry to Torcy, to take the wooded crest, including Bois-de-la-Mariette, Bouresches and Bois-de-Belleau, in order to put the Allied front lines over the crest of the hill and into the woods behind it. The attack was launched on the morning of June 6th by the American 2nd Division. They succeeded in advancing one kilometer in the direction of Torcy, took part of the Bois-de-Belleau, captured Bouresches and Vaux, and advanced their lines beyond the Bois-de-la-Mariette. On the night of June 6th a combined attack was launched by the French and the American 3rd Division and Hill 204 was taken by the 3rd Division. This secured Chateau-Thierry to the Allies, as it could now be held from Hill 204 on the south bank of the Marne.

The strength of the German drive was now exhausted, and they had not only been forced to halt along the entire front, but were now on the defensive and at several points had lost a small part of their guns. They announced the results of their victory at this time, which were fifty-five thousand prisoners and six hundred and fifty guns, as well as an immense amount of war material.

Ludendorff now set about to carry out his original plans and made preparations for his next blow, which was to be in the Montdidier-Noyon sector, where he attacked on June 9th.

ANALYSIS AND CRITICISM.

Very little criticism can be given to the action of the Allied commanders and forces in this operation. The one and only outstanding fault is the lack of an efficient intelligence service. No reasonable excuse can be made for their complete lack of knowledge of the attack which was to be launched on May 27th. Historians all agree that they had absolutely no information regarding it until the evening of May 26th, and during this time the Germans had concentrated over forty divisions in their immediate front. They were taken completely by surprise and according to the teachings of all great military leaders this is never excusable.

In their actions after the attack had been launched I can see no just cause for criticism. Foch was slow to send reinforcements, it is true, but he was justified in being slow. He was greatly outnumbered on his entire front and had only a handful of reserves. Once these were committed to the action his power of manoeuver and counter attack on the entire western front would be gone, as no troops with which to form a new reserve were available at this time. He expected and had prepared for the next blow to be on the Somme and used good judgment in doing so. It was the logical place for the attack and Ludendorff had planned the final blow to be on that front.

It is said that he over estimated the natural strength of the Chemin-des-Dames. It is quite possible that he did, but he did not have troops enough to hold all points along the entire front as strongly as they should be. He was forced to hold many places very weakly, and it is only logical that the strongest natural positions should be held with the fewest troops. He had to do the best he could with what he had.

In considering the operations of the Germans, nothing but praise can be given the manner in which the preparations were made and the attack launched. It was a large operation carried out on a large scale, and yet was an absolute and complete surprise to the Allies. The main point of criticism of the German operation is the apparent lack of consideration of the flanks. In the first two days of the battle the center was driven hard, but the flanks were neglected. Ludendorff soon realized this and then made every effort to correct the error, but it was then too late. The initial vigor of the attack was spent, the troops were beginning to tire, and, most important of all, the element of surprise was lost. The Allies realized the importance of the flanks and directed their main efforts to holding these points. This is shown by the determined fighting at both Soissons and Rheims, where the Allies counter attacked repeatedly in order to hold their positions. This was not done at other points in the line. Counter attacks are costly and they were saving their troops except where the gain was worth the cost and this was only on the flanks.

Another point is that Ludendorff in his original plan had intended this operation as a diversion only, an important yet minor operation in his plan to bring about the defeat of the entire Allied forces. To accomplish the purpose of this operation he had only to advance to the Vesle, and had he stopped here he

would have saved his forces, would have been in a good position both strategically and tactically, and would have used up a part, at least, of Foch's reserves, as Foch threw in three reserve divisions on the 27th and on the 30th ordered the 10th Army and 1st Cavalry Corps to Villers-Cotterets. However, owing to the pressure brought to bear by the Kaiser and Crown Prince, the attack was not stopped when its mission was accomplished, but was continued, with the result that, although more ground was gained, no strategical advantage was gained, and the entire forces engaged were left in a very disadvantageous position. The basic plan of an operation cannot usually be successfully changed during the operation, and the one who made the plans and is executing them must be free from interference by others if they are to succeed.

When Ludendorff found that the strength of his attack was spent and he was practically at a halt, he immediately realized the situation and stopped the attack, thereby saving his troops from costly local encounters for small gains, and turned his attention elsewhere, which was the logical and reasonable thing to do.

LESSONS.

OVERESTIMATING THE STRENGTH OF NATURAL POSITIONS.

It is clearly shown that in modern warfare, no matter how strong the natural position, it cannot be considered impregnable. The concentration of a large amount of artillery on such positions as the Chemin-des-Dames will make them untenable in a few hours' time, and the attacking force can take possession practically without resistance. Therefore if such positions are of importance they must be held by sufficient forces and be just as well organized and fortified as the weaker natural positions of the line, the advantage of the strong natural position being that it is more easily organized and fortified.

CONSIDERATION OF THE FLANKS.

No attack, whether it be in position or open warfare, can be successful unless the flanks are given proper consideration and attention. If in the first day's fighting Ludendorff had pushed the attack on the flanks the results of this battle might have been entirely different. He would have had fresh troops and the element of complete surprise, and had Rheims and the Heights of Soissons fallen on the first day, the Allies would have had nothing on which to base their defense. Both in attack and defense the flanks should be the first and most important consideration of the commander, as his success or failure depends primarily on them.

CHANGING THE PLAN DURING AN OPERATION.

It is only in very rare instances that the plan of a large operation can be changed during the battle and still be successful. The plan once made and the operation begun must be carried to its logical conclusion without change, if possible. A change of the essential part of a plan usually gains nothing, often causes severe defeat and is always extremely costly.

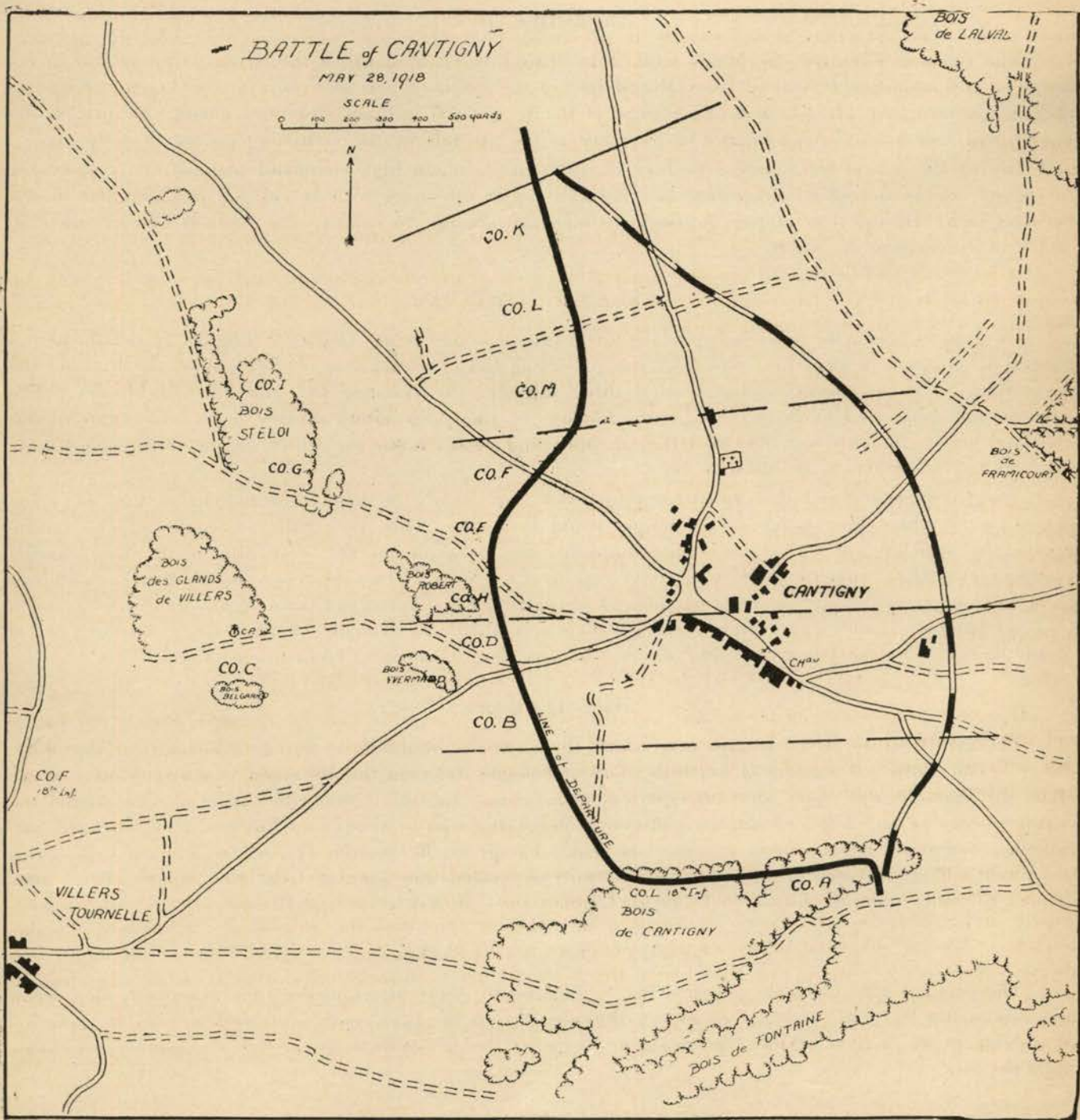
LACK OF INFORMATION.

A commander to be successful must have an efficient intelligence service. He must at least have a general knowledge of the enemy's movements and intentions. This is his only protection against surprise, and surprise is probably the greatest of all assets to an attacking force and the greatest of all handicaps to the defender. A force surprised is thrown into confusion, is often defeated by even inferior numbers, and always suffers severe losses. In this battle the Germans had both superiority of numbers and the element of surprise, which accounts for the large gains made, the large number of prisoners captured, and the immense amount of material taken. Had Foch been informed of the German blow in time he could have placed sufficient forces on the Chemin-des-Dames and in all probability the German attack would have failed.

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BATTLE of CANTIGNY
MAY 28, 1918

SCALE
0 100 200 300 400 500 yards



GERMAN OFFENSIVE OPERATIONS.
FROM JULY 9 TO JULY 17, 1918, INCLUSIVE.

—By

Major Alexander W. Cleary, Infantry.

INTRODUCTION.

The German offensive operations from June 9 to July 17, 1918, which the writer will endeavor to describe in this monograph, extend from Montdidier in the northern part of France to the Argonne Forest in the northeastern part. In addition to a *resume* of the the general military situations during this period, the reader will find a few brief remarks in reference to the attitude of the civilian populace in Germany.

During the period from June 9 to July 17, 1918, the German high command planned and endeavored to execute to a successful conclusion two separate major offensives with an interim of about one month between each. During this interim the Germans made an attempt to capture Rheims and also executed an attack in the vicinity of Albert.

GENERAL SITUATION.

On June 9, 1918, the lines occupied by the German armies from Amiens to Rheims placed them in a dangerous situation, a situation caused by the preceding German offensives of the Somme, the Lys and the Aisne-Marne. These offensives had created three salients: the Amiens, Lys and Chateau-Thierry. The Amiens and Chateau-Thierry salients were, because of their depth and narrow bases, extremely vulnerable and costly, in both men and material, to hold, and each offered the Allied command an opportunity for striking the Germans an effective blow.

The Germans realized that an attempt to widen the salients at their respective bases must be made before any further effort south of their lines could be made. This, they believed, could best be accomplished by attacking in force along the Montdidier-Noyon sector on the west side of the Oise, having Compeigne as their objective. If they could capture Compeigne it would force the French to withdraw from the Compeigne-Noyon-Soissons line, thereby eliminating the Amiens and reducing the dangerous element, Chateau-Thierry salient, and furthermore it would establish a straight battle line extending from Montdidier to Chateau-Thierry, a line which would present a menacing front toward Paris.

THE TERRAIN.

The main feature of the terrain over which the Germans would be required to advance in the Montdidier-Noyon sector was a group of low hills south of Lassigny between the Matz and Oise rivers. west of the Matz the country was open and interspersed with farms. East of it the Allied front curved around the northern edge of the hills, which were thickly wooded and rose to about four hundred feet above the surrounding country. They formed a continuous ridge except at the western end where a sharp valley with the small village of Gury at its northern extremity separated one summit from the ridge. This ridge formed the only natural obstacle between the German lines in that sector and Paris.

GERMAN PLAN OF BATTLE.

The original plan of battle consisted of the Eighteenth Army attacking on June 7 between Montdidier and Noyon, the Seventh Army to attack simultaneously with the Eighteenth southwest of Soissons, but, due to a delay in the arrival of the reinforcing artillery for the Eighteenth Army, the attack was postponed until the 9th.

THE FIRST BATTLE OF LASSIGNY.

At midnight on June 8th, an intense bombardment of the Allied lines began, and at dawn on the 9th

the Eighteenth German Army consisting of fifteen divisions, approximately 200,000 men, commanded by Hutier, advanced to the attack. The attack was directed against Mery on the west and on the east against strong positions on the high ground west of the Oise.

The Germans met with a local success in the center, they advanced three miles and captured the isolated hill heretofore described, commanding the village of Gury, and they reached Ressons to the south. Next day, the 10th, they advanced their center about three miles more to Marquglise and Elincourt; on their left they entered Thiescourt Wood; and on the right they captured the small villages of Mery, Belloy and St. Maur. The French left between Rubescourt and Courcelles withstood repeated assaults. On the evening of the 10th the French line extended from Mesnil St. Georges in the west to La Bernardie south of the Cannectancourt in the east, passing by Le Ployron, Courcelles, Marest and Montigny.

On the 11th the French regained Mery and Belloy and, overcoming the desperate resistance of the Germans, advanced their lines about two miles on a front of four miles between Gournay and Courcelles. To the east they succeeded in forcing the Germans north from the banks of the Matz river, and also repulsed a German attack along the Ribecourt-Compeigne road.

On the 12th, reinforced by four fresh divisions, the Germans advanced slightly between Ribecourt and Marest, capturing the latter village, which is located on the south bank of the Matz river. Cherincourt, Marchmont and Melicocq were also taken by the Germans. This forced the French to withdraw their lines east of the Oise, south to a line about six miles north of and parallel to the Aisne river. South of the Aisne in the vicinity of Laversine the Germans, in an effort to create a diversion, attacked with five divisions under Von Boehn, which resulted in a gain of two miles on a three-mile front. This same day the French regained Melicocq and drove the Germans from the southern bank of the Matz from Marest to the Ouse.

On the 13th the Germans attempted to advance between Courcelles and Mery, also in the vicinity of Chateau-Thierry between Bouresches and Belleau, but were repulsed in both these attacks with heavy losses. This day's fighting practically ended the first battle of Lassigny and terminated the fourth great German offensive. This battle, although the Germans had superiority in numbers, was characterized throughout by the vigor and promptness of the French counter attacks executed by Mangin, and for the first time the Hutier tactic, which will be described later, seems to have encountered something suggesting a successful counter tactic.

RESULTS OF THE FIRST BATTLE OF LASSIGNY.

The battle of Lassigny did not change the strategic situation. It did result in a gain for the Germans of five or six miles of valuable ground between the two salients, but the Germans had failed to reach their objective, Compeigne, for about six miles. They had, however, widened the bases of the Amiens and Chateau-Thierry salients, and had accordingly greatly reduced the vulnerability of their lines, which was of great importance to them. On the other hand, twenty-odd German divisions contemplated for the use of Prince Rupprecht in his Flanders drive planned for August, had been exhausted, at least for the present time.

THE ATTACK ON RHEIMS.

The offensive directed against Compeigne having failed, the Germans on the 18th of June attacked with three divisions under Fritz Von Below at Rheims, between Virgny on the southwest of the Fort of La Pompelle, on the southeast of Rheims—a front of about ten miles. This attack, although encircling the First Colonial Corps of Mazillier on three sides, was repulsed. However, this failure impressed the German high command of the necessity of capturing the high ground to the south and southwest of Rheims prior to attempting any advance south of the Marne.

THE LULL.

After Von Below's effort to capture Rheims a silence covering a period of nearly one month fell along the western front, a silence broken only by local attacks by the Allies, and a comparatively unim-

portant but successful operation by the Germans in the vicinity of Albert. In the meantime, the Germans were preparing for their fifth major offensive, which was to be their last.

The Allies were content to have the Germans delay their next move, since each day from six to seven thousand men were arriving in France to reinforce the divisions of the American army.

THE GENERAL SITUATION PRECEDING THE FIFTH GREAT GERMAN OFFENSIVE.

A few words of the estimate of the general situation by the German high command at this time will be of interest: The Hungarian offensive in Italy had failed, and the situation was such that Italy could now send troops to assist the Allies on the western front; on the other hand material help from any reinforcements which Austria-Hungary might send to Germany could not be expected. The previous battles had left great gaps in the ranks of the armies, gaps that could not be filled, and last, but far from least, the civilian population were clamoring for a rapid conclusion of the war, and furthermore we find a certain element among the German people rapidly becoming disciples of Trotsky—some even preaching the doctrines taught by him. Military victory leading to a rapid termination of the war seemed to provide the only escape from the critical situation.

We should bear in mind that up to this time the main objective of the Germans had been to break through the Allied lines in Flanders and capture the Channel ports.

After the failure to capture Compiègne, a difference of opinion among certain members of the German high command seems apparent. Some time previous to July 15th the French had captured a letter that had originated in the German imperial household containing the statement that a heated discussion had occurred between the Kaiser, the Crown Prince and leading generals, whether to attack in Flanders or attempt an advance directly against Paris via Chalons.

Early in July the Germans realized that Crown Prince Rupprecht could not assume the offensive in Flanders before August, and in the meantime they realized it to be imperative that their armies retain the initiative. An attack in the Champagne, which was known to be weakly held by the Allies, was Ludendorff's solution. Such an attack, if successful, would obliterate the Marne salient, might lead to the evacuation of Verdun, thereby giving the German another railway line for their armies in France and possibly result in the withdrawal of Allied reserves from Flanders. On the other hand, if no attempt was made to reduce the Marne salient, the French occupying Rheims were in a position to launch an attack northward to the Aisne and out the Soissons-Neufchatel-Rethel-Mezieres railway, or to strike westward to Fismes, which would cut the Chateau-Thierry-Fismes railway, both of which were of vital importance to the existence of the German troops occupying the Chateau-Thierry salient. The Allies well realized the situation, and accordingly prepared for a German attack along this sector.

Foch, the Allied Commander-in-Chief, believed that the main attack of the Germans would be between Rheims and the Argonne Forest, and he realized that it would be necessary to defeat the Hutier tactic if the German advance was to be blocked.

THE HUTIER TACTIC.

What was the Hutier tactic? Foch defines it in a communication addressed by himself to his subordinates on June 16, 1918, at the moment when the successful answer was being formulated. It practically changed the character of fighting, and it was not until July 15th, after a period of nearly four months of its successful use which had resulted in great disasters to the Allies, that a satisfactory counter measure was discovered. The Hutier tactic represented the result of almost four years of study of the lessons of war by the best military leaders in Germany, and if the Allies had not found a means to successfully oppose it the Germans would probably have won the war. Foch's definition reads as follows:

"The German method of attack is characterized by surprise, violence, rapidity of execution, manoeuvre, and the extreme depth of penetration sought.

1. The surprise is obtained by the brevity of the artillery preparation (three to four hours) and by the transport to the place of attack of units to be engaged at the very last moment, the marches to the

front of the troops to be used being made by night and on foot.

Up to the night which precedes the attack there is not the slightest change in the customary appearance of the front; quiet reigns and the usual formations are in line.

The attack always takes place at daybreak, the Infantry being preceded by a barrage consisting of a strong proportion of smoke shells. As a result of the cloud effect thus produced, our infantry and our artillery only perceive the enemy when he is within a few metres of them.

2. The violence is achieved by the intensity of the bombardment, all calibres and every sort of shell being employed simultaneously on a depth of four or five kilometers and by the attack of masses of infantry which, during the artillery preparation, assemble at from seven hundred to a thousand feet before the first lines to be taken.

After the first lines are taken it lengthens out and spreads out, the units in advance aiming as quickly as possible at successive objectives, which have been indicated for them in advance, without having any pre-occupation for their own flanks or for cleaning up in their rear, to which task other units are assigned.

The designation of these successive objectives does not imply any halt at any of them, but merely provides landmarks showing the direction to be followed.

3. During the forward movement the infantry is protected by a rolling barrage of artillery, then by the light artillery and mienenwerfer, which accompany it. It also makes free use of its rifle fire and its machine guns.

If an infantry unit encounters an obstacle which it cannot take by its own strength, it halts and is immediately passed by units which support it, and these are charged with the task of taking the strong point which remains by enveloping it.

4. The Germans generally employ their best troops in the center of the attacking front in such a fashion as to give themselves every chance of obtaining a rapid and profound advance in the center.

The manoeuvre consists, first, in enlarging rapidly the breach thus opened, and then in attacking on the flanks of this breach.

5. The penetration in depth is obtained by the rapid and resolute march of the troops upon predetermined objectives situated far within the enemy's line. It has for its consequence a prompt disorganization of any defense not completely organized by taking from it the essential points of organization, which are its predetermined objectives."

FOCH'S PLAN TO OPPOSE THE HUTIER TACTIC.

Now we have Foch in consultation with Petain and Gouraud preparing a method to meet the Hutier tactic. It was simply this: it was arranged that at the last moment prior to the German attack between Rheims and the Argonne, the Allied army should draw back its main forces from the entire front, leaving only small forces to defend a series of strong points surrounded by wire and other obstacles. Behind this line of strong points there would be three or four miles of deserted territory, then the main body of the Allied would be organized in fixed defensive positions.

How well the Hutier method of attack was met, we can judge from the description of the fifth and last great thrust of the German armies, called by the German populace at home the "Peace Storm."

THE GERMAN PLAN FOR THE FIFTH GREAT GERMAN OFFENSIVE.

The attack was planned for July 12th, but delays in the preparations made it necessary to postpone it until the 15th. The plan was for the VIIth German army commanded by Boehn to cross the Marne between Jaulgonne and Verneuil, a distance of about twenty kilometers, gain the heights south of the Marne and then to push forward on both flanks of the river toward Epernay. Fifteen divisions were placed for the attack along a front of thirty-six kilometers. The Ist and IIIrd German armies commanded by Mudra and Einem respectively, were to attack on a forty-four kilometer front extending from Rheims east to the Argonne Forest. Fifteen divisions were disposed on the front line with ten in reserve. The city of Rheims was not

to be attacked, because it would naturally fall if the general attack was successful. These armies were to push southward to Chalons-sur-Marne and join with the VIIth army near Epernay.

THE ALLIED DISPOSITIONS TO MEET THE ATTACK.

The German Ist and IIIrd armies were opposed by the French army commanded by Gouraud; the VIIIth German army in the sector of attack was opposed by the Vth and VIth French armies commanded by Berthelot and Degoutte respectively. These French armies were opposed for the most part of tired or second line troops and were reinforced as follows: the fifth by one British and two Italian divisions, the IVth by the 42nd American division and the VIth by the 3rd American division.

It will be of particular interest to us to know that the 3rd Division occupied the south bank of the Marne from a point just east of Mezy to a point opposite Chateau-Theierry, while the 42nd Division entered the line near Somme Py.

THE ALLIED INTELLIGENCE SYSTEM.

Due to the excellence of the Allied intelligence System and the bravado of the German, the Allies were well aware of the enemy's plan of attack. In the latter part of June one of many French patrols had captured a German engineer officer and found in his possession the plans for the crossing of the Marne at Mont St. Pere and Jaulgonne; furthermore, about this time the German high command experienced great difficulty in keeping their plans from being discussed in the most irresponsible way throughout the army. While the commanders did their utmost to keep their plans secret, the desire to boast betrayed to the Allies matters of the greatest importance. Combined with the foregoing, the information gained by the air service was plotted, carefully studied, and the Allies knew on the eve of the attack the exact hour the Germans would advance.

THE TERRAIN.

The main feature of the terrain to the south of the Marne between Fossoy and Dormans was a low ridge of hills which commanded the crossings of the river. South of this ridge and extending east to Epernay was a dense forest, north of Epernay and covering a territory of approximately one hundred square miles was the Montagne de Rheims and the Bois de Coutron, a section characterized by a series of low wooded ridges which provided numerous excellent defensive positions for the Allies. The Marne river between Jaulgonne and Vernuil was about seventy yards in width, with a current of approximately four miles per hour. The valley of the Champagne between Rheims and the Argonne Forest is slightly rolling, being interspersed by small villages and vineyards.

THE BATTLE, FIFTH GREAT GERMAN OFFENSIVE.

At midnight Sunday, July 14th, the German artillery preparation commenced. In the sector west of Rheims the Allied artillery replied with such skill and accuracy in searching out the enemy's batteries and assembly trenches as to create dismay and confusion in many parts of the line. (For a detailed description of this phase of the battle see the 2nd paper hereafter).

East of Rheims the Hutier tactic was being applied by Mudra and Einem, while opposing it was that splendid tactician and soldier, Gouraud, to whom the carefully prepared plan of Foch had been entrusted.

Now remembering that the plan of Foch in this sector of the defense was to hold the front line positions with only small bodies of troops grouped in a series of strong points with the main army of Gouraud four or five miles to the rear, we can better visualize this section of the battle field.

Following the German preparatory bombardment, the German infantry advanced practically unopposed. They reached the line of Allied strong points which had been almost obliterated by the German artillery fire, when suddenly an unexpected and violent Allied bombardment, which swelled mightily each

minute, opened from the intact main defensive positions. The German infantry was caught in the maelstrom, their numerous tanks which they had assembled to assist in the attack were rendered useless. Valient efforts were made by the Germans to bring up their artillery, but no sooner would a piece arrive than it would be literally blown to fragments.

Swift counter attacks by the Allies prevented the Germans from reorganizing and making any material gains. They did gain ground north of Souain and Prosnès, also in the vicinity between Tahure and Massiges and they entered Prunay, but they had suffered severe losses in men and had failed to even reach the main French battle zone. On the French side only 3,000 casualties occurred and they did not lose a single gun.

The German advance in this sector of the battle field had been completely checked. During the night an attempt was made to reorganize for a continuance of the attack, but by noon the following day Ludendorff realized the hopelessness of the situation and ordered the 1st and 3rd armies to take up a defensive position. A quotation from Von Hindenburg's book in reference to the defensive measures applied by the Allies in this instance is of interest. It reads as follows:

"The enemy had obviously used this second position as his principal line of defense. Our most effective artillery preparations had, therefore, been practically without result. A new system of defense against the destructive effects of our massed artillery had been introduced and employed by the enemy—thanks to a German traitor, as the enemy subsequently announced in triumph to the whole world!"

On the 16th Boehn's army southwest of Rheims still battled on. The Germans had at least sixty divisions in reserve. If Epernay could be captured and the Montagne isolated, the failure of the Germans to the east of Rheims would be partially redeemed. All day Berthelot stubbornly resisted the German advance up the Marne valley toward Epernay, but by evening he had been forced back 4,000 yards with his center on the line Festigny-Belval. To the west the French counter attacked between Comblizy and St. Agnan, and won the ridge commanding the Marne, from which they were enabled to bring artillery fire on the German pontoons. Since the French now had gained a position from which they could command the Marne crossings, the situation assumed a most serious aspect for Boehn's eight divisions which had succeeded in forcing the crossings and were now fighting south of the Marne.

On the 17th hard fighting occurred on the upper Andre river, where the Germans were opposed by the Italian 11th Corps, and further progress was made by the Germans toward Nanteuil and at the Bois de Courton. The French center south of the Marne was forced still further up the river, but by night the French had recaptured Montvoisin and the high ground to the west as far as Festigny. Boehn realized the importance of recapturing the ridge commanding the Marne crossings, but his most desperate efforts in this direction failed, and on the evening of this day, the 17th of July, the Germans had succeeded in advancing only about six miles at the farthest points, and with the Allies commanding the Marne crossings, further effort was hopeless. The fifth and last great German offensive had failed, the high water mark of the German invasion had been reached.

(b) CRITICISM OF THE TACTICS EMPLOYED.

In reference to the battle of Lassigny, it is difficult to discover any feature of the operations which can be criticised. Ludendorff used the Hutier tactic which had proved its value in the three preceding offensive operations. As to the strategy, it was sound. It was essential that the dangerous features, i. e., the Amiens and Chateau-Thierry salients be eliminated before any major effort on any other part of the line could be attempted. Had he been successful he not only would have succeeded in reducing the salients beyond the danger point, but he would have established a new front from which to threaten Paris, and probably have caused the withdrawal of large Allied reserves from the front of Crown Prince Rupprecht, thus simplifying the great offensive against the Channel ports, planned for August, and which was at that time the immediate objective of the German high command.

In reference to the German operation of July 15-17th, there seems to be ample ground for criticism, and the following tactical errors are mentioned:

1. Failure to properly estimate the Allied situation. Ludendorff greatly underestimated the strength of the French reserves and the morale of the enemy.

2. The German high command had apparently changed its objective—from the Channel ports to Paris.

3. The energy of the attack, i. e., the application of the Hutier tactic, was too widely dissipated. It is particularly noticeable that Ludendorff's preceding offensives had unity of character. Each carried the German line closer to the Channel ports and Paris by creating great dents in the Allied line. Now the fifth differed from the preceding offensives in that the brunt of the attack did not strike the middle of a straight line. No central breach was made to enable fresh troops from both flanks to pour through, thus paragraph IV of this tactic as defined by Foch was ignored. In fact the advisability of the use of this tactic at all in the fifth offensive is questionable because it required long preparation and elaborate training of specialty shock troops, and, as we know, delayed the fifth offensive approximately one month, during which time the Germans knew that the forces of the Allies were being augmented each day by thousands of men from America.

4. Ludendorff failed to notice that in the preceding offensive the Allies had succeeded for the first time in partially defeating the Hutier tactic by a series of swift and determined counter attacks which prevented the infiltration and penetration in depth so essential to its success.

Ludendorff repeated the same venture as Kluck did before Paris in 1914. Kluck ignored the danger on his right flank from the direction of Paris. Ludendorff ignored the peril of an attack against his right flank of the Forest of Villers-Cotterets, and he did this because he had estimated just as Kluck had done, that the enemy was incapable of making any offensive thrusts, he had failed to realize the qualities of the master tactician, Foch, who opposed him.

(b) LESSONS TO BE DERIVED FROM THE STUDY.

1. That the flexible defense as conceived by Foch, especially when the enemy has a preponderance of artillery, is the best solution. Briefly stated, this defense is as follows:

First: Organization of the outpost line in depth.

Second: A highly complex use of artillery to break up concentration once it is located.

Third: A system of rapid counter attacks to check infiltration at the start. (An aggressive defense.)

2. Efficient intelligence service is essential to success. During these operations we have seen that east of Rheims, on July 15th, the Germans were totally unaware of the location of the main defensive position of the French army, and as a result the artillery preparation of the Germans had failed to even partially accomplish its mission, while on the other hand, the excellence of the Allied intelligence system had enabled Foch to checkmate his opponent at every move.

3. That the failure of the tanks on July 15th was undoubtedly due to the inability of the German artillery to counteract the effect of the Allied artillery.

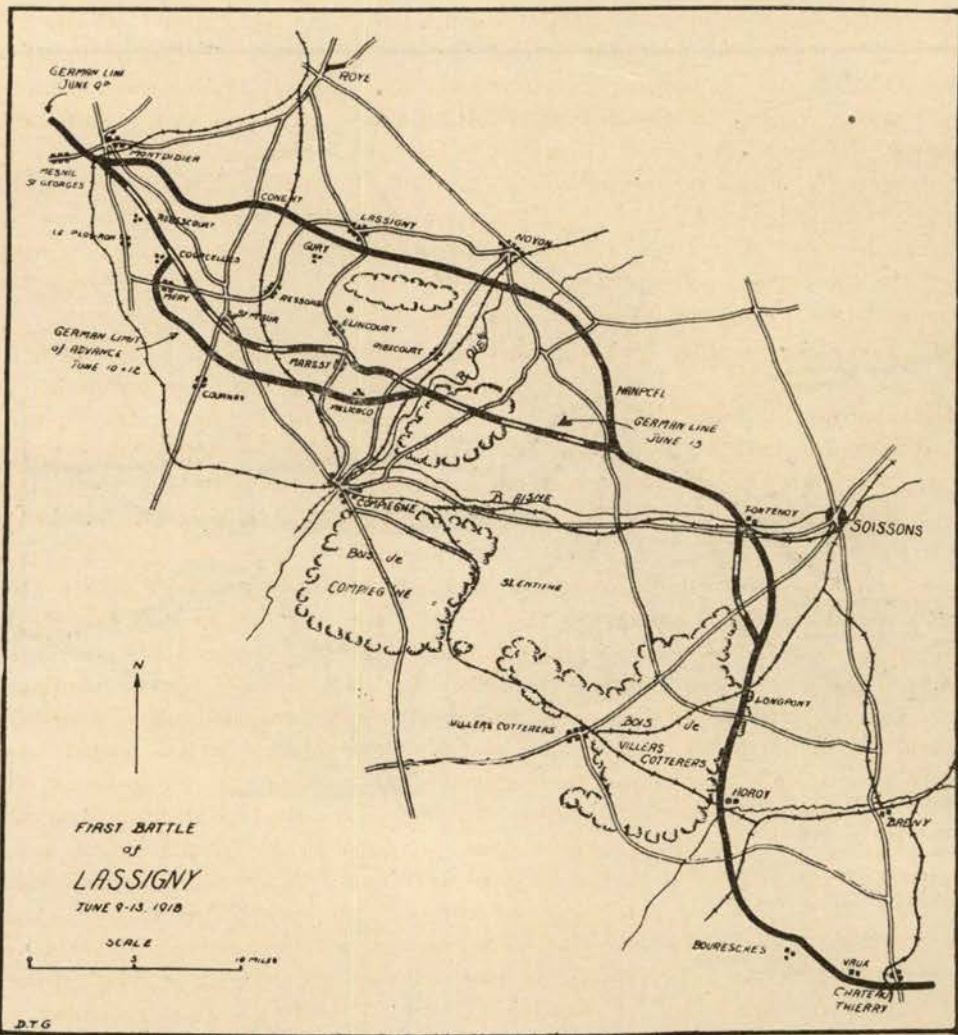
4. That the plans and intentions of a command must be guarded with the utmost secrecy.

CONCLUSION.

Ludendorff's strategy during the period covered by this monograph cannot well be criticised, as he made a choice, or rather followed a course of action which under the circumstances had been practically forced upon him. However, it is a reflection upon his generalship that he underestimated the initiative and resourcefulness of the Allies, and particularly their Commander-in-Chief, Foch. When he ignored the possibility of a determined Allied thrust against the exposed side of the Chateau-Thierry salient.

It is not so much the operations during the period, June 9 to July 17, 1918, as it is those operations which preceded the offensive of June 9th which are subject to criticism, i. e., the great German offensives of the Lys, the Somme and the Aisne-Marne, which created the dangerous positions occupied by the German armies on June 8, 1918.

References.—A History of the Great War, by Buchan; The Literary Digest History of the World War; The Strategy of the Western Front 1914-1918, by Sargeant; History of the World War, by Simonds; History of the A. E. F., by Thomas; Out of My Life, by von Hindenburg; Ludendorff's Own Story; The N. Y. Times Current History; The Encyclopaedia Britannica.



THE CHAMPAGNE DEFENSE OF JULY 14TH, 1918.

—By—

Major Woodell A. Pickering, Inf.

LOCATION OF FINAL GERMAN OFFENSIVE.

SECTION I.

Ludendorff must continue his attacks; must retain the initiative; must seek a decision this summer, before the advantage of numbers had been counterbalanced by arriving American forces; before the Allies could accumulate reserves to thwart his blows; before the Allies could wrest from him the initiative and offensive. Every military principle dictated this procedure. Increasingly compelling was the pressure at home. Victory, the German Nation must have and before the campaign closed. At the zenith of her military power the German army would now gain victory, or see a progressive decline set in that spelled nothing else but utter ruin. That magnificent military machine—the German Army—was still functioning at maximum efficiency. Promised victory in the spring—it still retained its esprit and morale and belief in invincibility, undiminished through four great offensives. Though eventually checked each time, the army knew that it was superior to the Allies. But the army wanted the matter settled once and for all. The Army wanted Peace—Victorious Peace. It was willing, nay, figuratively implored, for one final offensive to gain this end, and for this final offensive it was willing to put forth its supreme effort. And thus the high command promised the *Peace-Storm*—the final great battle that was to dictate terms of peace in Paris itself and return the war-worn German army home.

The point of attack for this *Peace-Storm*, therefore, alone remained to be decided. A study of the map indicates that the decision is practically automatic. True, Ludendorff, as he states in his Memoirs, may have desired to continue to push in between the French and British armies, against the British. Compelling reasons against this course existed, however—in the fact that the Allied reserves had been massed behind these fronts. Ludendorff's offensives had not attained their amazing success by striking the enemy when he was strongest; but by an unerring accuracy had he each time struck, not only secretly, but where the Allied line was weakest.

In the existent circumstances, the Champagne front seems almost to invite attack. In the first place, this front is, comparatively lightly held. It was largely from this region that French reserves were extracted and thrown in to stem the offensives of March and April; the constant need for reserves since that time had not permitted the strengthening of the forces of the IVth French army (Gouraud) holding the Champagne front. A break through in this front would cut off the railroad, Paris-Verdun, which supplied all of the Allied front east of Paris. A success such as that of the Marne in May would cut off Verdun and result in the capture of that important point with a consequent rolling up and isolation of all the armies, including the American, operating in that section. The gateways through Belfort and Epinal would be thrown wide open to invasion. The *Peace-Storm* would accomplish its purpose. An ambitious program, surely. But, it must be remembered that, for its accomplishment there was required no greater success than had already been attained in the two major offensives of the spring. And the Allied armies had found no answer to the German offensive tactics; the German army had now brought these tactics to their highest development, and could throw experienced, trained veteran divisions into this attack at maximum strength. Ludendorff had not yet failed in effecting a complete surprise; with the same resources at his disposal in the matter of threatening several fronts, there was no reason to believe that he would not be equally successful in a Champagne venture.

But the next and final offensive must perform one more object: Ludendorff is under the compelling necessity of widening his Marne salient. The map demonstrates the absolute necessity of this—without further elucidation.

The Champagne attack fits in admirably with the necessity of releasing this salient, because, combined with a secondary attack against this salient, it will not only accomplish this prime necessity, while attaining the ambitious plans of the German high command, but it will—and this is quite important—pinch out the Rheims salient, that French thorn projecting into the German calculation, and which, be-

cause of its natural and artificial defenses and concentration of troops, was impregnable to direct assault.

The combined attack on the two fronts of the Champagne and the Marne salients was, therefore, decided upon by Ludendorff.

SECTION II.

PLANS AND OBJECTIVES OF THE OFFENSIVE.

The VIIth German Army was to attack on the Marne salient from Chateau-Thierry to Bligny (about 15 kilometers southwest of Rheims) to the Aisne 25 divisions.

The Ist army (Mudra) and IIIrd army (Einen) were to attack from Prunay (13 kilometers southwest of Rheims) to the Aisne—25 divisions.

Junction between these two attacks was to be effected at Tours-sur-Marne.

Well within the interior lines of the Germans was an army under Eben of 60 divisions—termed the “Army of Pursuit”—which was to follow up when the front had been broken.

The offensive, planned by Ludendorff in the most meticulous detail, was under command of the German Crown Prince. The Marne divisions were mostly, and the Champagne (Ist and IIIrd armies) divisions wholly, fresh, at full strength, fully trained, completely rested veteran divisions of the previous offensives.

The objectives assigned these two groups of armies evidence the confidence of the German high command in the irresistibility of their tactic and manoeuvre. On the first day the Marne (VIIth) army was to reach the Marne river up to Epernay and effect junction with the Champagne (Ist and IIIrd) armies on the second day at Tours-sur-Marne.

The Champagne group (Ist and IIIrd armies) was to reach the line Marne-Chalons-St. Menehould by the second day. Indeed, maps found on dead German officers indicated this line as the first day's objective, but the French high command deduces that the first day's real objective of the Champagne group was the general line Verzy-Vesle river-Noblette river-Somme-Bionne river to the Aisne.

The effect of this accomplishment was to be the elimination of the Rheims salient, capture of Epernay and Chalons in the first two days of the offensive. Detailed plans were made for the occupancy of Chalons and the German service of supply had determined upon the distribution of the army supplies stored there. The subsequent exploitation rolling up the French and American armies to the east and cutting off the French and British line to the north—incidentally capturing Paris and dictating peace.

Paris, incidentally, became of course the German objective, was always the destruction of the field armies of the Allies.

In connection with the plans and objectives of this final offensive—this *Peace-Storm*—it may be well to review the characteristics of the tactic employed—a tactic that had, so far, baffled the military minds of the Allied high command—and the tactic upon which the German counted for the success of his ambitious objectives. All histories of the war are replete with the details of this tactic, but for the sake of completeness in this paper they may be briefly summarized here. This particular tactic has been characterized by one historian as:

“Representing the fruits of almost four years' study of the lessons of the war by the best brains of Germany, and it almost won the war for its authors.”—The word “almost” may be translated into “Gou-raud's Fourth Army.”

It is characteristic that before applying this method of offensive on a grand scale against the western Front, Ludendorff had tried it out on inferior foes and on the Western Front on a small scale. Hutier, who gave the tactic its name, had used it successfully in the capture of Riga in the autumn of 1917. It was used against the Italians at Caporetto. Finally it was employed against the British at Cambrai, “bringing off a huge success, and after an undeniable surprise.” Reduced to its essential elements this famous tactic may be expressed by the following characteristics:

1. *Surprise*.—In a stabilized warfare which had apparently eliminated this fundamental principle of military success, this tactic suddenly injected it by concentration of large forces against the point of at-

tack secretly. This necessitated an army under the most stringent discipline. Even with this admitted factor, however, the success of the Germans in this respect still remained the marvel of the military world.

2. Overwhelming superiority of artillery and an intensive but short concentration, with liberal employment of gas. The assembly of this artillery, as with the infantry, was a corollary of (1) above.

3. *Infiltration*.—Throwing in of masses of infantry, in small groups, who pushed ahead regardless of flanks—these were to be cared for by supporting troops. Strong resistance passed by—held by rear troops and enveloped by advancing troops.

4. Accompanying weapons, liberal use with assaulting battalions of accompanying artillery which pushed constantly to the front; of heavy machine guns; particularly of light machine guns and trench mortars.

Overwhelming of the enemy first line by artillery and trench mortars close following of rolling barrage by infantry supported by weapons in (4) which enabled a rapid and deep penetration. The enemy artillery positions were invariably the *minimum* objective.

6. Exploiting and spreading out the rapid penetrations made by leading elements.

7. A never before equaled liaison between all elements of the attack.

Such, in brief, was the tactic by which Ludendorff had achieved his unparalleled success; a tactic to which the Allies had found no adequate answer; a tactic that was to bring to a successful conclusion the *Peace-Storm* and dictate terms of peace in the Allied Capital.

SECTION III.

THE CHAMPAGNE FRONT.

As this paper is concerned with the brunt of the final German offensive which fell in the Champagne front, it may be well to glance for a moment at this section of the battle line of the western front.

The military geography of this sector is most interesting, but not essential at this moment to this study. The student interested is referred to Johnson's "Battlefields of the World War," pages 252-268. The Champagne has been historic military ground from every age. It was here that Attila's hosts were turned back. Valmy, of the fifteen decisive battles of history, was in the area of the 8th Army Corps, holding the right of this front.

The Champagne front was originally established by the line taken up by the Germans in their retreat of September, 1914, and this line was chosen with the usual German thoroughness. As originally established by the Germans, it had held practically without change save a few kilometers.

It was in the Champagne that Joffre launched his offensive in 1915 that engaging 63 divisions and losing 180,000 men with but meagre results, paved the way to his retirement.

In the Champagne in 1917 Nivelle's grandiose offensive collapsed and resulted in his speedy elimination.

The Germans, realizing the impregnability of position, had never attempted an offensive in this theatre.

It was the opinion of the French high command (1918) that the Champagne front was the most strongly fortified area in the world, on both sides. In view of this fact, it may be well questioned here as to how the Germans hoped to conquer this formidable territory by an offensive in July, 1918. The answer in this: The Chemin-des-Dames, a more localized area, presented natural barriers even more formidable than those in the Campaign proper; and at least as well organized; and a terrain that had been as bitterly contested. Yet, on May 27th, the Germans, by the application of this new offensive tactic, had completely overwhelmed and conquered this apparently impregnable Chemin-des-Dames in less than one day! And Ludendorff's valuation of terrain impregnability at this period is well illustrated by his contemptuous: "Terrain! My tactics were not defeated by the Alps. (Coporetto)."

In the French army the "Champagne Front" was always taken to mean an assignment to a very lively sector. The strategical and tactical points of "Butte des Mesnil" and "Main de Massige" (mentioned later herein) when mentioned will always invoke comment from an officer of the French army. These two points were pre-eminent in the French military mind, and the battles incident thereto cost many thousands of French lives. The Champagne front, as a whole, and particularly in the vicinity of these two adjacent points, was

always known as "very active." And this was a true characterization. The Champagne Front, held by the IVth French army, extended from Prunay on the west to the Aisne (Argonne Forest) on the east, with army headquarters at Chalons.

SECTION IV. COMMANDERS.

German.—The detailed planning of this vast combat was the personal work of Ludendorff, and was to be executed under the direction of the German Crown Prince. The latter was here to retrieve all the lost prestige of Verdun and by winning the war re-establish the supreme prestige of the dynasty.

The execution of the attack on the Champagne Front was entrusted to two chosen army commanders.

Einem, commanding the IIIrd army.

Mudra, commanding the Ist army.

Einem had commanded the Champagne Front ever since 1915, when he had greatly distinguished himself in repulsing the several French offensives. During the following three years he had maintained the integrity of his front and was highly esteemed by the German high command. Mudra had commanded an army in the Chemin-des-Dames success and had just been placed in command of the German Ist army for the particular purpose of the coming offensive; he relieved Below of this command.

French.—Firstly, of course then, was Foch (age 67—Artillery), the Generalissimo of all the Allied armies. As he was the ultimate authority there fell upon him the responsibility for the disposition of the forces available to the Allies. Petain (age 62) was the Commander-in-Chief of the French army, as was Haig of the British and Pershing of the American. By the French army Petain was regarded as their best military mind. Petain's rehabilitation of the French army into an effective fighting force, after the Nivells debacle of 1917, is regarded by those who know as one of the supreme accomplishments of the war. Petain had achieved many successes; he had never suffered a defeat. If Petain made a military error history does not reveal it. This is, perhaps, sufficient to fix his place in history. But there remains one quality that must endear him to every soldier: Loyalty. He, perhaps, felt that he should have been selected as the Generalissimo of the Allied forces. He *knew* that he was the choice of the French army for this position; to the extent that he was even visited by a delegation of influential French officers who, from patriotic motives, urged that he insist upon such selection. To his eternal credit be it said that he acquiesced completely in the selection of Foch, and, from that moment, rendered one hundred per cent. loyal subordinate service. Even his most captious critics—and he has many among the writers of the war—grant him that soldierly quality.

But it is Gouraud (age 51) with whom we are particularly concerned. Gouraud, Commanding General of the Fourth French Army holding the Champagne Front. Like Petain, Gouraud was an infantry officer. He was a *combat* general, as his many wounds mutely testified. When he was given the command of the IVth army, in 1917, he had lost an arm in combat and his body was so shattered by wounds that he was always—day and night—swathed in bandages; and this condition of physical suffering continued undiminished throughout the events covered by this paper. But the keen military intellect of this soldier retained always his ascendancy over the mutilated body. It was to this "Lion of the Argonne"—a title gained in the fierce forest fighting of the early days of the war—that there was entrusted the task of demonstrating that the Allied military intellect was equal or superior to that of the German War Machine. Of course to Foch and his task fell the task of developing the major principles for combatting the Hutier tactic. To Petain fell more details. But the essence of both was: Echelon in depth. And the Gouraud army (under Petain) had already been thoroughly indoctrinated with this principle early in 1918 before the opening of the German offensive. Upon these general—very general—principles of the high command was it incumbent upon Gouraud to formulate the multitudinous and minute details of defense against an attack which had never yet been stopped short of six days, many miles of penetration, thousands of prisoners and hundreds of guns. Unless Gouraud could prevent a similar success the war was lost. Fortunately at this crisis Gouraud had surrounded himself with what was probably one of the most efficient army staffs in history. Buchan in his "A History of the Great War" characterizes Gouraud as . . . not only a paladin of chivalry but

a great and wily tactician." He was all that and more. Above all, he possessed, to an absolutely pre-eminent degree the essential quality of leadership. Of all the commanders at that time in the Allied and German armies probably none surpassed Gouraud in that vital element. He possessed the supreme confidence of the officers and men of his army; he was worshipped by his "poilus." The tide of pessimism that engulfed all the Allied forces (except the Americans) as a result of the staggering defeats from March to June had left the IVth army entirely untouched. When the enemy storm broke against the IVth French army on July 15th, the morale of that army was probably at a higher level than any force in the war at that time; and this does not except the victorious German army plunging on to its expected final victory—its *Peace-Storm*.

It is doubtful if any other commander in the allied forces could have accomplished Gouraud's maneuver without irreparably breaking the morale of his forces.

Visualize: Upon Gouraud was placed the responsibility of stopping the hitherto always-successful and "unstoppable" German tactic. The primary essence of this tactic was *surprise*, an element that is generally conceded almost exclusively to the offensive. Gouraud's answer was the almost unthought of "Defensive Surprise." Surely, no mean task in itself. But when this defensive surprise involved the withdrawal from and voluntary abandonment of bitterly contested for positions, the possession of which had cost many, many thousands of French lives, and had terminated the military career of two French Commanders-in-Chief, it must be conceded that the IV Army Leadership was subjected to a supreme test. It is to Gouraud's enduring fame that his Army responded to this fiery test and with a morale that, instead of being weakened, was heightened to the maximum. Every officer, every soldier had full confidence that Gouraud was right, that their General would win. A confidence that was gloriously vindicated.

I would that space permitted quoting and commenting upon Gouraud's Orders of the Day prior to and following the battle; and of the military epic when he assembled his principal officers and two thousand of his poilus at a luncheon to express his soldierly admiration and appreciation of their heroic defense. The record of the simplicity of these events affords a classic that might well be handed down to the American Army.

As of interest in this paper, there remains the identification of the two French Commanders particularly concerned with the recital of events which follows:

General Hely D'Oisel commanded the 8th Army Corps of three divisions, holding the right of Gouraud's line; from the Argonne to include the Butte des Mesnil. In appearance the beau ideal of a soldier, D'Oisel was literally the strong right arm of Gouraud's battle; and he possessed a chief of staff who was the very incarnation of French military efficiency and courtly graciousness.

General Lebouc commanded the 161st Division, holding the left of the 8th Army Corps. In Gouraud's galaxy of preeminent Division Commanders none surpassed the commander of the 161st to whom his army Commander was later to entrust the spear head of the attack that was to break the Champagne Front on September 26th.

SECTION V COMBAT ORGANIZATION.

It may be pertinent here to briefly review the combat organization of the opposing armies:

FRENCH.

Division.—Approximate strength 12,000-15,000. Division headquarters; three (3) infantry regiments; one regiment field artillery (75s); three battalions; one battalion of heavy artillery (155); trench artillery (variable); sector machine guns (variable); one company of engineers; one troop of cavalry; medical units.

The infantry functioned under a commander of the infantry of the division (I. D.) who was a colonel; practically same as a brigade commander.

Infantry Regiment.—Approximate strength 2800; headquarters company; one-pounder platoon; three battalions; trains.

Battalion—Approximate strength 700; battalion headquarters; three rifle companies; one machine gun company.

Rifle Company—Strength 190; four platoons; each platoon four squads.

Machine Gun Company—Strength 120; two platoons; each platoon two sections; each section three machine guns.

Besides there was maintained in each division a center of instruction (C. I. D.) which functioned as a training center and was in continuous operation. The theoretical fourth rifle company of each battalion was stationed here and consisted of a nucleus only.

GERMAN.

The German organization was almost precisely the same as the French, including strength.

There was the division consisting of three infantry regiments under a brigade commander; a regiment (3 battalions of light artillery); a regiment of trench artillery; a detachment of cavalry and the sector artillery, normally six battalions of heavy.

The infantry regiment (about 3,000) had three battalions; each battalion (880) consisted of four rifle companies (each 190) and one machine gun company (130). Each rifle company had six light machine guns and each machine gun company twelve heavy machine guns. Each battalion also had two trench mortars.

In the offensive of 1918 there was always an overwhelming concentration of artillery on the front to be attacked. This attack artillery was commanded by the same officer in each of the five offensives.

Extensive use of accompanying artillery was made and was considered by the Germans a vital feature of their tactic. One battalion was assigned to each assaulting regiment which assigned one battery to each assaulting battalion and retained one battery. Elaborate preparations were made for getting these guns forward with the attacking infantry.

In these offensives the stereotyped form of attack was: Corps had two divisions in assault and one division in reserve. Division had two regiments in assault and one regiment in reserve. Regiments had two battalions in assault and one in reserve. Battalions had two companies in assault and two in reserve. Companies had two platoons in assault and two in support.

SECTION VI.

PROBLEMS CONFRONTING THE ALLIED HIGH COMMAND.

While Ludendorff is training, rehearsing and concentrating his divisions and artillery, for his last offensive, we may consider the problems confronting the Generalissimo of the Allied Armies, the French high command and the Gouraud armies.

In all wars the essential condition of victory is the concentration of superior numbers at the decisive point. To achieve this essential the necessary condition is always secrecy. This secrecy in turn produces surprise.

Upon this fundamental and immutable principle of war was the German tactic based. In the highly organized warfare of the western front Ludendorff had been able to arrange this *sine qua non* with a success and precision that was nothing less than amazing. The bitter lessons of the May 27th offensive in the Chemin-des-Dames was a flaunt, a challenge to the brains of the Allies.

Therefore, to circumvent this basic policy of Ludendorff, was the primary, all-compelling necessity of the Allies. The fact that the Champagne was the logical point of attack gave no reassurance, as witness this same debacle in the Chemin-des-Dames, when Foch's genius, placing the logical attack elsewhere, had been completely outwitted by Ludendorff's putting it on in a most "illogical place."

The Allies might establish this "decisive point" chosen by the enemy. To this end every possible resource of the Allied armies must be applied. The highest command, the French High Command, would bend every effort to accomplish this. But it was to the army commanders in the field that the principle trust must be given of definitely establishing for their fronts the existence or non-existence of enemy concentrations.

Having established the "decisive point," there then resulted the necessity of moving supports to this point. And Foch's reserves were so small at this time that he could not support more than one front at a time. It required a delicate balancing of judgment. On the one hand, if he delayed too long, his effort was fruitless. On the other hand, if he reinforced too early, the enemy with his interior lines could shift the decisive point to another sector from which all support had been withdrawn.

An error of information as to the decisive point, an error of judgment as to the time of reenforcing, would spell disaster to the Allied cause.

The decision having been reached as to the decisive point, the order having been given for placing of supporting troops, there still remained the equally important factor of devising a tactic to meet the hitherto invincible German technique. With Petain and Gouraud as consultants, Foch enunciated the principles upon which the Allied defense was to be based. Buchan, in his "A History of the Great War" (page 272), gives an excellent *résumé* of these:

1. Organization of the outpost in great depth so that the enemy's first shock might expend itself in the void.

2. Highly complex use of artillery to break up a concentration once it was located.

3. System of rapid counter attacks to check infiltration in the start.

The principles of this technique were, after all, rather obvious. It was the detailed elaboration of these principles as worked out and applied by the army commanders attacked which was to result in success or defeat.

The fate of the Allied Nations then, in the period from June 1st to July 15th, depended upon the success of the Allies in each of these vital and momentous factors:

1. Determination of the front to be attacked.

2. Reinforcement of this front at the correct moment.

3. Formation and application of a correct tactic to frustrate the Hutier tactic of offensive.

In the following sector we will follow Gouraud's solution of these three critical factors.

SECTION VII. GOURAUD'S SOLUTION.

Gouraud's solution of the tremendous problem confronting him may be considered under two phases: The first phase comprising the first two of the vital factor mentioned in the previous section, namely:

1. Determination of the front to be attacked, and (2) reinforcement of this front at the precisely correct time:

The second phase involving the formation and application of a tactic of defense that would successfully meet the Hutier tactic.

FIRST PHASE.

The problem confronting the army commander here was to determine:

First—Whether or not his front was to be the "decisive point"—the front to be attacked by Ludendorff. If this was determined in the affirmative, Foch could then release troops for his support.

Second—the date of such an attack. This established, he could then arrange the entry of the supporting troops so that they would be in position when needed.

Ludendorff's success in surprising the Allied Commanders as to his point of attack had each time been accomplished by an unparalleled and almost unbelievable secrecy of concentration and maintenance of normalcy on the selected front.

Gouraud's solution of this intricate problem was an unparalleled and almost unbelievable intensity and efficiency of combat intelligence.

Incidentally, it may be remarked that it was unofficially reported in the army that the highest com

mand had, early in June, through accomplished treachery of two German officers, been made cognizant of the Ludendorff plan to attack on the *Champagne Front* in July. The writer has nothing to substantiate the authenticity of this report; but it was commonly believed.

Primarily the IVth army initiated and continued the most intensive and extensive aerial reconnaissance, employing all the aciation units of the army corps and divisions incessantly, without rest, by day and by night. With the result that early in June the army commander was enabled to decide definitely that there existed the possibility of a great offensive in the Champagne front. These evidences multiplied so that in the latter part of June this possibility seemed a reasonable certainty.

An important link in the chain of intelligence being forged by Gouraud was found in the following fact: The accumulation of artillery and the tremendous amount of ammunition required for one of these offensives consumed on the average about six weeks. The German could hide his accumulations so they were not visible. But he could not hide them from the searching artillery fire of the French army. Day after day from early June, and in increasing numbers as July 15 approached, ammunition dumps on the German lines were blown up; sometimes two and three could be seen burning at the same time. And always without invoking any retaliation from the German guns. This significance was conclusive.

Now, in late June, began the second stage of this intensified combat intelligence campaign. In order to definitely establish the intention of the enemy, the army commander issued instructions directing an intensive series of raids throughout the entire front. These raids to be made by specially selected and trained troops in each unit; the number specified resulted in a minimum of one raid per day by each corps; which meant that each division was executing two highly organized raids every week. The imperative mission of each raid was to capture prisoners and they were required to effect sufficient penetration to accomplish this end. A volume could be written on these minor battles alone. Follows a summary of the information obtained:

1. June 28th, prisoners captured gave the first definite information that an attack on the Champagne front was imminent, but did not fix the limits or the date. It is of interest to note that the first definite authoritative information of the attack was obtained from prisoners captured by the 161st Division, whose detailed history of the battle is given in a subsequent part of this paper.

2. June 29th: Prisoners had knowledge of the imminence of the Champagne attack.

3. July 2nd: Same as June 29th.

4. July 6th (16th Division of 8th Corps), captured thirteen prisoners who confirmed the projected attack.

On July 7th, Gouraud issued his famous "Order to the French and American soldiers of the IVth Army," announcing to the troops that *The Battle* was imminent; that all necessary measures had been taken, and calling upon them to prepare to break the assault.

5. On July 10th prisoners captured by four different regiments gave the first exact information of the attack:

(a) To be launched on the 14th or 15th of July.

(b). The front comprised all the area of the IVth Army. In addition to this general information these prisoners gave the precise details of the preparations made by their units for the offensive.

6. July 11th (161st Division) and July 12th and 13th, prisoners were taken by four different regiments who confirmed in even more precise detail the information already obtained.

In view of the certainty the army headquarters issued the order for all units to each night take up their combat positions; without, however, entirely skeletonizing the to-be-abandoned first position until the final code word had been issued.

7. Finally, the crowning effort of all these raids was accomplished at 9:00 P. M. of July 14th, when twenty-seven prisoners were captured with the vitally important information that the grand attack was to be launched in a few hours; the artillery preparation was to begin at midnight and the infantry assault at 4:00 A. M. of the 15th. This capture was effected at 9:00 P. M. on a front far distant from army headquarters. So rapid, thorough and systematic was the service of intelligence and liason that the information

gained was obtained, digested and evaluated by the regimental, division, corps, and army headquarters, the decision made by the latter and the definite signal of execution of the battle orders issued and received by the most distant front line units at 11:30 P. M., with the code word "Francois 570" Gouraud sprung his trap, that in twenty-four hours was to smash to smithereens the German dream of victory. That within three days was to produce the historical phrase of Palmer ("America in France," page 333):

"We did not dash the cup of victory from his (the enemy's) lips—we smashed it into splinters in his face!"

At 11:45, twenty-five minutes before the German's opening blast of artillery, every gun of the Fourth French army was pouring its hurricane of shells into the amazed and bewildered ranks of the two German armies concentrated for the attack that was to win the war.

The first two of the three vital elements essential to halting the victorious march of the German war machine had been accomplished by Gouraud. In this accomplishment, the French Fourth Army had matched brains with the Great German General Staff, had matched poilus with the victorious German soldiers supremely confident of their superiority. And the French Fourth army had won! Gouraud had definitely determined that the attack was to be made on his front and had determined the date of the offensive.

But with these tremendously valuable accomplishments, with the elimination of the surprise feature of the attack, with the certainty of having reinforced the threatened front—even then could Gouraud defeat the invincible German offensive tactic? Could even his reinforced army successfully meet this situation? Ludendorff did not believe it could; the German army felt itself to be invincible still. A more than negligible quantity of the Allies feared it would be impossible. The French Fourth army *knew* that it could. Gouraud knew it could, and so did Petain, and probably Foch.

The second phase of Gouraud's solution will be discussed in the two following sections of this paper.

SECTION VIII. THE GOURAUD TACTIC.

It is now proposed to demonstrate the general principles of the Gouraud tactics by showing their application to a typical corps front—that of the 8th Army Corps—and in the following Section IX by a detailed narrative of the operation of a typical Division (161st Division of the 8th Army Corps) to show the execution of the minute details of this tactic.

Preliminary to discussing the tactic formulated by Gouraud it should be remarked that the Fourth Army had been making intensive studies of the German offensives from the beginning. Conferences were the order of the day—even though the front of this army was always highly active. With each batch of information received the army commander conferred with his corps commanders, the latter with their divisional commanders, who in turn assembled the regimental commanders and the last named passed down the accumulated knowledge to the regimental officers. As early as May 8th the IVth Army Staff had disseminated a printed pamphlet compiled from captured enemy documents, showing in the most minute detail the German plans employed in the offensives of March and April. This included the detailed plans and maps issued by all units to include a company. The details of training squads, platoons, companies, battalions and so on were given from the original German documents themselves. Bulletins of information giving details of later operations were issued at frequent intervals. So that, long before July 15th the officers of the IVth Army knew exactly what to expect when and if the German offensive machine was turned against them. All the brains of the army were thus concentrated on the problem of how to meet this tactic. When the time came for Gouraud to formulate his tactic of defense there was no minutiae of the problem which had not been fully considered in all of its possible potentialities; every phase of the Hutier tactic was provided for.

The Champagne front comprised the following elements:

First Position—Which was that nearest the enemy—highly organized and held by the forces of the army, normally one battalion of each regiment in sector.

Intermediate Position—A few kilometers in rear. This was a relatively new line, and was normally occupied by the support battalions. It was not now a continuous highly organized position—in some sections were

few trenches and no emplacements. In other sections it was more completely organized.

Second Position—Some few kilometers in rear of the intermediate. Practically continuous and well organized, by reason of the fact that this was the position occupied by the French army prior to Joffre's offensives of 1915. There was normally no garrison for this position. The third or "rest" battalion of the regiments in sector were quartered in the ruins of villages in rear of this position.

These three positions by virtue of being all connected up by a maze of continuous boyaux constituted practically one large fortified area.

Third Position—Still further in rear was the third position—thinly organized—practically a continuous trench system of two or three parallel trenches.

The normal scheme of defense was contemplated, in the event of attack, the occupation by the sector troops of the first position. The occupation of the intermediate position by supporting troops available to the corps. Similarly with the second position by the reserve troops available to the army. These three positions must hold while G. H. Q. was transporting reinforcements to occupy the third position.

Now the defense tactic of Gouraud was based upon the fundamental principle of war requisite to success, namely, *surprise*. Having first penetrated the veil of secrecy thrown over Lunderdorff's concentration, he was to counter by the defensive surprise.

He deliberately chose to abandon his first position—the most strongly fortified of all—but where the enemy expecting to find him would make the greatest effort. He chose as his battle ground the intermediate position—which was to be, in the intervening time, even more strongly organized than was the first position. This plan involved, of course, the necessity of making the withdrawal from the first to the intermediate position with absolute Secrecy else the enemy would simply ignore the former and concentrate his attack of penetration on the newly chosen battle ground. This meant that the occupation of the first position must continue normal in all respects up to the moment of attack. Not only did common prudence dictate this course, but captured enemy documents carried instructions for each German divisional commander to insure daily that the enemy had not withdrawn from the fronts to be attacked. So, in the final analysis, the complete success of his tactic depended upon his combat intelligence to determine the time of attack. The confidence of this commander that, with his staff and troops, he would be able to accomplish what no other commander had succeeded in doing—determining the date of attack—was superb. The time of attack being ascertained, the troops of the first position were to be withdrawn under cover of darkness before the morning attack to their combat positions in the intermediate position. Small sacrifice elements were to be left in the parallel of surveillance of the original first position; and slightly larger detachments in the line of redoubts of that position; both to simulate normal occupancy; the former to signal the advance of the enemy; the latter to slow up and break up his final attack, and then to be withdrawn to their battalions on the battle line.

One other highly important item in the surprise effect: Regardless of how much reinforcing artillery could be provided for this front, it was certain that the enemy would mass a superior force. The experience of previous offensives had demonstrated that the surpassing accuracy of the Germans in locating the Allied gun positions had resulted in the immediate paralyzation of their artillery, thus depriving the infantry of this essential support at the most critical moment. Great quantities of reinforcing artillery were poured into the Champagne. But these guns took up positions secretly—carefully camouflaged and did no firing; they were "mute"; the continuous heavy bombardment of the enemy lines increased from early June to the day of battle, was executed, in general, by the artillery already in position in sector. True, the Germans had been doing precisely this thing in their offensives and had developed the technique of firing without registration to a marvelous degree. But the utter amazement of the Germans at the overwhelming artillery hurricane that met their infantry advance, when all previous advances had been met with a feeble artillery response, would indicate their belief in the possession of a monopoly—that the French could not apply this method. It is of interest to record that in one division every single battery that had done any firing was neutralized before the enemy launched his infantry attack; but the "mute" batteries fulfilled their missions completely. In other divisions the firing batteries had prepared alternate positions or were simply run out in the open.

Early in June, work was begun upon the intermediate position to convert it into a stronghold capa-

ble of withstanding the tremendous shock of the 1918 brand of German offensive. Every available man was utilized in pushing this work by day and by night without respite. The support battalions were engaged as well as the rest battalions—of the latter there ceased to be any such until after the July battles. All engineer units and every auxiliary, including medical troops, were used to the utmost.

It is of interest to state that there was, additionally, at the disposal of the Gouraud army for this purpose an Italian army corps who, having misbehaved in the Caporetto disaster of October, 1917, had been deprived of their arms and sent to the French front as labor troops. The army corps and division staffs were in front line continuously organizing the defensive scheme. The whole IVth army, without exception was a veritable host of laborers in creating an impregnable fortress. The scheme of machine gun defense probably reached its peak of development in this newly created position. The entire front was so wired and obstructed that any and all advancing enemy must perforce traverse area after area completely swept by machine guns. The question of shelter received most skillful attention. Secure in the warnings of advance to be given by the devoted detachments left in the first position for that purpose, the entire garrison of the battle position—personnel and material—was to be "buried" safe from the heaviest shell fire until such time as the advancing enemy infantry caused his artillery to lift, when they would emerge unscathed to meet the attack. Dugouts, 25-40 feet deep, into which the machine guns were lowered; bomb proof shelter for the elements occupying the first line of the new position; immense subterranean shelters capable of housing a whole battalion where were the troops for counter attacking.

Well could Gouraud say to his soldiers, in his famous order of the day issued on the eve of battle:

"You will fight on a field which you have transformed by your labor and your tirelessness into a redoubtable fortress. This fortress will be impregnable."

Meantime Foch and Petain had set in motion the reinforcements for this front, after Gouraud had made sure he was to be attacked. Infantry and artillery were poured into the Champagne, and the meticulous staff work of the IVth army headquarters was able to match Ludendorff at his own game of secretly massing of troops—no small achievement—accomplished by similar methods of movement only at night and concealment by day, the general aspect of the rear area presented a normal view to the German aviation.

Here a division was able to withdraw its left flank regiment due to the shortening of the line incident to the rear position; and withdrawing its right flank regiment placed both of these on the second position, thus effecting its own reserve. A newly arrived division being put on the right.

Here a division maintaining a frontage equal to its old one was reinforced by two new regiments in the second position. Machine guns in vast numbers were brought in all reserve stocks of the entire French army were drained to furnish them. Shortly before the French army had had to reduce the allowance to each regiment in order to provide the American Army with these weapons. All available St. Etienne guns were placed in position. These guns, inferior to the Hotchkiss, were yet valuable in a fixed defense when handled by skilled personnel and every machine gun possible was needed.

Gouraud could send this assuring message to his soldiers in the Order of the Day referred to:

"We may be attacked at any moment. You know that no defensive battle has ever been engaged under more favorable conditions. We are forewarned and on our guard. We have been strongly reenforced in infantry and artillery".

The French were under no illusions as to the momentous issues involved in the coming battle. Fruthtingham ("A Guide to the Military History of the World War", page 262) echoes the opinion of most historical writers:

"This assault was the most dangerous of the war as it was the final concentrated effort of the military strength of Germany".

For once these historians are in accord with the authorities competent to judge. The French High Command emphatically regarded this fifth offensive as the critical operation of the war. Success here, for the Germans, unequivocally lost the war for the Allies. Foch's plans for Victory, already formulated, were absolutely dependent upon Gouraud's Army holding the Champagne front.

Clemenceau had safely remarked that that side would win which could hold out for the last quarter

hour. The last quarter hour of holding had now come. In this supreme crisis the French had exhausted every resource within their capability. They, of necessity, staked everything on the outcome of this battle. The line must hold. There was to be no strategical or tactical retreat. Without flamboyancy the order was issued that every man must die at his post, there would be no withdrawal. Every officer and soldier understood this. And under the Inspired leadership of Gouraud and his splendid Generals they were prepared to do this. From the writer's close, intimate association and critical observation of the troops at this period, it is his deliberate opinion that had the Germans broken through the Champagne Front it would have been over the annihilated Fourth French Army. And a world would have been awed at the magnificence of the French officers and the devotion of the French poilus.

Happily, French military genius, the capacity for infinite pain and prodigious labor, averted any such sacrifice.

Before proceeding to the detailed history of the Battle as exemplified by a typical Division, let us briefly summarize the elements of the Defensive Surprise which Gouraud had devised for the Hutier tactic and which disposed of that menace once and for all:

(1) The opening of the French counter artillery preparation twenty-five minutes before the German began his bombardment. A counter preparation that rained mercilessly upon the enemy front line trenches jammed with adequate shelter, the losses inflicted were enormous.

(2) The heaviest firing of the German artillery, trench mortars, and projectors expended upon the empty First Position.

(3) Infantry attack launched against "the air" of the abandoned First Position.

(4) Infantry attack met by an annihilating artillery fire from supposedly silenced guns.

(5) The attacking infantry with the force of its shock spent and having lost the protection of its rolling barrage came up against most highly organized defensive system of their experience.

(6) A position manned by fresh troops who had suffered no casualties.

(7) Troops who instead of being dispirited and disheartened as Ludendorff firmly believed, were probably at the very peak of their morale and enthusiasm.

SECTION IX.

DETAILED APPLICATION OF THE GOURAUD TACTIC. DISPOSITIONS AND OPERATIONS OF THE 161ST DIVISION.

In order to demonstrate the smaller details of the Gouraud tactic and to intelligently follow their concrete application in battle, it is proposed now to make a study of the activities and operations of a typical division of the IVth army, the 161st division of infantry (General Lebouc), holding the left of the 8th Army Corps (General Hely D'Oisel) and extending from the Main des Massige on the right (east) to the Butte des Mesnil, inclusive, on the left (west). The two last points mentioned are distinguished in French military history as locating the position of some of the bitterest fighting of the war. In the fall of 1915 the famous Morocco Division had, at the cost of grievous casualties, established a footing on the Main des Massige which had been tenaciously held ever since. With the Main des Massige the Butte des Mesnil was the topographical key to this part of the front. Times without number the French had endeavored to secure this commanding position, but the German never yielded and put in always the number of troops necessary to maintain its integrity.

Under the normal occupancy this divisional sector was held by the three infantry regiments, each disposing one battalion in first position; one support battalion reverse of intermediate position; and the third battalion at rest in rear area; reliefs, in general, were effected every 10 or 11 days. Regimentals P. C's were along the line of the intermediate. There was no occupancy of the second position.

The artillery consisted of one regiment of 75s and one battalion of 155s, plus 12 isolated pieces as anti-tank guns. One battalion of 75s assigned to support each regiment of infantry. The battalion of 155s remained under the division artillery officer.

As previously described, the intermediate position had been transformed into a veritable fortress and highly organized to a degree never before attained. All sector machine guns and quantities of St. Etienne guns had been placed on this position.

Adjoining troops—

West—43rd Division (21st Army Corps).

East—16th Division (8th Army Corps).

By July 15th the reenforcements of the division had been completed.

Infantry—2 regiments. Total 5.

Artillery—2 battalions 245.

2 battalions 155.

1 battalion 120.

1 battalion 105.

1 battalion 8-inch American.

Additional guns 100. Total 160.

Defense of the sector rested upon two principles:

1. The intermediate position is the battle ground of the division.
2. The first position—a position of cover—to be evacuated; provided and prepared in all details but to be executed *only* on the order of the army.

Follows a summary of the dispositions and preparations:

First—Position: (a). To be stationed on the parallel of surveillance small groups of selected men under NCOs—three men to group. Mission: Signal the moment that the attack reached our line.

(b). On the parallel of redoubts—three half platoons in each sous-sector (total 9) commanded by an officer in each case; each battalion of each regiment furnishing one group.

Mission: To slow up and break up advance of enemy across this position without accepting definite combat; then to withdraw on their battalions.

Intermediate Position: Battle zone.

Organized continuously to permit the nine battalions of the division to simultaneously produce the maximum fire effect. Two battalions from the second position were in close support of this line for the purpose of delivering counter attacks against infiltrating fractions of the enemy.

Second Position: Held by two regiments (less two battalions sent forward). In this sector this position had been strongly organized and many new deep "abris" constructed.

To prevent the passage to rear of any enemy (or friend) by way of the numerous boyaux connecting this with the forward position, all such were completely filled up for a distance of 400 metres from the second position.

All machine guns of this position, including two additional companies, have mission of overhead indirect fire in front of intermediate position.

Missions of Artillery:

1. CPO maximum concentration on enemy first position.
2. On signal that enemy was leaving trenches to put down maximum rate of fire from our front wire to interior of front line of enemy concentration.
3. Following signals of our elements on the parallel of redoubts (one-half platoons), concentration of successive barrages to interior of our first position.
4. Finally to concentrate every gun on the field in front of our battle line when enemy reached there.
5. By a maximum of efficiency of liaison to prepare to support counter attacks at all points of the zone for the purpose of driving the enemy from our first position.

Engineers:

When army signal received, to destroy the bridges across the Marson, and two extensive tunnels in the first position. These two tunnels had been constructed when the Germans held this position in 1915; when the French had captured this position large bodies of enemy troops swarmed out of the tunnels, attacked the French in rear and necessitated many more days' fighting before the position finally changed hands. In these same tunnels later (September, 1918,) were concentrated the assault troops of the French offensive of September 26th which, for the first time in the war, broke the Champagne front.

Service of Liaisons

All liaison, telephone, radio and optical were strengthened; many additional laid; wires deeply buried and hundreds of paralleling lines laid. Pioneers were stationed along all the routes of communication for effecting quick repairs.

Chains of courier posts, with relays, were established. Many additional courier routes for all elements were laid out and plainly marked, but not used until the day of the battle. Additional pigeons were sent to the posts in the first position.

The underground wiring of first position made ready to be destroyed.

Aviation:

The aerial squadrons and the division balloon were prepared for combat reconnaissance.

Miscellaneous:

All the garrisons of the first position prepared mustard gas shells to be exploded in the dugouts shortly after they withdrew on the night of the battle.

All impedimenta sent to the rear areas. Trains retired behind the Valmy railroad.

Military police were installed on field of battle, particularly in rear of second position, with both fixed and patrolling posts.

Between July 6th and 14th, the division executed a raid every day.

The proximity of the attack was so imminent on July 7th that all troops were ordered to their battle positions every evening, except that the advance elements in the parallel surveillance, instead of being reduced to their three-man groups were kept as one-half platoons in order to maintain the integrity of the front and provide reconnaissance in front of our wire.

Came July 14th—the National Holiday of France—a fitting choice on the part of the Germans: at 11:10 P. M., the division was informed by telephone from corps that prisoners just captured by the 132nd division had given information of enemy attack, with artillery preparation beginning at midnight and infantry assault at 4:00 A. M. All elements of first line were informed. At 11:30 came the army order "Francois 570," at once transmitted to all troops. The half platoons on the parallel of surveillance were withdrawn and the heroic little group of volunteers installed.

At 11:45 P. M. the order was given for the artillery to open its "Counter Preparation Offensive," and executed. At midnight (12:10 French time) the German launched his bombardment and the battle had begun and ended. The corps commander, ceaselessly visiting his troops, encouraging and advising, had not slept for three days. With the opening gun of the German artillery he knew the battle was won and lay down to rest and slept for twenty-four hours undisturbed. This fact epitomizes the Champagne battle. With the opening gun of July 14th, the story of the fifth and final German offensive has been told. The real contest was waged before the opening gun and decided when Gouraud beat the German by twenty-five minutes.

What followed was simply anti-climax. And this is why I have chosen to term this, in contradistinction to the historians, "The Champagne Defensive of July 14th."

The details of the following days form a study in themselves that would require a paper of very great length to do them justice. The story of the little group left in the first position is, in itself, a miniature epoch of finely applied skill and heroic self-sacrificing devotion to duty. These heroes were amply rewarded when Gouraud termed them "Mes Braves."

Suffice for our purpose to briefly summarize:

The elaborate time-table of the Ludendorff machine beginning with the opening artillery at midnight of July 14th and continuing to the allocation of the magazines at Chalons on the second day functioned as per schedule, for exactly the opening gun and nothing else.

The meticulously prepared schedule of Gouraud functioned exactly throughout as planned, from the beginning to the end of the battle.

The seven Gouraud elements of defensive surprise actually developed with mathematical precision as the successive phases of the combat unfolded.

The German artillery bombardment was all that the French had anticipated and probably more. But certain it is that the counter preparation for four hours of the French artillery was a very great deal more than the Germans had imagined possible. The heroic thin warning line was completely submerged on the first onslaught, but performed their function before obliteration. So disorganized were the German assault waves by the furious pounding of the French artillery during the four hours preceding the hour "H" that only about half of this front was able to depart at all, and they not on schedule. It was late afternoon of the 15th before any enemy elements appeared in front of the redoubt groups of the right regiment, and they did not attack. It was 9:00 A. M. before any elements reached the selected battle ground in the front of the left regiment. All day and night of the 15th did the line of half platoons in the redoubts hold their position and always in liaison with the adjacent groups, save only one which withdrew at 4:00 P. M. on the center regiment. And a company of this regiment in the following morning attacked the abandoned redoubt and captured a whole German company. At noon of the 15th (the first day of battle) the division commander requested authority to make a reconnaissance in force in his right and center sous-sectors, and if this demonstrated a real inactivity of the enemy, then to launch an attack on the Butte de Mesnil. This was the sort of disheartened, discouraged French army that Ludendorff had counted on overwhelming. Night fall of the first day found the division still in possession of the line of redoubts in the first position. The losses aggregated 488 (of whom only 43 were killed—about 3 per cent.) The German losses were probably 50 per cent. The French artillery ammunition consumption is interesting. For the 75s there were fired 38,000 rounds. This was an average of about 600 rounds per gun. During the final hour of counter preparation the guns fired at the rate of 100 rounds per hour and this same rate was maintained when an enemy concentration appeared. Six pieces of 75 and two 155 had been put out of action.

The fifth German offensive had failed. The *Peace-Storm* had been stopped dead in its track. The day of July 15th, 1918, was the worst single day in the history of the German army. The German system of signals provided for a G. H. Q. 12-star signal to be fired by a battalion commander when his headquarters had reached an important objective. There were no 12-star signals fired in the Champagne on this day. Nor thereafter. The German army never attacked again. The generalissimo telephoned Gouraud that the latter had inflicted the most signal defeat of the war. Indicative of the completely decisive nature of this victory, as early as the night of the 15th Gouraud began releasing troops for Foch's offensive. A Moroccan regiment in the second position of this division was withdrawn and started for Soissons where it participated in the launching of the attack on the 18th.

CONCLUSION OF THE BATTLE.

So complete had been the success of the Gouraud tactic that it was not until the following day (16th) that the Germans made a determined concerted effort to achieve results. Strongly reinforced, they launched an assault, after a fierce artillery bombardment beginning at 2:00 A. M. and nearly equaling that of the first day. The redoubt groups were withdrawn by 10 A. M., having accomplished their full mission. Several of them had to fight their way back with the bayonet; some fought regular rear guard actions. Some had to call for—and get—a temporary barrage between them and their battalions before they could get through. None left any of their number alive in the enemy hands, nor any single item of material. The enemy was scarcely settled in this first position, which he was feverishly organizing, before the division began an offensive reconnaissance along the whole front. The 17th, the enemy continued to organize the position. Certain battalions of the French had established a foothold on the southern slopes of the first position.

On the 18th, the French began to push back in earnest with one battalion from each regiment in assault. The Germans resisted vigorously and stubbornly and sent in supporting troops. It would be a crumb of comfort if Ludendorff and Einem could announce that they had recaptured and held this position taken from them in 1915. The division kept pushing on, fighting day and night. As one battalion slowed down it was hauled out and another thrown in to push the attack from trench to trench. The work of the artillery in supporting these many attacks was brilliant in the extreme, even for the always brilliant French artillery. Liaison *can* be maintained between infantry and artillery in combat of the most difficult nature.

Slowly but irresistibly the French line was advancing. The enemy put in an entirely fresh regiment during the night and the day of the 19th was the most active of the six days' operations. But always the attack pushed on; fighting off strong counter attacks, the French never relinquished a foot of ground gained. Attack after attack was launched during the night and continued during the day of the 20th. By afternoon the pressure had become too great—the German line broke and fled in disorder back to his own original trenches from which the assault had been launched on the early morning of the 15th. When this occurred, the division commander snapped out position orders to all five regiments and his artillery and requested authority to attack the Butte de Mesnil. General Lebouc was bound to have that redoubtable strong point. But the time was not ripe. The IVth army must release every available regiment to Foch's offensive further west. That night the 161st division was able to report that it occupied all of the original first position.

In closing this narrative it is gratifying to record that the Americans had a part albeit a very modest part, in this great battle. The 42nd U. S. Division held position in the middle of Gouraud's line and acquitted itself most creditably. The 369th U. S. Infantry in the 8th Army Corps of Gouraud's right, played its unpretentious part as an integral regiment of two French divisions (16th and 161st; it successfully executed every mission assigned.

SECTION X ANALYSIS.

An effort has been made in this paper to analyse the operations in conjunction with the narration of events.

CRITICISM.

Of criticism there is but little for either command. The plan of Ludendorff was entirely sound. An offensive was forced upon him by the situation. His objective was logically chosen and offered as much choice for success as any front available to him. His estimate of the situation was faulty in many respects, notably in his assumption that the French Army was a defeated, demoralized force; that his tactic of offense could not be solved; that the secrecy of his concentrations could not be penetrated. But even had these elements been correctly estimated it is probable that he could have followed no other course than he did. The one alternative promising any favorable results was a Hindenburg withdrawal from his salients. With the situation existing in Germany this was an impossibility. It is doubtful if any *competent* authority would have declared on June 1st that Ludendorff did not have more than an even chance of winning his offensive in the Champagne. What commander desires more? To say, as many do, that he was careless of secrecy in his final concentration is all bosh; its efficiency was at least equal to that of any other. This enigma had simply been solved, the usual eventual fate of all enigmas. Ludendorff and the Germans had met their superiors as must all champions in the natural process of time. Ludendorff was beaten, and beaten soundly, but he was far from being discredited in the opinion of any impartial student. Ludendorff, his genius, the accomplishments of the German Army, must for all time remain the admiration of the military world. The French concede that. Others can do no less.

Lessons: There are a few outstanding lessons that may be noted in conclusion.

1. Any new tactic has an answer.
2. Leadership—the personality of the commander—is always a vital element.
3. Surprise remains indubitably an essential principle of success in war.
4. Surprise is not a monopoly of the offensive; it is always a possibility in a defensive.
5. In the final analysis, the answer to surprise is aggressive, incessant combat intelligence.

6. It is possible to maintain liaison in battle under the most severe conditions, liaison with infantry units and between the infantry and artillery.

SECTION XI. SOURCES.

The sources upon which this study is based are original sources comprising the following elements:

a. Observations, notes, diaries, records, orders and reports of the writer who, in this particular battle, commanded the 369th U. S. Infantry forming an integral part of the 161st Division, 8th Army Corps, of the French Fourth Army.

b. Report of the commanding general 161st (French) Division on this battle, together with orders, records, information intelligence — including battlemaps.

c. Similar records of the 8th Army Corps and of

d. The French Fourth Army (Gouraud).

e. Captured enemy documents and reports of interrogatories of prisoners.

f. Confidential bulletins of information and

g. Confidential studies of the operations of 1918 by French G. H. Q., 4th Army, 8th Corps, and 161st Division.

The information in "b" to "g," inclusive, was furnished the writer, at the time, in his capacity as regimental commander. It should be noted that the 369th Infantry was an integral part of a French division from March, 1918, until January, 1919; that all other elements of the division were French. As evidencing a particular knowledge of the Champagne front and the army of Gouraud, it may be remarked that the service of the 369th Infantry was continuously in front line on this front from March to October, 1918, with no relief; and involving participation in the two major actions of the Champagne defensive of July 15th and the Champagne offensive of September 26th, 1918; on October 15th of the latter offensive the division was withdrawn and sent to the Vosges for replacement and recuperation.

The writer has, nevertheless, consulted practically all references in his own and the school library on the subject of this battle; finding, however, substantially nothing which was not already covered by the original sources in his possession. It might be added that, in the course of this reading, there were found, in the case of practically every historian, many inaccuracies, particularly as to details; in some instances most glaring.

CHAMPAGNE DEFENSIVE CORPS ZONE

(8TH ARMY CORPS) IV ARMY (COURAUD)

KILOMETERS

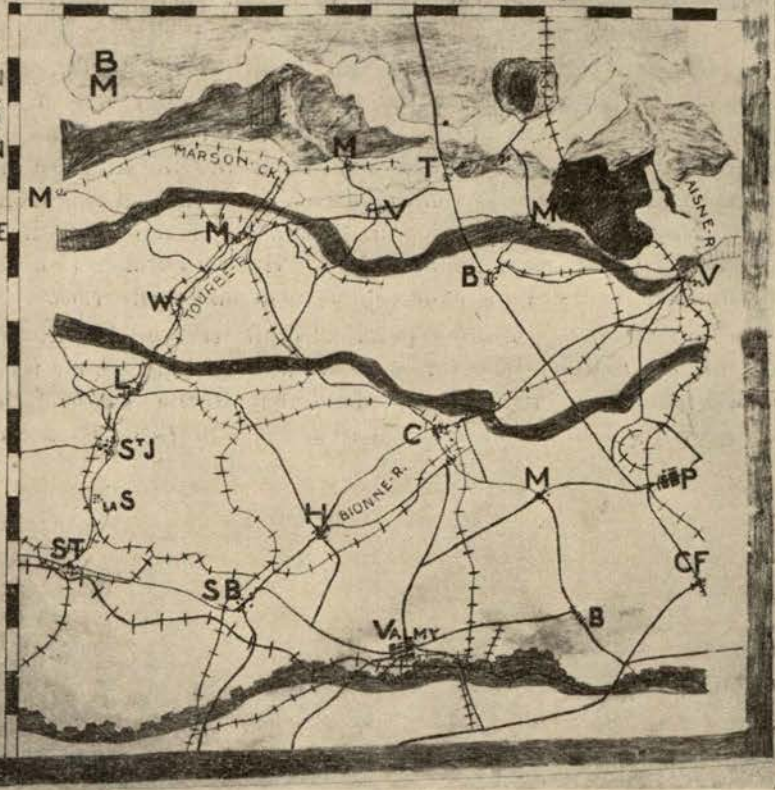
GERMAN (BLUE)
1ST POSITION

FRENCH (RED)
1ST POSITION

INTERMEDIATE

SECOND

THIRD



OPERATIONS OF THE THIRD DIVISION FROM MAY 30, 1918, TO JULY 18, 1918

—By—

Major Lindsay McD. Silvester, Infantry.

INTRODUCTION.

Shortly after the treaty of Brest-Litovak, which brought about a cessation of hostilities between Russia and the Central Powers, the Germans began transferring their divisions to the western front. The capacity of her railroads was ten divisions per month. By the time of the "Big Drive," which took place in March, 1918, she had transferred 63 divisions, bringing the total up to 206 divisions on the western front.

The German high command planned to bring about a peace with one huge drive. Ludendorff had announced that peace would come before summer. This fact was heralded throughout Deutschland and the ever increasing evidence of man superiority on the western front caused the Allies grave concern. The one big thing the Allies had accomplished to meet this great offensive was unity of command. The credit for this wise decision must be given to the premiers of the Allied countries rather than to any one military man.

THE PEACE OFFENSIVE.

The greatly talked of "Peace Offensive" took place in March when the Germans launched an attack in Picardy and Flanders, which netted them great gains. The morale of the Allied armies grew low. Sir Douglas Haig issued an order in which he stated, "We are fighting with our backs against the wall." The Frenchman, Britisher, Belgian, Italian alike were saying, "The Americans are too late." The Bosche continued to advance toward the Channel ports and were bombing the lines of communication from Calais to Havre. In the upper reaches of the Isonzo the Italians were giving way to the Austro-German advance. The six French and six British divisions sent to rescue the Italians could least be spared at this time, and their going only tended to make the situation worse.

AMERICANS IN FRANCE.

Up to this time few American divisions had arrived in France. The 1st and 26th Divisions were the only ones which had completed their training. The 2nd and 42nd Divisions were still in their training areas. The 32nd had been designated as a training division for the corps and the 41st had been designated as a base replacement unit, which was at times almost skeletonized.

In April the 3rd and 5th Divisions began to cross. These divisions, however, had not had sufficient training and were without much of their equipment. So we find at the end of April that, in addition to the 1st Corps phase, there were only two other American combat units in France—the 3rd and 5th Divisions.

THE DRIVE OF MAY 27TH.

In the latter part of May the British 5th Army, which had seen particularly hard service in the north, took a position between Rheims and Soissons. This had been a peaceful sector. The German intelligence discovered their position and, under the cover of darkness, concentrated its armies. On the morning of May 27 this army moved forward. Little trouble did it experience in smashing the British 5th Army, and in three days made an advance of over 40 kilometers, its advance units resting on the Marne. The situation was serious. Munition works, industrial plants, banks, and even the government itself were ready to move at a moment's notice to points south of Paris for safety. It seemed that the Americans were too late and that the Germans were about to win. This was the general outlook on May 30, 1918.

ORGANIZATION OF 3RD DIVISION.

While this situation was developing, the 3rd Division, with the exception of its engineers and artillery, was completing its training in the vicinity of Chateau-Villain. This division consisted of the 5th and 6th Infantry Brigades, the 7th, 8th and 9th Machine Gun Battalions, the 6th Engineers, the 3rd Artillery Bri-

gade, the 5th Signal Battalion and the division trains. The 5th Infantry Brigade was composed of the 4th and 7th Infantry Regiments; the 6th Brigade was made up of the 30th and 38th Infantry Regiments; and the 3rd Artillery Brigade consisted of the 10th, 18th and 76th Artillery Regiments. About the 29th of May information reached the division area of the German advance to the Marne. Chateau-Thierry was an emergency and General Pershing immediately placed every available American at the disposal of Marshal Foch. On May 30th orders were issued from General Headquarters, A. E. F., placing the 3rd Division, less artillery and engineers, at the disposal of the French general commanding the group of armies in the north, by whom it was assigned to the 38th French Army Corps, operating in the Chateau-Thierry area.

MOVEMENT OF THE 3RD DIVISION INTO LINE.

Pursuant to the above order, the troops of the 3rd Division began movement. The 7th Machine Gun Battalion, a motorized unit, proceeded at once under its own power for Conde-en-Brie and after twenty-four hours on the road it was thrown into line at Chateau-Thierry. Here it gained immediate contact with the enemy and, although greatly fatigued by its long ride and loss of sleep, it remained in action for three days and three nights. It held its position throughout that time in spite of determined enemy attacks and severe bombardment. With the aid of the French Colonials it repulsed the attack and prevented the Germans from crossing the Marne. During this engagement a company of German infantry was caught in the streets of Chateau-Thierry in column of squads. With the use of combined sights this company was practically annihilated. The 7th Machine Gun Battalion was thus a determining factor in bringing the Germans to a standstill at this point of the Marne.

THE INFANTRY BRIGADES.

While the 7th Machine Gun Battalion engaged the Germans at Chateau-Thierry, the infantry brigades were enroute by train and the division trains being driven overland. This movement was completed June 3rd and the division took up a position extending eastward from Hill 204 to Chateau-Thierry along the southern banks of the Marne to the vicinity of Dormans.

The Germans occupied the ground north of the Marne while the 3rd Division occupied the southern bank. The 3rd Division did not plan to take the offensive during the early stages of combat. Its mission was purely one of defense.

DESCRIPTION OF 3RD DIVISION SECTOR.

Here the Marne flows in a northwesterly direction, through a fertile valley. The river is about 80 yards wide and waving wheat fields and vineyards cover the slopes which rise to a height of 600 feet on either side. The northern slope is more abrupt. The Paris-Metz railroad parallels the Marne on the southern bank. Further up on the southern slope, one kilometer from the river, is the Paris aqueduct. Here and there are farm houses and small patches of woods. Chateau-Thierry, that quaint old town where so much French history has been made, is located in this beautiful valley at an abrupt turn of the river. Further to the west in Hill 204. Its base is covered with apple orchards and its top with a forest, lending itself to defense. Improved roads parallel the Marne on both sides and within the 3rd Division sector roads, improved and otherwise, radiate in all directions. To the northeast of Chateau-Thierry, in the direction of Soissons, is Belleau Woods. The Paris-Metz Boulevard furnishes the main avenue of approach for the Americans and parts of the Soissons-Chateau-Thierry road and railroad furnish the main avenue of approach for the enemy. Almost equal in beauty to the Valley of the Marne is that of the Surmelin Valley. The fields are cultivated and here and there are French villages. The Surmelin Brook flows into the Marne. A branch line of the Paris-Metz railroad parallels the stream. Improved roads lead to the high ground which commands this valley.

ADVANTAGES AND DISADVANTAGES OF THE TERRAIN.

From a military standpoint the Germans have the advantage, in that the ground rises more abruptly on the north side of the Marne. The plateaus and greater portion of the slopes are covered with woods.

This enables the Germans to concentrate large masses of troops within 600 yards of the Marne without being observed. Moreover, our movement over the open fields can be readily checked.

PRELIMINARY ENGAGEMENTS.

For the first three weeks in June the division, less artillery and engineers, was constantly shifted from one position to another. During this time the 4th and 30th Infantry Regiments assisted in operations on the north side of the Marne on Hill 204. The 7th Infantry Regiment was sent to Belleau Woods to give the Marines a rest.

These regiments were sent into the line with the old reserve ration. Although cautioned about building fires, the men became hungry and cooked their bacon and coffee. The smoke disclosed their position and the result was heavy shelling and many casualties.

Shortly after the 3rd Division had had its initial experience in battle, an officer asked one of the enlisted men—a foreigner by birth, but an American at heart—how he liked it. The soldier replied, "I no understand English—I see Bosche—I fighta like hell!" This was typical of the 3rd Division, as most of the men composing its ranks were of foreign birth, and it illustrated the fine morale and splendid fighting spirit of this unit.

The French general commanding the corps ordered a corps reserve formed out of our own and French troops. This group went out of action when the corps sector was reorganized. One-half of a brigade of French field artillery and a small quota of French corps artillery was all the support that could be provided for a sector of over 10 kilometers. On the night of July 23rd the corps area was reorganized. The 3rd Division was assigned a position in the center of the corps. The 125th Division (French) occupied the sector on the right and the 39th Division (French) occupied the sector on the left.

DIVISION BOUNDARIES.

The boundaries of the division were as follows:

Eastern boundary—Marne river at point 929-611—Min Ruine (Signal) point 940,585—Monthurel (exclusive)—Mont Bazin (inclusive)—Pertibout Fme (inclusive).

Western boundary—Junction of main road Chateau-Thierry and the railroad, about 700 meters north of Etampes (exclusive)—road from Etampes to Petit Ballois as far as southern edge of the woods, 600 meters southeast of Nesles-Lelumeron (inclusive)—Cabane de Contonnier-le Giletterie (exclusive)—St. Jean (inclusive)—La Chapelle-Sur Chezy.

REGIMENTAL SECTORS.

The division sector was divided into four sub-sectors, known as follows:

West Sub-sector—Brasles.

West center sub-sector—Gland.

East center sub-sector—Mont St. Pere.

East sub-sector—Chartreves.

The boundary between west and west center sub-sector was as follows:

Point 875.582 on Marne River north of Blesmes.

Point 880.513—Les Aulnes Boullants Farm—La Motte—Essises (all inclusive to west sub-sector).

The boundaries between west center and east center sub-sectors were as follows:

Marne River at mouth of small stream northeast of Fossoy—north edge of Fossoy—crossing of aqueduct and main road 300 meters east of Fossoy Chateau—west edge of Bois D'Aigremont to point 0070—Tilvot Farm—Viffort (the last two points inclusive to west center sub-sector).

The boundaries between east center and west sub-sector as follows:

Marne River at east end of Chartreves Island—crossing of railroad with Crezancy and Parcy Road—Le Chanet—Le Donjon Farm—Montalvert—La Fosse Gaudier Farm (all inclusive to east center sub-sector). These four sub-sectors were garrisoned by the 4th, 7th, 30th and 38th infantry regiments, from left to right. (See attached map marked II.)

RESERVES.

The division reserves consisted of one battalion of the 38th Infantry located south of St. Eugene. The corps reserves consisted of one battalion of the 4th Infantry at Essies, one battalion of the 7th Infantry at Viffort, and one battalion of the 30th Infantry south of Courboin.

ARTILLERY.

The first units of the 3rd Artillery Brigade arrived July 3rd and went into position on the night of 3-4 July. Up to this time the division had experienced great difficulty in obtaining horses for the artillery. The few that they had were sick or soon became so, hence the delay of the artillery in joining the division.

The 10th Field Artillery supported the 6th Brigade in the vicinity of Greves Farm and Bois de Jute. One gun of this regiment was placed in a forward position in the 30th Infantry sector and directed its fire on any possible crossing of the Marne. One battery was placed in French territory at Janvier Farm in order to sweep down the slopes in front of the 38th Infantry. The 76th Field Artillery, on the left, supported the 5th Brigade at Ballois, Reurtebise and Petret Farms. The 18th Field Artillery had two battalions in the vicinity of Perle and Donjon, west of St. Eugene and one battalion near the main Chateau-Thierry road.

ENGINEERS.

The 6th Engineers were distributed throughout the division sector and were engaged in constructing trenches, obstacles, etc. Two companies of this regiment were at the disposal of the VIth Army for the organization of the second line resistance. The headquarters were located at Bertibout Farm.

LINES OF DEFENSE.

There were two general lines of defense that constituted the first position. The general location of the first line was as follows: cross-roads 400 meters southeast of Etampes—Hill 186—Fossoy — northern edge of woods northwest of Grezancy—Moulines—Min Ruine (Known as the Aqueduct Line). This general line was to be held in case of attack. In front of this line those isolated strong points which could be garrisoned by platoons or sections, under proper command, were to be held in the event that the enemy succeeded in effecting a crossing. (Known as the Railroad Line.) Not more than one-fourth of the infantry strength in each sub-sector was to be stationed in advance of the first line. Observation posts were to be established along the first line and the river, and patrolling along the river was to be active at night.

The real limit of the zone of resistance of the first line was generally as follows: La Charmos—Fontaine Aux Charmes—Le Rocq Chateau—Le souvien Farm—Janvier Farm. (Known as the Woods Line.) Liaison was established on both flanks of the division on the front line.

The general location of the second position was as follows: La Giletterie—Bochage Farm—Conde-en-Brie. (Known as the Army Line.) This line was to be organized by the 6th Army.

In the rear of the division was a fairly strong position garrisoned by the 28th Division, U. S., and 73rd French Division.

A bretelle position, garrisoned by three companies of the 7th Infantry and a machine gun company was under construction from La Rocq Chateau to Bochage Farm and another along the western edge of Bois de Jute and the northern edge of St. Eugene, garrisoned by the 38th U. S. Infantry. One battalion from each regiment made up the garrison of the army's position.

MACHINE GUNS.

The 7th Machine Gun Battalion was assigned to the Army Corps Reserve. The 9th was assigned to the Commanding General, 6th Brigade, except for one company in division reserve at Paillardise Farm. The 8th Machine Gun Battalion (less one company, assigned to division reserves) was placed at the disposal of the Commanding General, 5th Brigade.

One company of the 8th Machine Gun Battalion was at the disposal of the division commander, and took station as follows: one platoon, with the battalion of the 4th Infantry, at Les Caquerets; one platoon with the battalion of the 7th Infantry at Viffort; one platoon, with the battalion of the 30th Infantry, south of Courboin. These platoons were under the command of their respective battalion commanders and operated with the battalion to which assigned. The battalions assigned to brigades were used in checker board formation.

RUMORS OF ATTACK.

The enemy's artillery was known to have been materially increased during the first few days of July. All points in the 3rd Division area had been accurately registered upon. Constant rumors were afloat that the much talked of German offensive was about to take place. Captured prisoners freely admitted that preparations were being made for this drive. The exact date was not known. Troops were on the alert, however. There was a noticeable decline in the activity of German artillery. It was the peace before the storm. At night wheel transportation could be heard in the vicinity of Mt. St. Pee and Chartreves, indicating that the day of battle was rapidly approaching.

On the evening of July 14th we find all the troops of the 3rd Division in their positions except for the battalions assigned to the corps reserve, which are en route to join their respective regiments, and one battery of the 18th Field Artillery.

Fire data had been secured from the French, enabling our artillery to fire upon points suspected of being occupied by the enemy and the S. O. S. line for barrage fire. That night the 38th Army Corps ordered a gas attack upon the woods upon the northern slope of the Marne. This attack commenced at 8:00 P. M. About this time the French on our right captured a German engineer officer, who gave Dormans as one of the probable places that the enemy would cross. This, pieced together with other information already at hand, was proof enough that the Germans intended to attack that night. Orders were issued by the corps directing that a general counter preparation fire be delivered at 11:30 P. M.

EFFECT OF OUR ARTILLERY FIRE.

This attack was delivered at the appointed time. What effect did it have on the Germans? According to their tactical reports and war diaries of the troops opposite the 3rd Division on this occasion, the Germans spent two days in preparation for their attack. The regimental and battalion commanders inspected the 1st and 2nd positions, lines of approach, etc. Shortly after nightfall, July 14th, the German infantry advanced and took up position in the woods, 600 to 800 yards from the Marne. Shelter had not been provided. The night was dark, the air filled with gas. Suddenly the American artillery opened fire. Shrapnel and high explosives fill the woods. Whole squads are blown to pieces. Direct hits register on the artillery which is moving into position. Horses roll to the ground, ammunition blows up. Entire companies are routed.

EFFECT OF ENEMY ARTILLERY.

At midnight the enemy artillery opened fire. It extended from Chateau-Thierry to Dormans and from the banks of the Marne back 10 or 15 kilometers to the rear. The barrage sheet of units opposite the 3rd Division shows that they contemplated reaching St. Eugene by 8:50 A. M. that day. One battery of the 18th Field Artillery, going into position, was caught on the road and practically annihilated. The reserve battalion, on the way to join its regiment, was also caught in this fire and there were numerous casualties. It has been estimated that in the forward areas 1,000 shells per square kilometer fell. Cases of different

kinds were used, but it was noticeable that mustard gas was used only in the rear area which the German troops did not expect to reach. The bombardment was so intense that within ten minutes all telephone communication was cut off. Trees were felled, paths and roads obliterated. The radio was working, but too much time was lost in coding and decoding messages. The shell fire is intense. Suddenly the radio ceases and the signal lamp is put out of action. Runners cannot find their way. Our artillery keeps up the fire with equal intensity. At 3:40 A. M. the preliminary bombardment is followed by the rolling barrage and the Germans begin to cross the river.

DIFFICULTIES ENCOUNTERED BY THE GERMANS.

Down on the Marne the German engineers are working. Few pontoons are on hand, where many should be. One crosses overloaded. Machine gun and rifle fire open from the opposite bank. Men fall overboard. Many are drowned. Some succeed in reaching the opposite bank. The night is very dark, the valley is filled with smoke, fog and gas, and little can be seen. They move forward into wire entanglements, Americans occupy the trenches. Hand to hand combat ensues. To the right, in front of the French, the German troops now occupy the railroad station. They take Verrennes after a short combat. From the right Americans advance, forming semicircles in the field and allowing Germans to approach within forty yards before shooting them down. Further to the right the 6th Grenadiers operate. At 4:00 A. M., July 15th, this regiment sends a message to the division headquarters: "First battalion crossed at 3:40 A. M. with only slight casualties; second battalion is following. Reported that right wing of 36th Division is having difficulty." At dawn the Americans can be seen running down the heights at Moulins in the direction of the railroad. At 5:55 A. M. the following message to division headquarters is sent by the commander of the 6th Grenadiers: "Strong enemy counter attack from points of woods south of Crezancy toward 5:55 A. M. Parts of railroad embankment being held. The reserve battalion brought into action. No contact right or left. Reenforcements urgently needed, as I cannot hold this position long. Enemy awaited us fully prepared as attack was known a week ago. (Signed) Grussdorf."

The Germans have succeeded in crossing the river and in the vicinity of Mezy have taken the railroad. The attack is directed toward Bois D'Aigremont. The 6th Engineers are now thrown into line. Although not in contact with the enemy they suffer severely from artillery fire. The Americans open fire with rifles and machine guns. This proves so effective that American troops stand on the railroad and shoot down Germans individually. The ferry positions are now taken under fire by machine guns from the heights of Surmelin Valley. The Germans rush back to the Marne. The position is untenable. At 8:05 the German regimental commander sends the following message to his division: "Regiment thrown back over the Marne. As scarcely any officers left units must be reorganized. Effectives weak. Am not in position to maintain defense until units are organized which is difficult in consequence of heavy enemy fire. Neither cyclists nor horses have been able to reach the staff yet. Special reporting officer of the brigade also missing. Telephone communication constantly destroyed. (Signed) Grussdorf."

Efforts to reorganize prove impossible. Every German who shows himself is shot down. The ferry soon ceases operation and men are now swimming back across the Marne. They are caught in the river by machine gun fire and killed, others are drowned. Out of the entire 6th Grenadier Regiment there were only five officers and 107 men who survived.

To the right of the 6th Grenadiers we find the 47th and the 398th German Infantry Regiments. They too were in a position on the slopes of the Marne ready for the jump-off. They too were caught by the 3rd Division counter preparation barrage and badly disorganized.

Men of the 10th Field Artillery manned the guns which were left by the French, who had taken shelter when the German bombardment began. The German advance up the slopes of the Surmelin Valley caused one battery of this regiment to cease firing and fight off the enemy with its machine guns. The forward guns did very effective work. The battery located near Jaurier Farm, east of the Surmelin Valley, remained in its position until the French troops retired. The last rounds were used to blow up the guns. These guns were recovered on July 17th.

That morning a report from the 3rd Battalion 398th Infantry reached the German division headquarters. It stated that the 1st Battalion, 398th Infantry had been routed by shell fire; that the 3rd Battalion

and greater part of the 2nd had succeeded in crossing the Marne.

COUNTER ATTACK OF THE 7TH INFANTRY.

The Germans push on against rifle and machine gun fire and at 12:30 we find the 398th in front of Fossoy. A counter attack by the 7th Infantry and a machine gun company is launched from the bretteille position.

EFFECT OF OUR RIFLE AND MACHINE GUN FIRE.

The forward troops of the 47th Infantry have advanced 200 yards in the wheat fields. Suddenly there is an overwhelming machine gun and rifle fire from the direction of the Mont St. Pere-Mezy Road. On account of the high wheat fields, the German soldiers cannot see unless standing. Every one who shows himself is instantly killed or wounded. Our troops are firing from trees and German soldiers are hit even when crawling. At 4:45 P. M. the bridge over which the 398th passed is destroyed by our artillery fire. This places the 398th in a precarious position. The German staff realizes this and directs a machine gun company of the 377th Infantry, 10th Landwehr Division, to take up a position on the northern banks of the Marne in order to protect the 398th. Mezy is retaken at 4:20 P. M. by American troops. The counter attack being made by the three companies of the 7th Infantry and a company of machine guns from the bretteille position had been discovered. Nine batteries of German artillery opened fire on the woods, Brettonnerio Farm, Chailly Farm, and Fossoy. This barrage proves very effective and hardly is there a company remaining of the three infantry and one machine gun companies which made the counter attack.

WITHDRAWAL OF THE 10TH GERMAN DIVISION ACROSS THE MARNE.

The 398th now occupies a position along the railroad. At 7:15 P. M. the entire division is ordered back across the Marne, leaving small detachments of machine gunners along the Paris-Metz Railway. With the aid of the 10th Landwehr, the division guards the northern banks of the Marne from Gland to a point one kilometer from Jaulgonne.

On our right, in the vicinity of Varrennes, the Bosche still retains his foothold. His artillery has now crossed the Marne. No effort has been made by the French to regain lost ground. The 30th Infantry's attention is now turned to the right flank. At 4:30 P. M., July 15th, it withdraws from its forward position to the Aqueduct Line, for fear of being outflanked. The following day it again withdraws to a point in front of Connigis. Here it remains until July 18th. In the 30th Infantry sector the Bosche has gained little ground beyond the Paris-Metz Railroad. In the 7th Infantry sector the enemy has not advanced further than the northern edge of Fossoy.

ADVANCED GERMAN TROOPS.

One company of Germans, under 2nd Lieutenant Oberg, succeeds in penetrating the east slope of the Surmelin Valley for a distance of four kilometers. Doubtless this was the unit fired upon by the 10th Field Artillery, located at St. Eugene.

The direction of the German advance is shown by a copy of a captured map. It shows that Bois D'Aigremont was the key to the situation. The sectors occupied by the 30th and 38th Infantry Regiments were in direct line of advance. At Fossoy the 7th Infantry pushed the Germans back. Comparatively little fighting was done in the 4th Infantry sector.

CONCLUSION.

This battle is of far reaching importance, since it was here that German victory was turned into defeat. It was in this battle that the German war machine started on the decline. The casualties of the 3rd Division numbered around 3,000. In the 30th Infantry sector 1,300 of this number is accounted for. This one American division met and defeated in detail three German divisions and forced two of them back

across the Marne, capturing large quantities of munitions, supplies and a number of prisoners.

CRITICISM.

In the first engagement of the 3rd Division, troops were sent into line with the old reserve ration. Although cautioned about building fires, the order was violated, and the smoke showed their position, resulting in concentrated fire from the enemy's artillery and causing heavy losses. Proper rations should have been issued troops before the division was placed in line. Our troops had been in France for nearly a year and still this new division was allowed to go into line in this way. It was not until after these preliminary engagements that this fault was corrected.

Field Order No. 7, setting forth the sectors of the different units of the division, was issued nearly two weeks after the regiments had taken their positions. The disposition of troops within the regimental sectors was left to regimental commanders. Field Order No. 7 was based on their action. These positions were inspected by the brigade commander and approved. Especially is this true of the 6th Brigade. As a result there was no co-ordination. For example, the 38th Infantry sector had three companies placed in the front line on the railroad, while in the 30th Infantry sector two companies arranged in depth held a front of over three kilometers.

In the preliminary engagement the importance of liaison between units was not realized. In one instance the support company of the firing line was over two kilometers to the rear.

LESSONS TO BE LEARNED.

One of the outstanding features of the engagement of July 14th was the close liaison between the infantry and artillery. In the words of Colonel Butts, commanding the 30th Infantry: "The liaison between the infantry and artillery was perfect, being by far the one best feature of the battle." Equally important is the machine gun fire which held the Germans to the railroad bank while the infantry shot them down.

This engagement proved beyond the shadow of a doubt that it is exceedingly dangerous, if not impossible, to maneuver troops over open ground in the vicinity of the front.

It was also proven that trenches constructed in the edge of woods are dangerous. The enemy can easily get the range and destroy them by artillery fire. Wherever constructed, the importance of camouflage must not be overlooked.

This battle taught that smoke screens are effective when used on a large front; but very dangerous, in fact suicidal, when used on a narrow front, as they draw fire from the enemy. Smoke screens should be used on a large front or not at all.

Another important lesson taught is that formations in depth in battle are exceedingly necessary. The front line should be thinly held. It can be quickly re-enforced should the occasion demand.

It was clearly demonstrated that the artillery can do very effective firing and can place that fire in a short time wherever the infantry is having the greatest difficulty.

The importance of machine gun fire, with other infantry weapons, in defense was clearly shown. Recall the situation on the railroad where the machine gun fire was so effective that the 6th Grenadiers could do nothing and our infantry picked them off individually.

The 3-inch trench mortar, though hard to maneuver, proved its worth in defense. In attack it could not be depended upon, as, due to the difficulty in maneuvering, it was never in place at the appointed time. The 37 mm. gained great favor among the troops. They believed in its accuracy. They felt certain that it would either kill or drive the enemy from his position. It enhanced morale.

The battle proved that, in attacking machine gun nests, it is best to attack front and flank simultaneously. Advance should be made by leaps and bounds when fire superiority has been gained.

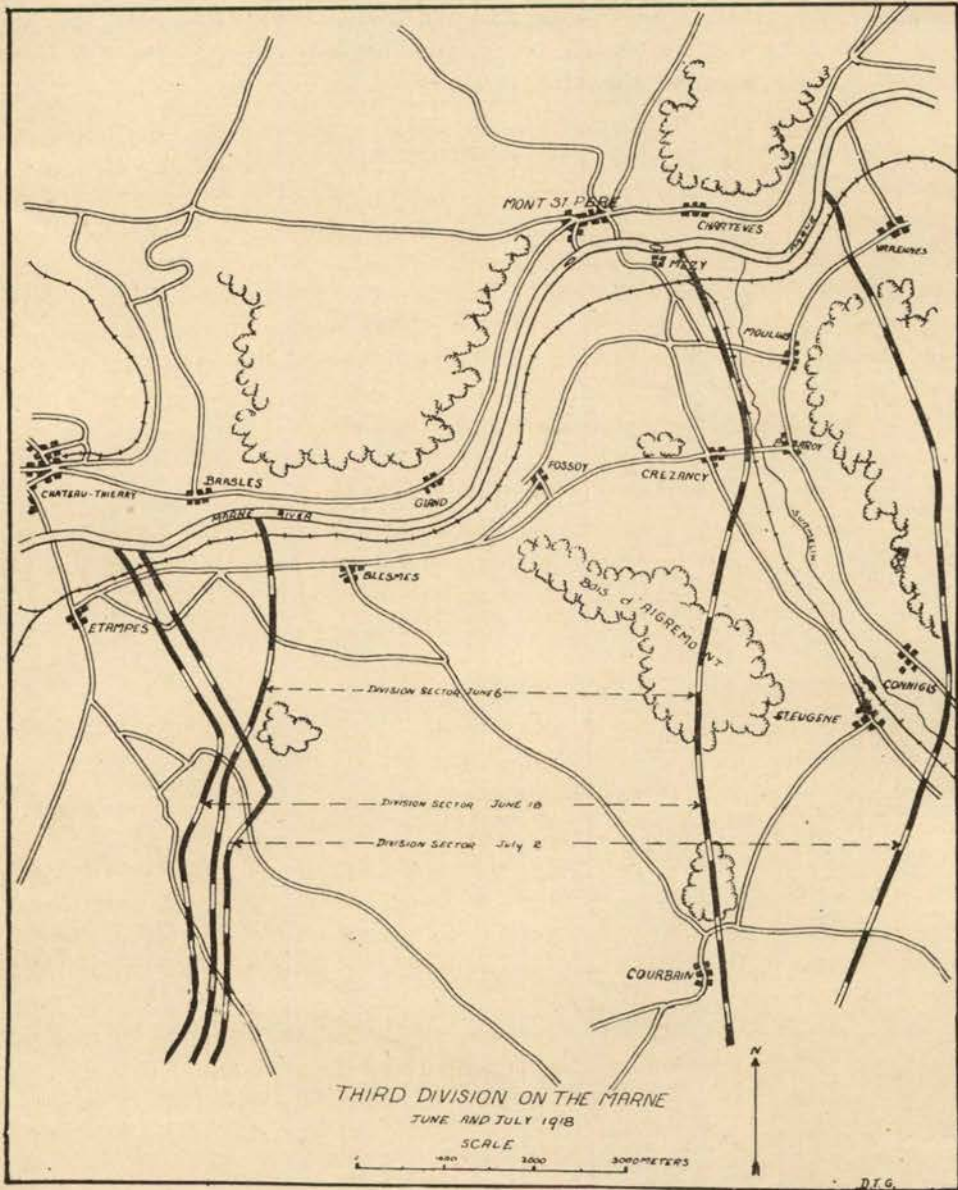
When telephone communication was destroyed, it was proved that radio, while accomplishing fairly good work, caused a great deal of time to be lost in coding and decoding messages. Methods of communi-

cation became an important consideration. The wireless telephone should be seriously considered, and the value of the carrier pigeon in battle should not be overlooked.

For surprise effect, the value of using combined sights of the machine gun unit at Chateau-Thierry was clearly demonstrated. Here a whole company of enemy infantry was annihilated.

Finally, we learn the extreme importance of Military Intelligence, as displayed in the engagement of the 14th of July. Bits of information here and there when pieced together divulged much of the German plan. Intelligence was highly developed in the World War and should continue to play an important role in all future wars.

References.—Battle Records of the 47th and 398th German Infantry Regiments, Century Magazine, May 1919; Drama of the Marne; Field Orders Nos. 1-7 incl., 3rd Div.; New York Times, Sunday, Dec. 22, 1918; Operations Report, 3rd Div., July 14-Aug. 1, 1918; Order 10th German Infantry Regiment; Tactical Report, 6th Grenadiers; Third Division.



THIRD DIVISION ON THE MARNE
 JUNE AND JULY 1918

SCALE

0 1000 3000 METERS

D.T.G.

OPERATIONS OF THE 30TH INFANTRY TO JULY 18, 1918.

—By—

Major F. L. Walker, Infantry.

ORIENTATION.

The Aisne-Marne offensive came to a close on June 6th, 1918, with the battle line extending eastward from Chateau-Thierry along the Marne River. On this date the German forces occupied the north bank of the river. They had recently been successful and were presumed to be reorganizing for a further advance. The 3rd Division (U. S.) was deployed along the south bank of the river and engaged in organizing a defensive sector. Its left was nearly opposite Chateau-Thierry and its right was about one and one-half kilometers east of Mezy.

On the night of June 10-11, 1918, the 30th U. S. Infantry took over a part of the sector as the right center regiment of the 3rd Division. The 38th Infantry was on its right and the 7th Infantry was on its left. The right boundary of the 30th Infantry was the line: Marne River at east end of Charveves Island; crossing of railroad and Crezancy; Paroy Road; Le Chanet; Le Donjon Farm; Montalvart; La Fousse Caudier Farm (all inclusive to the 30th Infantry). The original left boundary of the regiment was the line: Marne River at mouth of small stream northwest of Fossoy; north edge of Fossoy; crossing of aqueduct and main road 300 meters east of Fossoy Chateau; west edge of Bois D'Aigremont to point (190.0-257.0); Trivet Farm; Viffort (the last two points inclusive to the 7th Infantry). The front of the 30th Infantry, measured along the river, was approximately three kilometers. As the sector extended to the rear it gradually became narrower until it reached a width of about two kilometers on the line Crezancy-Fossoy. Thence southward the width of the sector remained at approximately two kilometers.

ESTIMATE OF THE SITUATION.

Upon arrival in the sector the first duty of the commander of the 30th Infantry, Colonel E. L. Butts, was to formulate a regimental plan of defense. In this respect considerable latitude was given the regimental commanders of the 6th Brigade (U. S.), which was composed of the 30th and 38th Infantry regiments.

THE TERRAIN.

The Marne is about seventy yards wide in this region. It is deep, unfordable, and its banks are steep. No bridges were in existence within the sector at this time. Within the sector assigned to the 30th Infantry the river makes almost a right angle turn and forms the front of the regimental sector on the north and west for about three kilometers.

The slopes on the north side of the river ascended rapidly to a height of about 425 feet above the river and then extended northward into a plateau. Wooded area, or forests, covering about three-fourths of the area, extended over the high level surface northward from the summit of the steep slopes. These forests were traversed by numerous good roads and trails and afforded excellent concealment and cover for the enemy's troops and their movements.

South of the Marne and within the sector assigned to the 30th Infantry the ground was low and flat for a distance of about one kilometer from the river; it then rose more rapidly within the next two kilometers until it reached an elevation of about 500 feet above the river at the Bois D'Aigremont. Numerous woods were distributed over the area. Good roads and trails covered the area and facilitated the movement of troops.

The Paris-Metz Railroad paralleled the river through the low ground across the front of the sector. On the low ground in the vicinity of the railroad were a few small patches of woods. About a kilometer south of the railroad and on higher ground were three larger patches of woods arranged along an east and west line across the narrower width of the sector. This line of woods is designated as the "aqueduct line" in Field Orders Number 7, 3rd Division, July 2, 1918, and was the nearest line to the river suitable for defense. These woods provided concealment for the holding garrison. A long field of fire extended over the open, gentle slopes toward the front and flanks. Good observation of the approaches to the river from the woods

on the enemy side was also afforded. Concealed routes permitted easy communication laterally and to the rear. Reserves could be brought forward from the rear by way of the ravine south of the Fossoy-Cresancy Road and either reenforce the holding garrison or support it by counter attack in case the necessity for the same should arise. These three small woods were conveniently located for organization into a series of independent strong points in such a way that, while each could support its neighbor by flanking fire across the front, each could continue to hold out for some time even if its neighbors should fail.

Further to the south and at the top of the slope was the Bois D'Aigremont. This woods was the key position from which the Surmelin Valley and the Marne Valley west of Mezy was controlled by fire and observation. Unless the Germans could finally capture the Bois D'Aigremont they would be unable to maintain themselves in the 3rd Division sector with the Marne separating them from their supporting troops. The Bois D'Aigremont was advantageously situated for defense. A defensive line along its west, north and east edges would have a good field of fire. The woods (Bois D'Aigremont) covered several square kilometers of area. It was traversed by good roads and trails. Inter-communication, communication to the rear and observation over the adjacent terrain was excellent. It provided good concealment for artillery as well as for a large body of infantry.

THE ENEMY'S PROBABLE INTENTIONS.

The enemy had the advantage near the river in observation, concealment and fire concentration. It was assumed that the enemy would take the offensive as soon as their reorganization was completed. In renewing their advance it was expected that they would avail themselves of their advantage in observation, concealment and fire concentration in the vicinity of Mezy in front of the 30th and 38th Infantry regiments. Here they had cover for their working parties and good channels of communication for assembling their assaulting troops under cover of the woods on the heights north of the river. They could launch their attack as a surprise under cover of darkness or fog, and, under the protection of an intensive artillery and machine gun barrage, could cross the Marne in boats or on bridges.

THE DECISIVE FACTORS.

The plan of defense of the regimental commander was based upon the following decisive factors:

1. The nature of the terrain and the enemy's advantage in observation, concealment and fire concentration over the area between the Fossoy-Crezancy Road and the Marne.
2. The probable intentions of the enemy, i. e., to cross the Marne by surprise in the vicinity of Mont St. Pere and Mezy under cover of darkness and an overwhelming artillery and machine gun barrage.
4. The necessity for holding the Bois D'Aigremont for final success.

The above factors demanded a deployment in depth and the greatest possible effort to conceal the defensive dispositions. It was conceded that the enemy would be able to cross the river when he should attack and that he could not be stopped by a strong force along or near the river bank.

The great area assigned to the front line battalion; the anticipated severity of the enemy artillery barrage and bombardment; the probability that the attack would occur under cover of darkness or fog; the probability of commanders of many units becoming casualties; all indicated that communication within the front line battalion would be practically impossible and that maneuver of troops in that area, especially during darkness, would be impracticable. For these reasons it was decided that each unit in the front line battalion should fight in place regardless of the presence of the unit commander or communication with him. By this arrangement it was expected to break up the enemy's attack formations, force him to concentrate his forces for the reduction of the units fighting in place, and permit of counter attacks being launched upon the flanks and rear of the enemy.

DETAILED PLAN.

As a result of the above mentioned considerations the following detailed plan of defense was decided upon:

1. To assign one battalion to the defense of the regimental area north of the Fossoy-Crezancy Road. This battalion to hold the river bank lightly with an outpost of two rifle companies. The two outpost companies to be supplemented by six machine guns from the Machine Gun Company and six light mortars from the Hq. Company. The light mortars to be used previous to the attack for harrassing fire at night.

2. To organize and hold the three woods 900 yards in front and parallel to the Fossoy-Crezancy Road as the line of resistance of the front line battalion.

3. To hold the Bois D'Aigremont at all costs.

4. To assign one battalion to the defense of the Bois D'Aigremont.

5. To utilize the Machine Gun Company (less six guns) in the defense of the line of resistance of the front line battalion.

6. To locate the Regimental P. C. near the northern edge of the Bois D'Aigremont.

7. To arrange for effective artillery support in the form of interdictory barrages along the north side of the Marne and an S. O. S. barrage south of the railroad.

EVENTS PRECEDING THE ACTION ON JULY 15th.

Every effort was made to obtain information of the enemy. Observation posts were established to observe the enemy's activities and intelligence patrols were sent across the Marne from time to time. Listening posts were established along the river bank at night. Neither the observation nor listening posts acquired much information. The enemy did not show himself. On June 17th a patrol of 22 men crossed the river and brought back five German prisoners without suffering any casualties.

The problem of providing a system of communication with the forward battalion which would survive the anticipated enemy artillery bombardment received much consideration. The following means were installed between the regimental headquarters and the headquarters of the front line battalion: two independent field telephone lines, one buzzer line, one T. P. S., one projector lamp, four pigeons, and runners.

Frequent personal inspections of all units within the sector were made by the regimental commander. Conferences with battalion commanders were held each day with a view to arranging for the strengthening of the position, delivery of supplies and perfecting the plan for the conduct of the defense. Company and battalion commanders inspected their respective units each night.

The construction of field works was taken up promptly after the arrival of the regiment in its sector. The Division Engineer Officer was charged with the exact siting of all works on the ground and the trace of the works as decided upon by him was ordered to be followed in all cases. The commander of the 30th Infantry disapproved of the location of some of the trenches dug by the Engineers. He ignored the trenches which had been dug along the edge of the Bois D'Aigremont and had his own men dig rifle pits about 100 yards in front of them. These rifle pits were then camouflaged. This saved many lives later when enemy artillery was directed on the trenches sited by the Engineers along the edge of the woods.

As time went on it was decided to reduce the river frontage of the 30th Infantry and attach another company to the forward battalion, 30th Infantry, and also another company to the 3rd Battalion, 30th Infantry. The frontage was reduced by moving the left boundary to a line approximately as follows: Point on the Marne near (189.2-259.9); Ru Chailly Farm (to 30th Infantry); point (190.0-259.4); thence south along the old boundary. The increase in strength was accomplished by attaching Company K, 3rd Battalion, 30th Infantry, to the 1st Battalion, 30th Infantry, and two companies of the 38th Infantry to the 3rd Battalion, 30th Infantry.

DISTRIBUTION OF TROOPS.

At the time of the attack, midnight, July 14-15th, 1918, the units assigned to the defense of the regimental sector were disposed as follows:

The 1st Battalion, with attached units, held the forward area. Companies B and C and six guns from the Machine Gun Company constituted the outpost along the river. One platoon of Company C (Lieut.

Marsh) was stationed in the town of Mezy; another platoon (Lieut. Gay) was in the narrow strip of woods opposite Mont St. Pere at (190.3-260.9) another was in the woods at (190.6-260.6) (Lieut. Eldred) and the other was near (191.2-260.5). One platoon of Company B (Lieut. Kingery) was near the Barrage Ecluse concealed in the trees on the bank of the river at (189.6-260.8); another platoon (Lieut. Turner) was in the narrow strip of woods about 250 yards southeast of the Barrage Ecluse; two platoons were stationed at Ru Chailly Farm during the day; at night one of them (Lieut. Savage) was placed between the railroad and the river at about (189.4-260.1) and the other (Lieut. Simon) remained at the farm. The machine guns near the river were placed approximately as follows: two guns (Lieut. McElligot) were at the viaduct (189.4-259.8); one gun near (190.5-760.6); one gun was near (190.8-260.6) and one gun was near (191.3-260.9). One-half of the 3rd Trench Mortar Battery was in the woods near (190.5-260.5).

The following units were deployed on the line of resistance (aqueduct line) as indicated: Company D held the woods at (191.5-259.5). Three platoons of Company K held the woods at (190.8-259.3); the other platoon (Lieut. Stewart) was in the eastern edge of the town of Crezancy with the mission of maintaining contact with the 38th Infantry. One platoon of Company A (Lieut. Ryan) was in the small woods at (190.2-259.5); the remainder of A Company held the woods at (190.258.8). The machine guns were near (191.5-259.6); two machine guns were at (191.0-259.5); two machine guns were near (190.2-259.6). The two other machine guns were placed near (191.1-259.2) for anti-aircraft firing. One 37 mm. gun was in the corner of the woods near (190.5-259.5); the third gun had no fixed location. The six light trench mortars under command of Lieuts. Winant and Barringer were distributed along the river between the Barrage Ecluse and Mezy and were not given any fixed location. One 75 mm. gun was placed in position near (190.7-259.5) in the front edge of the woods. It was sighted on the broken bridge at a point about midway between Mezy and Mont St. Pere because it was thought that the enemy would make use of this bridge if he should attempt to cross at night. Lieutenant Switzner, 10th Field Artillery, was in charge of this gun. Battalion Headquarters was in the woods at (191.0-259.4). The dressing station, dental office, battalion trains (supply and machine gun) and all kitchens for the units in the forward area were located in Crezancy.

The 3rd Battalion, 30th Infantry (less Company K), with two companies of the 38th Infantry attached, was deployed along the north edge of the Bois D'Aigremont and was given the mission of defending that woods. Companies B and D, 9th Machine Gun Battalion, were in the Bois D'Aigremont. Company D was to relieve Company B on the night of the attack. Both companies remained in support of the battalion which was holding the woods.

The 2nd Battalion, 30th Infantry, was garrisoning a portion of the army 2nd position near Courboin, but on the night of the attack it was in the western edge of the Bois D'Aigremont where it had arrived for the purpose of relieving the 1st Battalion, 30th Infantry, on the night of July 15-16.

Company A, 6th Engineers, was stationed in the southern part of the Bois D'Aigremont and in case of attack it was to report to the commander of the 30th Infantry as a reserve.

The 2nd Battalion, 10th Field Artillery, with the mission of supporting the 30th Infantry, was in position in the Bois D'Aigremont and Bois de La Jute.

EFFECTIVE STRENGTH.

The units within the regimental sector were very nearly full strength. However, the effective strength of the front battalion (1st Bn.) was reduced very greatly at the time of the attack, because several details were absent. These details consisted of a food detail, an engineer fatigue detail and a billeting party. The food for the 1st Battalion was cooked in Crezancy where the rear echelon of the battalion was located. One hot meal was served each night; the cooked food was carried by hand from the kitchens in Crezancy to the various units of the battalion as soon as it was dark, about 10:00 P. M. A large detail was necessary for this purpose and was furnished by Companies A, K and D, 30th Infantry. These companies also furnished a large fatigue detail for work at night under the supervision of the Engineer Officer of the sector. All men who could be spared, i. e., were not on other duty, were detailed for this work. These men were not accompanied by their officers or non-commissioned officers. This arrangement, which required Companies A, K and D to furnish fatigue details for engineer work was unsatisfactory and protest was made to the Divis-

ion Commander, but without satisfactory results. The food and fatigue details together employed about 350 men, reducing the effective strength of Companies A, K and D by about 46 per cent.—nearly half. In addition to these two details a billeting party consisting of four officers and several non-commissioned officers from Companies A and D had been sent to Courboin to arrange for billeting the battalion after it should be relieved by the 2nd Battalion, 30th Infantry, on the night of July 15-16.

THE GERMAN PLAN.

The 10th Infantry Division (German), with the 6th Grenadier Regiment and the 398th Infantry Regiment in the assault echelon, and the 47th Infantry Regiment in division reserve, was to cross the Marne on a front which corresponded very nearly with that held by the 30th U. S. Infantry. A part of the 6th Grenadiers was to cross at U3 in front of the 38th U. S. Infantry; the remainder was to cross at U2, west of Mezy. The 398th Infantry Regiment was to cross at U1 southwest of Mont St. Pere. Both of these regiments were to cross in boats under cover of darkness, move forward to the railroad embankment where they were to form for the attack and be ready to follow a rolling barrage which was to begin at daylight, 3:50 A. M. The advance of these two assault regiments was to be prepared by a preliminary bombardment which was to begin at 12:10 A. M. From the railroad the advance was to be made straight toward the Bois D' Aigremont. The boundary between the two assault regiments passed through the center of the sector held by the 30th Infantry.

One element of the 6th Grenadiers was to advance along the west edge of the woods held by Company K, 30th Infantry, the remainder of the woods being avoided. Two other elements were to capture the northern part of the woods held by Company D, 30th Infantry, then push on between Companies D and K to the ravine southwest of Crezancy. Crezancy was to be taken by sending a force to attack the north entrance to the town while other forces circled the town and made the principal attack from the south.

An element of the 398th Infantry Regiment was to surround Ru Chailly Farm after advancing from the railroad. Ru Chailly Farm having been taken, this element was to proceed along the boundary between the 30th Infantry (U. S.) and the 7th Infantry (U. S.) and take Fossoy from the rear. A part of this same force was to push on south between the Bois D'Aigremont and L'Herbennerie Farm to Le Rocq Farm and attack the woods east of Blesmes from the south. A greater part of the 398th Infantry Regiment was to push forward from the railroad between Fossoy and Crezancy, through the two small woods held as strong points by Company A, 30th Infantry, to the ravine southwest of Crezancy.

The plan was to bring the 6th Grenadier Regiment and the 398th Infantry Regiment together in the ravine southwest of Crezancy. Together these regiments were to push up the ravine and through the Bois D'Aigremont on a narrow front. The 175th Regiment of the 36th Infantry Division (German) was to cooperate with the two assault regiments of the 10th Infantry Division in reducing the Bois D'Aigremont. In order that it might do so it was to cross the boundary between the two divisions. It was planned to concentrate the three German regiments on the Bois D'Aigremont on a front of about two kilometers. After capturing the Bois D'Aigremont the three regiments were to push forward to their objective which was generally the line Gland-Longeurs.

The 47th Infantry Regiment (division reserve) was to cross the river on the pontoon bridge L1 and follow the assaulting regiments by bounds; the first position was to be in the woods north of Crezancy and the second position was to be in the Bois de Jute west from St. Eugene. Upon reaching the objective all three regiments of the 10th Infantry Division were to be placed in line, the 47th Infantry Regiment in the center.

In preparation for this attack the German troops had been drilled in the mechanics of crossing a river at the Vesle in the vicinity of Fismes. During the late afternoon of July 14th, 1918, the 6th Grenadier Regiment was moved to the cover of the woods about one kilometer east of Doly Mill; the 398th Infantry Regiment moved under cover of darkness and the woods to its assembly position in the vicinity of Champillon Farm; the 47th Infantry Regiment, division reserve, moved from Epiedo under cover of darkness to the assembly position in the west edge of Mont St. Pere. All regiments were in their proper assembly positions at about 11:00 P. M. From these assembly positions the battalions of the two assault regiments, 6th Gren-

adiers and the 398th Infantry Regiment, moved out independently to their assigned crossing places along the river bank and were ready to cross at about 12:00 midnight.

In the meantime and under the protection of darkness the pioneers (German) had assembled boats and bridging material and were prepared to ferry troops across the Marne at U1, U2 and U3 and to construct two pontoon bridges (L1 at Mont St. Pere and S1 at Mezy). The ferrying of the troops and the construction of the bridges was to be done under the protection of an artillery bombardment which was to begin at 12:10 P. M.

THE ACTION.

At 11:40 P. M., July 14, 1918, a message was received at 3rd Division Headquarters (American) from the 38th Corps (French) which stated, "Prisoners taken early this evening by a patrol from a division far to our right state the German attack will be delivered early tomorrow morning. Fire O. C. P. at once." This message was promptly relayed to all batteries and the Allied artillery bombardment began in the 3rd Division sector at about midnight a few minutes before the German preliminary bombardment began, 12:10 A. M. The fact that the American artillery was able to get into action ten minutes before that of the Germans had a very demoralizing effect upon the German units which were assembling to cross the river.

The 6th Grenadiers (German) crossed at U2, west of Mezy, and at U3, east of Mezy. The 1st Battalion and part of the 2nd Battalion, 6th Grenadiers, completed their crossing at about 2:40 A. M., suffering but slight losses. They moved forward in the darkness toward the railroad where they were to form and be ready to follow the rolling barrage which was to start at 3:50 A. M. By this movement the Germans advanced into Mezy and as far as the railroad which one of the battalions reached as early as 3:30 A. M.

The platoon of Company C, 30th Infantry (U. S.), which occupied a cellar in Mezy had several posts and patrols out along the river and in the town. These required about one-half of the strength of the platoon and were distributed over a large area. There were two machine gun crews, 30th Infantry in that vicinity and the officer who was in command of the Trench Mortar Platoon, 30th Infantry (Lieut. Winant), had several mortars near and in the town of Mezy. The machine guns and mortars, having been previously laid, fired on the north bank of the river in the hopes that they would be able to cause some damage. During the bombardment of Mezy and vicinity which preceded the occupation of the town by German troops it was impossible for a unit as large as a platoon or section to remain above the ground and permit of control and movement. In addition the night was very dark and the darkness was intensified by the flashing of the shells which blinded the eyes. The Germans occupied the town and vicinity during darkness and soon after the bombardment ceased. Under these circumstances the platoon leader, Company C (Lieut. Marsh), had to decide whether he would take the platoon out of the cellar and fight in the dark, not being able to determine friend from foe, or whether he would remain in the cellar until daylight when he would be able to see the enemy. The platoon commander decided to wait for daylight.

When daylight occurred a light fog existed which served to conceal the movements of the enemy. It gradually cleared and the riflemen, machine gunners and trench mortar crews (all 30th Infantry) found themselves confronted on all sides by small groups of Germans. This led to fighting at close quarters. The two machine gun crews (U. S.) were located very early by the Germans; one was put out of action by a direct hit from a mortar; the other was attacked by hand grenades and changed its position while part of the crew held the Germans off with hand grenades and pistols. After losing one mortar and their ammunition dump by a direct hit the crews of the trench mortar (U. S.) were assembled after daylight by their platoon commander (Lieut. Winant) who armed them with rifles which they found here and there and took a position in a trench in the vicinity of the railroad station in Mezy. On their right was Company G, 38th Infantry. Lieut. Marsh, who was in command of the rifle platoon, 30th Infantry, found, when daylight arrived, that small groups of Germans were on all sides. He collected as many of his men about him as he could and with free use of their rifles at close range they fought their way southward through the town from building to building as far as the railroad station, where they joined the trench mortar platoon, 30th Infantry and Company G of the 38th Infantry, with about eighteen men out of a strength of about sixty. This fighting of Lieut. Marsh had a disorganizing effect on the German units through which he passed.

From the trench which Lieut. Winant occupied near the Railroad station his men were able to fire down the railroad towards the west. The Germans moved through the wheat fields west of Mezy and north of the railroad by infiltration. When they reached the railroad they came under the fire of Lieut. Winant's platoon and many of them were killed. Some, however, passed on over the railroad and moved south.

In the meantime the part of the 6th Grenadiers (German), which had crossed in front of the 38th U. S. Infantry was being severely punished. The regiment (6th Grenadiers) was stopped. Its reserve battalion was brought into action. Its right and left flanks were "in the air." It had neither artillery nor mortar support. Its losses had been heavy. The rifle and machine gun fire of the Americans was accurate, effective and greatly superior to that of the Germans. The commander of the 6th Grenadiers, therefore, ordered the regiment to return to the north bank of the Marne for reorganization. Hence, at 5:00 A. M., one hour after daylight, the regiment was back on the north bank of the river except some remnants which were forced to take cover on the south bank and that fraction of the regiment which had passed through the wheat field to the left of Lieut. Winant's platoon and which was captured as will appear later. The 6th Grenadiers were assembled in the woods north of Charteves and there reorganized as a battalion of two rifle companies and one machine gun company under the command of Captain von Shreven. The effective strength on reorganizing was five officers and 107 men. The 6th Grenadiers took no further part in the battle.

Lts. Winant and Marsh remained in their positions during the day and retired with the 2nd Battalion, 38th Infantry, when that organization was ordered to withdraw to the rear at about 5:00 P. M.

The 398th Infantry Regiment (German) crossed the Marne in boats at U1 southwest of Mont St. Pere. The 1st and 3rd Battalions were in the assembly echelon and were the first to cross. The 1st Battalion had been disorganized during the assembly; the battalion commander had been wounded and succeeded in command by another officer. The 2nd Battalion was in regimental reserve (398th Infantry). The 1st and 3rd Battalions were met on the American side by a platoon of Company B, 30th Infantry, under the command of Lieutenant Savage. This platoon fought in the darkness in several small groups on the very edge of the river bank. Lieut. Savage was killed within a few feet of the water's edge while he was opposing the crossing with an automatic rifle. This platoon was eventually overwhelmed but not before it had so seriously checked the advance that the Germans were unable to reach their line of departure (railroad) in time to follow their rolling barrage. The 398th Regiment reached the south bank of the river at 4:00 A. M., daybreak. As it was now daylight the two machine guns, 30th Infantry, under command of Lieut. McElligott in position at the viaduct over the railroad about 300 yards northwest of Ru Chailly Farm, were able to bring effective fire on to those Germans who had crossed in their front. All three battalions of the 398th Infantry Regiment went forward to the railroad embankment which protected them from small arms fire. Here all three battalions were put in the assault since the 1st Battalion had been reduced in strength to the equivalent of one company. Before advancing from the railroad the regiment tried to establish contact with the 6th Grenadiers, which was supposed to be on the left, but failed to do so. The whereabouts of the 6th Grenadiers was unknown.

At this time, about 4:30 A. M., two platoons of Company B, 30th Infantry (Lieuts. Kingary and Turner), were stationed near the Barrage Ecluse. They discovered that a large number of Germans had crossed south of the Barrage Ecluse and had pushed eastward to the railroad embankment. This movement of the Germans cut the two platoons off from the remainder of their company. The two platoon leaders thought that they were about to be surrounded and decided to fight their way to Ru Chailly Farm where their company headquarters was located. They then moved southeast from the Barrage Ecluse to the railroad and when they reached the railroad they suddenly came upon a force of Germans concealed there. The Germans opened fire suddenly, killed many of the Americans, mortally wounded Lieut. Kingary and captured some of the men. Lieut. Turner retreated eastward along the railroad with some of his men and reached D Company in the woods north of Crezancy at about 6:00 A. M.

Shortly after 5:00 A. M. the 398th Infantry realized that it had strong resistance to overcome. The situation was as follows: Machine guns located on the viaduct 400 yards northwest of Ru Chailly Farm and on the commanding ground west and east of Ru Chailly Farm were directing a heavy fire on the 398th Infantry. One platoon of Company B, 30th Infantry, was firing from the vicinity of Ru Chailly Farm. Farther

to the south toward Fossoy troops of the 7th U. S. Infantry with some machine guns were also firing with good effect. In addition American artillery was firing on the Germans from the direction of Chateau-Thierry. The 1st Battalion, 398th Infantry (German), was directed to clean out the machine guns located west of Ru Chailly Farm. It attacked southward along the railroad. This movement was opposed by one platoon of Company B, 30th Infantry, at Ru Chailly Farm, which fought under the direct command of the company commander (Captain McAllister) and inflicted many losses on the Germans. One company of riflemen and one company of machine guns, 398th Infantry, attacked southward between the railroad and the river to clear out American machine guns on the German right flank. This company was opposed by troops of the 7th U. S. Infantry.

When the machine guns to the west of Ru Chailly Farm were overcome the platoon of Company B, 30th Infantry, at Ru Chailly Farm was without supporting fire. It was attacked by superior numbers, surrounded and overwhelmed. The platoon leader (Captain McAllister) was seriously wounded. Some of the platoon were captured and some escaped.

After a prolonged heavy fight the machine gun and rifle resistance on the right flank of the 398th Infantry was overcome and the regiment gradually worked its way forward and arrived at about 9:00 A. M. on the line:—north edge of Fossoy—west and north edges of the woods east of Brettonerie Farm. Here it was stopped by Company A, 30th Infantry, and troops of the 7th U. S. Infantry located in the vicinity of Fossoy and in the woods east of Brettonerie Farm. Lieut. Ryan, who commanded a platoon of Company A, 30th Infantry, located in a small woods about 700 yards east of Ru Chailly Farm, observed the advance of the Germans in approach formation. His platoon kept itself concealed within the woods and allowed the left of the German line to advance within about 30 yards, when it opened fire. The surprise effect was very effective, threw the Germans into confusion and drove them to cover. Lieut. Ryan's platoon suffered very few losses. This action threatened the left flank of the 398th Infantry Regiment, since there were no adjacent troops on its left. It maintained itself on this line for a time and endeavored to break the resistance in its front with its own machine guns and mortars. Company A, 30th Infantry, and the troops of the 7th Infantry kept up a continual fire with such good effect that the commander of the 398th Infantry (German) gave the order to withdraw to the railroad embankment at 11:00 A. M., and the movement was completed at about 2:00 P. M. It dug in under the protection of the railroad embankment which it had previously occupied. Here the regiment deployed for defense and prepared to repel a possible counter attack. Outguards were placed to the front and an advanced machine gun post was established at Ru Chailly Farm. Light mortars were set up in position behind the line along the railroad.

The 47th Infantry Regiment (German) was in division reserve. While in its assembly position in the gully in the western edge of Mont St. Pere it had suffered many losses from the American artillery fire and its morale had been badly shaken. It left its assembly position at 3:50 A. M. and proceeded to the pontoon bridge L1 where it was to cross. The battalion was ordered to move forward after crossing to the Mezy-Mont St. Pere Road, pass Mezy on the left and assemble in the southern part of the woods just to the north of Crezancy. The 1st Battalion, 47th Infantry (leading battalion) arrived at the bridge soon after 4:00 A. M. The battalion commander had difficulty getting his battalion to the bridge because the American artillery was shelling the town of Mont St. Pere at the time. He crossed the bridge with two rifle companies and one machine gun company. The remainder of the battalion was to follow as soon as it could be assembled. The 6th Grenadiers had been given the mission of clearing any resistance from the village of Mezy and the wooded section south of the bridge L1. Therefore the commander of the 1st Battalion, 47th Infantry, led his battalion in route column across the bridge and, upon reaching the southern bank, turned east through the wheat field toward the Mezy-Mont St. Pere Road. When the battalion, still in route column, had gone about 200 yards from the bank of the river Lieut. Gay's platoon, of Company C, 30th Infantry, which was stationed south of the bridge L1, opened fire at a range of about 300 yards. At the same time the machine guns near Lieut. Gay's position and those nearer Mezy began firing. The result was very heavy losses for the Germans, the battalion adjutant was killed and the medical officer and commander of the leading company were badly wounded at the first firing. The men of Lieut. Gay's platoon kept themselves well concealed but at the same time kept up their deadly fire. The Germans concealed themselves in the wheat field but many of them were hit because the Americans fired into the wheat where they knew the Ger-

mans were. The battalion commander (German) ordered his six machine guns to return the fire, but on setting the guns up it was found that the wheat was so high that the gunners could not direct their fire. The Americans continued their fire, using some rifle grenades, and losses continued to occur in the German ranks. The battalion was helpless because its trench mortars had been left behind with the combined combat trains and accompanying batteries of the regiment, and the battalion commander decided to retreat to the north bank of the river.

At this time, about 5:00 A. M., the 2nd Battalion, 47th Infantry Regiment (German) was in Mont St. Pere on both sides of the road leading to the bridge L1, taking refuge behind any cover that would protect them from the artillery fire which was falling in the town and in the vicinity of the bridge.

The 3rd Battalion, 47th Infantry Regiment (German), reached the crossing place U2 at about 5:00 A. M. and there found considerable numbers of the 6th Grenadiers (German) who were on the north bank of the Marne. Here the 3rd Battalion was punished by American artillery fire directed on Charteves and the woods north of Charteves.

At the headquarters of the 1st Battalion, 30th Infantry, it was realized soon after the German artillery bombardment began at 12:10 A. M. that the attack was in progress. The signal equipment was tested a few minutes after the bombardment began and was found to be useless. A rocket was sent up calling for the artillery concentration across the sector along the north bank of the Marne. Due to the darkness and intense German bombardment it was impossible to know whether the American artillery barrage was falling, and therefore other rockets were sent up from time to time. Runners were sent to Companies A, K and D informing them that the expected attack was in progress and directing them to hold their positions.

A runner from Company C, 30th Infantry, arrived at battalion headquarters at about 2:10 A. M. He was very much excited and after a short rest reported that at the time he left Mezy many Germans were in the town and that they greatly outnumbered Americans there. He also stated that he had passed many of the enemy between Mezy and battalion headquarters in the darkness. He seemed very calm after a time and was positive that the information he had given was correct. Another runner from Ru Chailly Farm (Company B) arrived a few minutes later and stated that the Germans had crossed the river opposite that place and had already destroyed two platoons of Company B. The company commander requested reinforcements at once. The folly of attempting to move troops in the woods, darkness and intense artillery bombardment was realized and it was decided that no movements of troops would be ordered. A messenger from Company A reported that the officers in his company had been killed. Runners sent out from battalion headquarters for information never returned. As soon as it was light four officers' patrols were sent out for information. One of the officers, a battalion intelligence officer, returned and reported that the German skirmish line was only fifty yards in front of the edge of the woods.

In view of these alarming reports it was decided to move the battalion headquarters about 500 yards to the rear to a ravine west of Crezancy where a better line on the action could be had and which would be more accessible to runners and where control would be facilitated. Messages were sent to Companies A, K and D informing them of the change. The company commander of Company D construed the message to mean that the battalion was withdrawing and he accordingly gave the order for his company to march through Crezancy toward Le Chanet and the Bois D'Aigremont. His company was not disorganized, was not even attacked, and could have remained in position all day. It was placed in position on the high ground just southwest of Crezancy at about 10:00 A. M.

In reply to a message from the regimental commander, 30th Infantry, for a report of the situation, indicating that he had not received the messages which had been sent to him during the previous five hours, the commander of the front line battalion reported at about 5:00 A. M. that the losses of the battalion were very great; that the two companies (B and C) which constituted the outpost along the river were a total loss; that the survivors of these companies were stragglers. He also reported that communication within the battalion had been impossible. He advised that the artillery fire its 502 barrage near the railroad at once. He also reported that the enemy's rolling barrage had passed and that the enemy was not following it.

Up to this time practically no information concerning the situation had come to the regimental commander because all means of communication had failed except runners, many of whom lost their way in the

darkness or were killed by the bombardment. The fact that the German rolling barrage had passed without the German following it indicated that they were having their troubles and that their plans were not going well. The regimental commander gave orders for the stragglers of the front battalion to be assembled at Le Chanet and held there as a reserve. The request for the artillery barrage was immediately given to the artillery liaison officer (Lieut. Hayes) and was promptly complied with. When the artillery barrage was put down some of the shells fell on Lieut. Gay's platoon (Company C) which was located in the small woods opposite Mont St. Pere and between the railroad and the river. This platoon had previously driven the 1st Battalion, 47th Infantry Regiment (German), back to the north side of the Marne and at this time was not being attacked. It had had few casualties. Our own artillery caused them more losses in a few minutes than they had had up to that time. The platoon commander (Lieut. Gay) was forced to evacuate his position. He led his platoon southwest to the small woods along the railroad track where another platoon of Company C, 30th Infantry (Lieut. Eldred), was located. Some of their own artillery shells were still falling there and the two platoon leaders decided to move east to their company headquarters near Mezy. Soon after they started along the railroad, a group of Germans, about 75 in number, appeared at close range running across the railroad track. The men of the two platoons opened fire with good effect and pursued the Germans into a small group of trees. Here the Germans put up their hands and surrendered. With this large body of prisoners they continued on their way. They had not gone far when they surprised another group of Germans who had concealed themselves in a ditch. This group surrendered without opposition. The total number of prisoners at this time was about 135 including five officers; all were of the 6th Grenadiers (German) who had previously crossed the railroad west of Lieut. Winton's platoon. The two Lieutenants now decided to march their platoons with their prisoners back to battalion headquarters and to the rear.

About 8:00 A. M. the 10th Infantry Division (German) ordered all units of the 47th Infantry Regiment to cross the Marne, for the second time, at U1 and attack northeast to drive out the machine guns on the railroad embankment and in the woods south of the bridge L1. The 2nd Battalion, 47th Infantry Regiment, was to be the first to cross. The battalion commander made a personal reconnaissance and came to the conclusion that the plan of the division would lead to inexcusable losses due to the fact that there was little or no cover by which the crossing at U1 could be reached and the movement would therefore be observed and shelled by the American artillery. He asked his regimental commander for permission to cross on the bridge L1 and his request was granted. He then made a co-ordinated attack and met with little or no resistance since the platoons (30th U. S. Infantry) which had previously held that ground had retired several hours before. The 2nd Battalion, 47th Infantry (German), moved directly south from the pontoon bridge L1 and reached the railway and the woods just south of the railroad at about 12:15 P. M. Here the battalion remained during the day establishing contact with the 398th Infantry Regiment (German) on the right.

The 3rd Battalion, 47th Infantry Regiment (German), which had not yet crossed the river but which had been placed in cellars during the day in Mont St. Pere, was ordered at 5:30 P. M. to cross the river, extend the line of the 2nd Battalion, 47th Infantry, to the left and occupy and hold the town of Mezy. At 7:00 P. M. two companies, 3rd Battalion, 47th Infantry, crossed on the bridge at L1 and three companies crossed at U2. The battalion moved forward cautiously and established a line along the railroad and the southern and eastern edges of Mezy, connecting with the 2nd Battalion, 47th Infantry, on the right.

The 1st Battalion, 47th Infantry Regiment, remained in Mont St. Pere.

Shortly after 6:00 o'clock on the morning of the 15th of July (day of battle) more detailed information concerning the situation was received at regimental headquarters, 30th Infantry (U.S.) This information indicated that the Germans were not advancing from the railroad. The line of resistance of the front battalion (Companies A, K and D) was not considered to be in danger. The situation of the regiments on the right and the left was unknown because communication had been impossible. It was therefore decided to hold all the troops then in the Bois D'Aigremont in readiness to defend that woods until the Germans should indicate their next move and the situation in respect to the neighboring regiments should be known. In order to clear up the situation the regimental commander, 30th Infantry, made a personal reconnaissance along the north and east edges of the Bois D'Aigremont at about 9:00 A. M. This reconnaissance together with reports received from the front battalion gave the impression that the attack was stopped for the time being.

At 10:00 A. M. the following message was received at regimental headquarters, 30th Infantry, from 3rd Division headquarters: "9:30 A. M. French division directed to counter attack through Bois D'Aigremont." This message indicated that the French were going to supercede the Americans. This was unexpected and no necessity for such action existed.

At about 10:20 A. M. a captured German officer and map which showed the German plan of advance arrived at regimental headquarters, 30th Infantry. From a study of this map, made immediately, it was learned that three German regiments (398th, 6th and 175th) were to attack the Bois D'Aigremont in conjunction.

This information convinced the regimental commander, 30th Infantry, of the importance of concentrating his efforts on holding the Bois D'Aigremont and he ordered all units then in that woods (2nd and 3rd Bns., 30th Inf: two companies; 38th Inf: Co. A, 6th Engineers; Cos. B and D, 9th M. G. Bn.) to take advantage of every means to improve their positions pending the arrival of the French or the Germans. Company K, 30th Infantry, was returned to the 3rd Battalion, 30th Infantry.

The French division did not make its counter attack through the Bois D'Aigremont. By noon it was known that the Germans had not advanced south of the railroad except in the vicinity of Ru Chailly Farm. in the meantime three companies of the 4th U. S. Infantry had arrived in the Bois D'Aigremont and were attached to the 30th Infantry as additional reserve.

The situation remained at a standstill during the afternoon. About the middle of the afternoon it was definitely known that the German attack had failed in the front of the 30th Infantry. The regimental commander then gave his attention to reoccupying the forward area.

Company L was sent from the 3rd Battalion, 30th Infantry, in the late afternoon, to occupy the line of woods northwest of Crezancy and was ordered to send patrols to the river after dark. Company I of the same battalion was sent to Fossoy with orders to assist the 7th Infantry in that vicinity. One-half of Company I remained in Fossoy throughout the night, the other half being ordered back to its position in the front of the Bois D'Aigremont.

Company G from the 2nd Battalion, 30th Infantry, occupied the woods east of Fossoy in the afternoon of July 15th and remained there during the night.

Company A, 38th Infantry, and two platoons of Company M, 4th Infantry, occupied the town of Crezancy during the night of July 15-16.

At 9:30 P. M., July 15, 1918, the 10th Infantry Division (German) issued orders for the 47th and 398th Infantry Regiments to withdraw to the north bank of the Marne under cover of darkness from their positions along the railroad where they had remained during the afternoon. This order was carried out by both regiments during the night.

At 3:00 A. M., July 16, 1918, the 2nd Battalion, 111th Infantry, 28th U. S. Division, arrived in the Bois D'Aigremont, relieved a part of the 30th Infantry and occupied the area near the river during the day of July 16th.

During the 17th and 18th of July the remainder of the 111th U. S. Infantry arrived in the sector and relieved the 30th Infantry, which was assembled in the vicinity of Essises for reorganization.

LOSSES (INCLUDING KILLED, WOUNDED AND MISSING)

German	Officers	Enlisted men
6th Grenadiers	21	823
47th Infantry	17	376
398th Infantry	12	623
	Total	1822
American		
30th Infantry	25	1400

COMMENTS.

1. The plan of defense of the regimental commander, 30th Infantry, was an excellent one. He analyzed his problem and discovered the decisive factors involved, viz: concealment, observation and terrain. Upon these factors as a basis he formulated a plan of defense in depth which conforms to the teaching of all our military schools today. He adhered to his original plan throughout the battle. In spite of the fact that he was encouraged from higher headquarters to counter attack across the open ground between Fossoy and Mezy he did not do so. This matter had been the subject of consideration and discussion even before the battle and the regimental commander had not been in sympathy with a counter attack to the river front in daylight for the following reasons:

(a) The ground was so exposed to the direct fire of the German batteries and machine guns from the hills north of the river that the losses would have been out of all proportion to any results obtained.

(b) The attack over such a large area would have involved the use of one battalion at the minimum and would have weakened the main line of resistance (woods line) which was to be held at all costs.

(c) As long as the Germans occupied only the low ground between the river and the "aqueduct line" (line held by Companies A, K and D), he had gained no advantage. The reason given by the regimental commander for not making a counter attack over the open ground near the river are logical and show that he had a clear-cut and definite conception of his mission and knew exactly how he was going to accomplish it from the beginning. In so far as the 30th Infantry was concerned, the battle never reached the climax for which the regiment was prepared.

2. The artillery supported the 30th Infantry efficiently even after numerous casualties and damage to its guns and signal equipment. This was a very important factor in the success of the 30th Infantry and was principally due to the fact that the regimental commander kept constantly in close liaison with the batteries and gave frequent missions to his supporting artillery directly through the artillery liaison officer.

3. The machine guns near the river were put out of action very early but inflicted heavy losses on those of the enemy who were the first to cross. These guns on the first line of resistance did good work at long range later in the afternoon.

4. The riflemen on several occasions opened fire on the enemy at close range and with deadly surprise effect. In one case the enemy was allowed to come within 30 yards before the riflemen, who were concealed, began firing.

5. Much of the information transmitted during the battle was incorrect. Individuals reported what they believed or imagined and not what they actually knew. This is natural in combat. In this case misleading reports were carried to the rear by stragglers. These reports were accepted by the higher commands and incorporated in official reports, thus creating incorrect impressions.

6. The signal equipment which was installed in this area by both Americans and Germans was of no value after the attack began. Communication was possible only by means of runners and this was slow and broke down frequently.

7. There was straggling because of conditions conducive to it. The food carrying details and fatigue details with the engineers were caught in the bombardment during the night and were scattered and separated.

8. Much information of value was obtained from prisoners who were sent to regimental headquarters.

9. A message sent from the battalion commander to one of his company commanders was misunderstood.

10. The initial location of the P. C. of the 1st Bn. was incorrect. This should have been evident when its location was selected.

11. A part of the SOS barrage fell on some of the defenders. This always has a demoralizing effect.

12. The German plan for attack was an excellent one. Their arrangements for crossing the river were good. Their idea of forming along the railroad as a line of departure and following a rolling barrage

from that point was good. They failed because they had miscalculated the resistance that they would have to overcome between the river and the railroad and the time necessary to overcome it, and because they had not succeeded in concealing the time of the attack, thus allowing the American artillery to begin their counter preparation fire several minutes before the German bombardment began, which had a demoralizing effect on the German assaulting troops.

13. Although his division orders forbade it, one of the German officers who crossed the river during the morning carried with him a map showing the plan of advance. This map was in the hands of the opposing American regimental commander (30th Inf.) by 10:00 A. M.

14. When the commander of the 1st Bn., 47th inf. Regiment crossed the bridge L1 early in the morning he moved out on the American side in a column of squads on the assumption that the resistance in his front had been cleared away by the 6th Grenadiers, who were to precede the 47th Inf. He needlessly exposed his force to the annihilating fire of one of the platoons of Co. C, 30th Infantry, and was compelled to return to the north bank of the river. He had violated the principle of security and reconnaissance. Had he sent scouts or small patrols as far as the woods before he crossed with the column he would have known the situation and could have made co-ordinated effort and crossed under protection of fire from his own machine guns.

LESSONS.

1. Plans for combat should be based on the decisive elements of the situation. The plan should be simple and thorough and then adhered to throughout the action.

2. In combat the Colonel of the Infantry Regiment should arrange for close artillery support and use it to assist his battalions by timely co-ordination of effort.

3. Machine guns should be distributed laterally and in depth over the defensive zone.

4. Surprise fire of small arms at close range is very effective and demoralizing.

5. Information transmitted by friendly personnel during decisive combat must always be authenticated before being accepted as correct. This necessity, frequently impracticable of fulfillment, often forces commanders of combat units to "leap in the dark."

6. Communication during *decisive* combat is difficult and slow. Frequently runners will be the only means by which communication can be maintained.

7. Conditions which are conducive to straggling should be reduced to a minimum and preventive measures must be adopted before the combat begins.

8. The examination of prisoners by commanders of front line regiments is important.

9. Messages must be unmistakably clear and should always be written.

10. P C of combat units should not be located on the assault line.

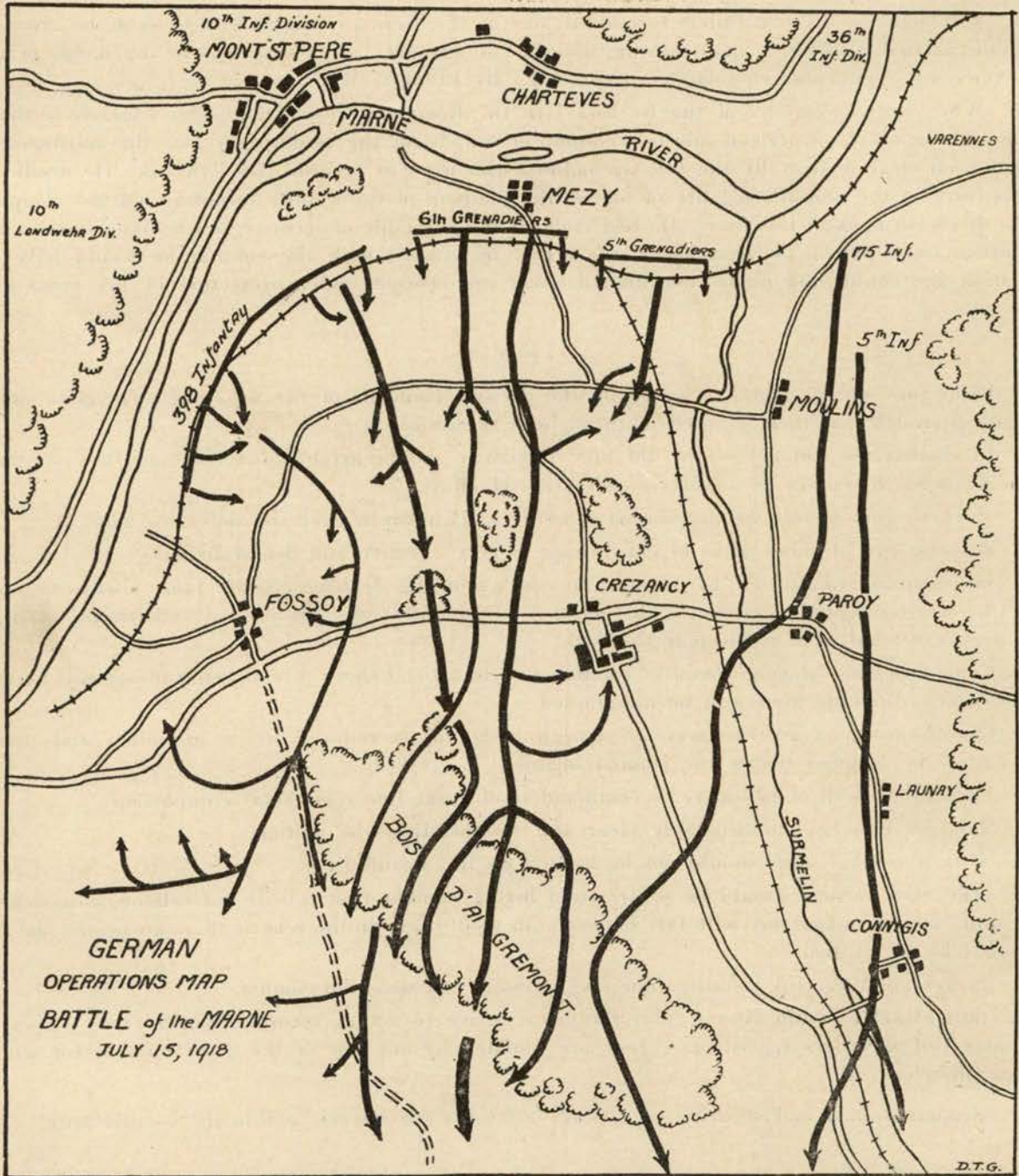
11. The SOS barrage should be so arranged before combat that it will not fall on areas where our security units are stationed but will fall between, in front of, or in the rear of these areas, and the support units should be so notified.

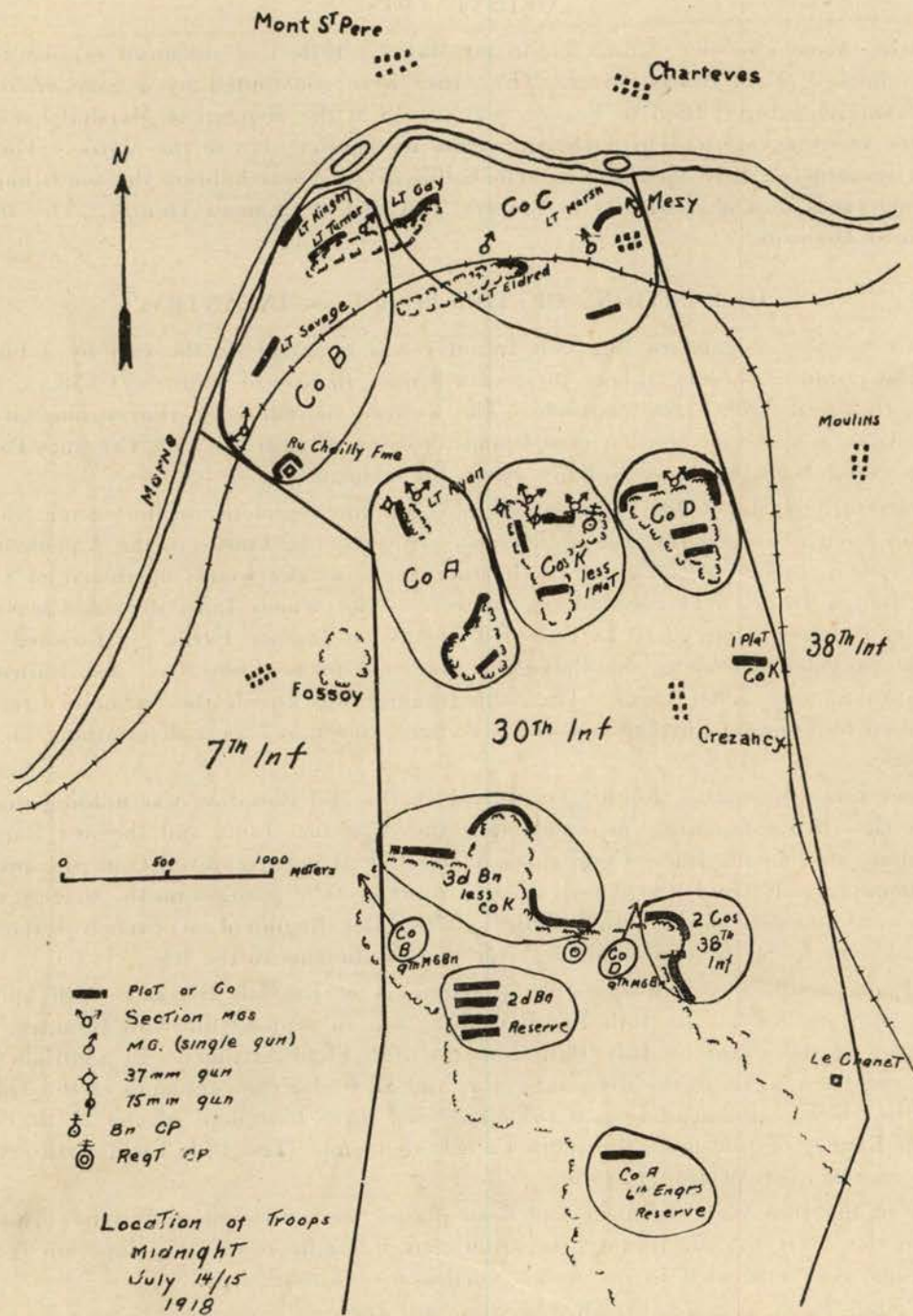
12. Secrecy and careful co-ordination are necessary for successful combat.

13. Subordinates should always "play the game" strive to act in accordance with the general plan. Secrecy may fail if orders regarding secrecy are violated by any one of the great number for whom the orders are intended.

14. Reconnaissance and security are always necessary for reserves within the combat area.

References—Report of Gen. Pershing; History of the 3rd Div.; Field Orders, 3rd Div.; Report of C. G. 6th Brig.; The Watch on the Rhine (3rd Div. Publication); Report of officers commanding units during the action; War Diaries of units engaged; Special Report "Operations of the 3rd Div., July 15-31, 1918; Letters from Col. Lanza and Col. Butts; War Diaries of the 10th, 47th, 398th and 6th German Regiments.





OPERATIONS OF THE THIRTY-EIGHTH INFANTRY.
JULY 15 TO 18, 1918.

—By—

Major Maxon S. Lough, Infantry
ORIENTATION.

The Germans' Aisne offensive, which began on May 27, 1918, had advanced rapidly toward Paris but was temporarily checked at the Marne River. The Allies were confronted by a grave crisis. To meet this crisis the entire American force, then in France, was placed at the disposal of Marshal Foch. One result of this move was the hurrying of the Third Division from its training area to the Marne. Therefore when the offensive of the Germans on July 15th was launched, this division was holding the south bank of the Marne from a point 1,000 yards west of Varennes to Chierry, just east of Chateau Thierry. The 38th Infantry was a part of the Third Division.

DISPOSITIONS OF THE 38TH U. S. INFANTRY.

The defensive sector assigned to the 38th Infantry was bounded on the east by a line running from the Marne River at point (92.9-61.1), thence to Moulin Ruine, thence to point (94.0-58.5), thence to Monthurel, exclusive, thence to Montbazin, inclusive. The western boundary of the regimental sector was as follows: Marne River at east end of Charteves Island, crossing of railroad with Crezancy-Paroy, Le Chanet, Le Donjon Farm, Montalvart, La Fosse Gaudier Farm, all inclusive.

The divisional orders, dated July 2nd, which assigned the regiment to the sector, required that the terrain be organized with two general lines of defense. The first line known as the Aqueduct Line, extended from Hill 186 to Fossoy, thence to and along the northern edge of the woods northwest of Crezancy, thence to Moulins and Moulin Ruine. The second line, known as the Woods Line, extended across the sector of the regiment from Le Rocq Chateau to Le Souvrien, thence to Janvier Farm. A forward line of isolated strong points was provided for along the Paris-Metz Railroad to be known as the Railroad Line. The frontage was approximately 1,900 yards. The 38th Infantry was astride the Surmelin Creek, which, while fordable and crossed by numerous bridges, should have been considered as a determining factor in any general plan of defense.

The regiment was disposed in depth. On July 14th the 2nd Battalion was holding the Railroad Line, the 1st Battalion (less two companies) disposed along the Aqueduct Line, and the 3rd Battalion (less one company) was along the Woods line. Companies A and C had been removed from the jurisdiction of the regimental commander, and had been placed along a short bretelle position on the western edge of the Bois de la Jute; they were attached to the 30th Infantry. The 131st Regiment of French Infantry was on the right flank and the 30th U. S. Infantry held the river and the heights to the left.

The 10th Field Artillery was assigned to the support of the 6th Brigade (30th and 38th Infantry regiments). The 1st Battalion of the 10th Field Artillery was to support the 38th Infantry. This battalion took over the duties of the sector on July 10th from the 76th Field Artillery. In addition to the 10th and 76th F. A. regiments, there were, in the division sector, and all under the command of the 3rd F. A. Brigade, one battalion of the 334th regiment of French 155 mm. guns, three battalions of the 214th French, using 75 mm. guns and one battery of 105s from the 120th French regiment. The 18th Field Artillery was just moving into position on the night of July 14-15th.

One battery of the 10th Field Artillery had been placed well forward and some distance within the sector assigned to the 131st French Infantry in order that it might sweep the slopes in front of the 38th Infantry. The guns were concealed in the woods northwest of Janvier Farm.

Company C, 6th Engineers, was attached to the 38th Infantry, and was assigned to a position along the Aqueduct between Le Chanet and Courtlin. Company, B of the same Engineer regiment, was also attached to the 38th and took position, as part of the regimental reserve, on the hill west of Courtlin.

Company A, 9th Machine Gun Battalion, was in support of the 38th Infantry. The regimental machine gun company was at the disposal of the regimental commander. Both of these companies had their active and reserve guns in position. This placed thirty-two machine guns in the sector and they were dis-

posed in depth in such a way that they could cover the entire forward area. A considerable number were dug in on the slopes east of the Surmelin.

The 37mm. guns were placed on the slopes east of Moulin where it could sweep the river and both Banks.

AMERICAN PLAN OF DEFENSE.

Divisional orders designated the Aqueduct Line as the main line of defense. This line was to be held firmly in case of attack. The Woods Line was to be constructed in such a manner that it would afford protection for the reorganization of the advanced lines in case they were ordered to withdraw. This line was to be garrisoned by the regimental reserves and was to provide a line of departure for counter attacks in case of need. The mission of each front line unit was to hold the ground entrusted to it and lost ground was to be immediately regained by counter attack. In case the enemy succeeded in effecting a landing on the banks, the strong points along the river and Railroad Line were to be held in order to break up hostile formations.

A few days subsequent to the promulgation of divisional field orders No. 7, the 38th Army Corps (French), under which the division was still serving, issued instructions to reenforce the line along the river and the railroad, and that a most stubborn resistance would be made at these most advanced positions. To quote from General J. T. Dickman's report, "instructions from the corps were to defend the river with one foot in the water." General Dickman considered this to be a tactical error, and whereas the corps order was published to the regimental commanders the execution thereof was left, to a certain extent, to their own judgement. The result was that the 30th Infantry, on the left held the banks of the stream lightly with an outpost, their first main line of resistance being organized about 1800 to 2200 yards south of the river. The 38th Infantry held the river and the railroad in strength with the intention of preventing a crossing at that place. The dispositions of the two regiments were inspected by both the division and brigade commanders, but apparently no effort was made to coordinate the different plans of defense.

In pursuance to the orders of the 38th Army Corps the Colonel of the 38th Infantry placed three companies on the Railroad Line with orders to hold this line at all costs. Company G held the left, using one platoon nightly on the river bank and three in support behind the railroad embankment. Company H, in the center, placed two platoons on the river and two in support. The right of the Railroad Line was taken over by Company E. This Company had three platoons in line and one garrisoning the town of Moulin. Company F, which was the battalion reserve, was later assigned the task of preparing and, in case of necessity, of occupying a system of fire trenches along the forward slopes of Hill 231. These trenches were sited in such a manner that they would cover the right flank of the forward battalion in case the enemy gained a footing to the east.

The line of observation along the river consisted of isolated rifle and machine gun pits. The garrisons of this line were plentifully supplied with rifle ammunition and hand grenades and had orders to hold their positions and prevent the landing of the enemy in force.

The Railroad Line soon developed into an almost continuous position from which rifle fire could be delivered. Actually occupying this line were the three companies less the platoons sent forward at night to cover the river. The engineer details assisted in the preparation of the defensive positions along this line.

The 1st Battalion was prepared to defend the Aqueduct Line, but under the plan of stubborn resistance from the moment the enemy set foot in the sector, these companies were also prepared to launch counter attacks when and where needed.

The 3rd Battalion (less Company K) was assigned the task of constructing the Woods Line and of preparing the counter attacks which were to progress along the slopes to the east of the Surmelin and into the valley from the vicinity of the woods south of Moulin Ruine. It was expected that the attack of the Germans would be made under the cover of darkness and smoke and preparations were made with that in view. Assembly points and routes were carefully marked. In some cases abandoned telephone wire was strung with the idea that the troops possibly could follow the routes by keeping physically in touch with the wires.

Company I was disposed across the valley in a thin line to prevent infiltration. Companies L and M were placed well on the slopes of the Surmelin to the east and slightly south of Launay. A series of fire trenches were dug facing to the northwest and preparations were also made to resist pressure from the east.

In case of a withdrawal of the advanced elements of the 38th this position was to be held to the last. Heavy fire could be directed into the valley from these positions and the roads made impassible. This plan was to go into effect only in case the withdrawal from the forward positions was made under orders and no counter attacks were made. In case the troops to the right gave way these companies were to face in that direction and resist the advance of the enemy.

Company K was withdrawn from the command of the battalion commander and placed in a regimental reserve with station in the woods in the vicinity of Courtlin.

The attached company of engineers was in charge of the construction of the shelters and defensive works throughout the area. To aid in this work, the Engineer Officer was authorized to call upon the infantry battalions for large details of men who work under the direct supervisions of Engineer officers and noncommissioned officers. The details were to report after dark and return to their organizations just before daylight. All engineer units at work or scattered though the area, would, in case of attack, be formed in squads or detachments by the officers and noncommissioned officers in charge and would report to the nearest Infantry commander for orders.

The machine gun defense consisted of thirty two guns, dug in along the slope on both sides of the Surmelin, a few along the rivr bank, and two or three sections covering the roads to the south. All ground between the Aqueduct line and the river could be swept with fire by day or by night. The emplacements were coordinated in such a way that cross fire could be delivered against all important points. Machine gun SOS barrage lines were provided for, first, along the banks of the river, and a second line along the railroad embankment.

Artillery barrage lines were to be laid first on the banks of the river, the second barrage on the railroad line and an eventual barrage was to fall in front of the Aqueduct line. The authority to demand these barages was reserved to the regimental and battalion commanders.

Each battalion command post was connected with each of its companies by telephone. Battalion C P was connected with regimental headquarters by the following means of communication:-

- Telephone Lines,
- Buzzer Lines
- T. P. S. (Ground Wireless)
- Light Projectors
- Runners
- Rockets

An elaborate system of rocket signals between the Infantry and the Artillery was prescribed and tested from time to time in order that comunication between the two branches might be rapid. Telephone communication was also available between battalion commanders and the supporting artillery. An Artillery Communication Officer was with each infantry battalion commander.

Great care was taken to prevent the enemy observation posts from observing the new works and the dispositions of the troops. His advantage in having the higher slopes overlooking the valley made this difficult but the fact that the Germans were unable to determine the exact location of the troops and the stength of the forward areas testified to the value of the precautions. When the attack actually started the German artillery failed to reduce or even neutralize the advanced positions of the riflemen.

The 37mm gun was assigned a battle position on the high ground east of Moulin. The gun did not fire from this position until July 15th but delivered its fire from alternate positions.

At least two emplacements were constructed for each machine gun and piece of artillery. No fire was to be delivered from the battle emplacement until the actual German attack began.

The general plan of connection within the Corps specified that each unit would be responsible for and maintain the connection with his neighbor on the right.

In pursuance to this requirement, combat and connecting groups were established for the purpose of connecting the Americans with the French on the right. Each group consisted of one half platoon of American Infantry and one section of French Infantry. An American officer was with each group although one of the groups was under French command. The groups were disposed as follows:-

Group A: On main road Varennes-Moulin at a point 660 yards west of Varennes.

Group B: At Moulin Ruine.

Group C: On Paroy-Mon Rouge road at point (94.0-58.5).

In addition to the above there was a mixed connecting group at Le Chanet Farm which was entrusted with the mission of maintaining connection between the 30th and 38th Infantries.

As an additional means of communication the reserve battalion sent several runners to report to the French battalion on the right. These runners were instructed to bring any news of importance to the battalion commander. As it turned out these runners were especially valuable as they brought the news, late in the day on July 15th, of the French whereabouts and enabled the 38th to regain contact with them near Janvier Farm.

GERMAN ARTILLERY

Before midnight of July 14-15 all the assigned German batteries were in position. They had been forbidden to fire until the commencement of the preliminary bombardment. The German bombardment opened at 12:10 A. M. Approximately ten minutes before that hour an intense counter preparation had fallen upon them. This indicated that the Allies had been informed of the place and hour of the attack. Of course it was too late to make any changes in the plans and the bombardment by the German artillery was opened as scheduled. This was intense and covered all woods, roads fields, and suspected positions. All calibres of shells up to and including 210mm, were employed, the smaller sizes on the forward areas, the larger sizes on the towns in the Surmelin valley and to the south. Intermingled with the high explosive shells were a large number of those containing gas. Lachramatory and non-persistent toxic were used in the forward areas, and a large percentage of mustard gas projectiles were thrown into the rear areas.

As the crossing was to be made under cover of darkness and smoke, a minute time schedule had been prepared. All fire was delivered under the provisions of this schedule up to 10:00 A. M., at which time the artillery was released in order to take on other missions. The fire lifted from the strip of land 330 yards south of the river in time to enable the infantry to cross and form up on the land. The rolling barrage started from the railroad at 3:50., for twenty minutes prior to this hour a concentration was to be placed directly on the railroad.

AMERICAN ARTILLERY

During the evening of July 14th the American artillery was busily engaged in throwing gas into the enemy positions in the woods. At 11:40 P. M., while this firing was in progress, telephonic orders were received from Division Headquarters stating that a French raid, further to the east, had captured a German officer who had maps and documents on his person that conclusively proved that an attack was to be made before daylight, and that a general counter preparation would be delivered immediately. The actual firing began at approximately midnight. This counter preparation anticipated the enemy bombardment by about ten minutes.

At this time all the American and attached batteries were in position and ready to fire, except two battalions of the 18th field Artillery which were moving in. All the guns of these two battalions had reached their positions except one battery. The emplacements were unfinished but in many cases were nearing completion when the enemy fire opened. This fire caught the one battery that was late in arriving on the road and due to injury to material and personnel it was possible to get only one howitzer into firing position. Ammunition was finally brought up to the gun and it opened fire at 8:00 A. M. The dump of the 18th Field Artillery was blown up at 2:00 A. M. and the fire of the regiment had to be suspended until 6:00 A. M. when additional ammunition was received and fire resumed on the bridges that the Germans were throwing across the river.

The consolidated fire of the artillery during the period covered by the Germans in moving from their assembly points to the river was extremely effective. A veritable curtain of fire was placed between the river and the exits from the woods. Large numbers of pontoons were destroyed before they reached the water.

The infantry was scattered and shaken in spirit. This, together with the unexpected infantry resistance on the river bank, served to delay the progress and when the rolling barrage started from the railroad line on schedule time, the assault troops were not in position to follow it.

GERMAN APPROACH.

At about 10:30 P. M. on July 14th the German regiments started their forward movement from the assembly points in the woods. The only exception to this was the 6th Grenadiers which had moved some distance toward the river during the day. The final assembly points, located 400 or 500 yards from the river were reached after midnight in some cases. No shelters or trenches of any kind had been prepared at these positions and the troops were exposed to the American counter preparation, and many casualties resulted.

Movement in the woods was extremely slow. Some of the units, which were allowed two hours to move about three and one-half miles were unable to arrive on time. The reconnaissance had been insufficient and units became lost. The assault troops were already tired and nervous by the time the river was reached.

The engineers, in several places, were unable to get the boats to the river and had to call upon the infantry for assistance.

All wire communication was broken almost immediately and it was impossible to learn what was taking place in the sectors of the adjoining units. Reports from front lines were not received at regimental headquarters. In the 10th Division every wire was cut by fire at 12:20 A. M. Before 2.00 A. M. the lamp stations and the wireless was shot to pieces.

The crossing of the river was delayed and as everything was dependent upon the time schedule this was serious and demonstrated the fallacy of this system.

THE AMERICAN

Ever since the 3rd of July the American Infantry had been expecting an attack. Almost every day orders had been issued from the Corps and Division to take up the alert positions and be prepared to repel the attack. The troops were becoming more or less "blaze" with regard to the alert signals although they were thoroughly convinced that the attack would soon be launched against them. On the 13th and 14th of July the ominous silence of the hostile artillery had strengthened the idea that the attack was about due. Even though the Division had ordered especially large working details away from the battalions and the alert signal had not been issued as usual all possible precautionary measures had been taken by subordinate commanders. Before the working details left their organizations they were given careful directions as to what to do in case the attack started before their return.

The Division received advance definite news that the attack was coming but notified only the artillery. As a result all the working parties were caught under the bombardment some distance from their battle positions. Several hundred of these men had been instructed, and did, immediately take up a position along the woods line in trenches that had been partially prepared for them. They were returned to their companies after the bombardment abated. Other details, working the areas further forward, were immediately reported to the nearest infantry commander for duty until the lifting of the bombardment when they also were returned to their companies. The concentration of gas in the valley necessitated the wearing of gas masks almost continuously throughout the artillery fire and that, in addition to the darkness, prevented any thought of moving detachments for long distances unless absolutely required. This caused a certain amount of mixing of units during the first hours of the battle but prevented useless casualties.

Along the Aqueduct line and the Woods line the garrisons were located in small shelters a short distance from their firing positions. Immediately the companies realized that the long heralded attack was starting, they moved into the firing positions assigned them, reaching there with almost no loss.

The troops occupying the river bank were in better shape as they had, at nightfall, assumed their battle positions on the river bank. Also no working details, other than the necessary food carrying details, had been taken from the forward companies. There was practically no shelling along the Marne for the first two hours of the bombardment and platoon and section leaders were able to make numerous inspections of the isolated posts and assure themselves that every man was in his proper place.

The machine guns intermittently fired along their barrage lines, the river, and the banks of the stream.

OPERATIONS OF THE SIXTH GRENADIERS

The regimental and battalion commanders and their adjutants were the only officers of the regiment allowed to reconnoiter the points of assembly and the routes of approach. The approaches and roads were so poorly prepared and so indistinctly marked that permission was asked for and obtained, from the Division to move the regiment to a forward assembly point located in the woods three quarters of a mile to the east of Doly Mill, during the daylight on July 14th.

The battalions reached the vicinity of Doly Mill about 8:00 P. M. The march was made without losses and did not come under observation and fire from the American batteries.

Shortly after nightfall the regiment moved out from the woods and proceeded to the Marne. All battalions arrived at the designated points without trouble and without suffering any casualties. The American artillery fire which was going on at this time was the gas shelling of the woods further to the east.

Regimental headquarters had a check of the troops made at midnight and it was found that all were in place and that they were not being harrassed by fire. Another check was made at 1:00 A. M., which showed that the companies were ready to start the crossing and that although the woods had been severely shelled, the troops, being in the open ground to the south had suffered but little.

The crossing of the Marne started at 2:40 A. M. The first Battalion and part of the second crossed at this time followed in a short time by the balance of the regiment. The landing was made just to the north of Mezy. Slight losses were suffered in the transfer across the river, mostly from machine gun fire.

It was noticed at this time that the 5th Grenadiers to the east were held up and were unable to make a landing, due to the nests of riflemen, automatic rifles, and machine guns dug in on the banks of the river.

A patrol preceded the regiment and advanced almost to the outskirts of Mezy before being detected and fired upon. At this point the patrol encountered an American 1st Lieutenant of the 38th Infantry who, mistaking them for Americans advanced on them and discovered his mistake and opening fire with his pistol he was wounded and captured. He was sent to the northern banks of the river for examination by the regimental commander.

The plan was for the 6th Grenadiers, after landing, to move forward through and to both sides of Mezy. Soon after landing, however, the most advanced elements of the 30th and 38th Infantries were encountered. These Americans greeted the attackers with a withering fire from rifles, machine guns and a Stokes Mortar.

The first actual contact in the 38th Infantry sector took place when the advancing columns met the river platoon of Company G. A desperate fight took place here and every man of this platoon was either killed or wounded before the Germans could continue their advance in the direction of their designated forming up positions behind the railroad embankment.

While the fight around the river platoon was taking place another platoon of Company G was forming for a counter attack. This assault struck the enemy and again seriously checked him. The fighting had been in progress now for almost an hour and a half and the darkness and smoke were rapidly lifting. The Germans had been using frontal attacks, with the bayonet, against the 38th Infantry and had been gaining ground very slowly. Now, however, the lines of riflemen along the railroad line, as far east as the Surmelin, could direct their rifles against the individual targets. Here the intensive training in the use of the rifle that the 38th had undergone stood them in good stead.

Company H, 38th Infantry, had been having its share of the excitement in the form of numerous attacks on their own front. A large number of German boats had put out with the intention of landing opposite the Sumerlin. Not one of these boats succeeded in disembarking its occupants on dry land. The two platoons of Company H which been dug in amongst the willows on the rivers edge fought them off with rifles and grenades and many of the boats were sunk and the rest hurriedly returned to the northern bank.

As the visibility improved Company H gathered its supporting platoons on the slopes east of Moulins and under the Surmelin bridge from which positions they could do the most good. As the attack of boats in their front subsided these platoons shifted their attention to the Germans moving against Company G and the combined fire of the two American companies soon had every able bodied German pinned to the ground.

Such was the situation when the commanding officer of the 6th Grenadiers landed on the southern bank at 4:00 A. M. He, with his staff had left headquarters near Doly Mill, at 3:30 A. M. in order to cross the river. On the way to the river the staff encountered detachments from the 5th Grenadiers who reported that they had been unable to get across the river and had been forced to retire due to heavy losses. These men were remnants of the companies that had tried to land opposite the 38th Infantry. The regimental staff crossed in boats at their regimental crossing. Upon landing the staff almost immediately encountered a small body of Americans who had stuck to their positions and had been passed over by the advancing Germans in the darkness. This detachment was engaged by the officers and orderlies of the staff and driven off.

The regimental commander found that his regiment had only been able to reach the railroad in a few places. A footing had been obtained in Mezy but this footing was difficult to maintain. The small detachment of 30th Infantry men who had been holding Mezy had reported to the company commander of Company G, 38th and were aiding him in the stubborn resistance. The Germans had failed to progress to any extent in front of the 38th and the supporting platoon of Company G was preventing the flanking out of the railroad line.

All connection between the 6th Grenadiers and the 5th Grenadiers had been lost, and could not be regained. The rolling barrage had started from the railroad line at 3:50 A. M. and the German assault echelons had at no place been in position to follow it. As the barrage moved forward, the Americans along the railroad line between Mezy and Moulins had gained definite fire superiority and retained it until the end of the action. The commanding officer of the 6th Grenadiers stated in his official report of the action that "the fire superiority was at this time (4:30 A. M.) so definitely in the hands of the Americans that they could stand upright on the railroad embankment and shoot down his men individually.

Due to the determined and valient stand of the 38th Infantry along the railroad the 6th Grenadiers was in a very dangerous position and was in a fair way to becoming absolutely annihilated. Individual Germans could be seen running to the river and attempting to swim to the northern bank. Few succeeded as most of them were killed or drowned before reaching there.

The bridge to the north of Mezy, had been completed, but immediately after full daylight so much rifle, machine gun and artillery fire was directed upon the bridge that it was useless as a crossing.

The regimental staff of the 6th Grenadiers remained on the southern bank until 5:00 A. M. when it became apparent that the German attack was a failure. An endeavor was made to withdraw the survivors of the regiment to the north and about 5 officers and 107 men were able to make the retirement. Other groups were still holding out in and around Mezy but they soon were cut off and either killed or captured. At 5:00 A. M. the commanding officer of the 6th Grenadier regiment reported to the Division that his regiment had been thrown back and would be able to accomplish nothing further. That the regiment then consisted of only 5 officers and 107 men and that part of his organization had been cut off and captured. This German regiment had been eliminated from the fight.

OPERATIONS OF THE FIFTH GRENADIERS

The 5th Grenadier regiment was ordered to cross the river in boats and ferries opposite the right flank of the 38th U. S. Infantry and the 131st regiment of French Infantry. On July 13th the regiment moved to its assembly point in the Foret de Fere, four miles north of the Marne. While in this location there was little bombardment and the men received some rest.

Orders from the 36th German Division specified that the approach march from the assembly point to the river would start at approximately 10:00 P. M., July 14th. The regimental commander failed to follow the example of his neighbor on the right who had obtained permission to make the most of this move through the woods during the daylight. As a result the regiment was caught in the woods by the artillery counter preparation. This fire was intense in the woods and especially so along the forward edges from which the troops had to debouch. Considerable loss and confusion resulted.

However the 1st battalion, 5th Grenadiers, after suffering severe losses from the artillery fire, arrived at the river opposite the sector occupied by Companies H and E, 38th Infantry, at the hour laid down in orders.

An attempt was made immediately to cross. They were badly punished while on the water by the fire of Companies H and E and the machine guns on the southern bank. A few boats did succeed in reaching the further bank but they became entangled in the wire which had been placed under the water in front of the American positions and were soon sunk by hand grenades which the river platoons threw down amongst them.

Several additional attempts were made to cross at this point before it became apparent that a landing could not be effected with the means at hand. The remnants of the battalion were badly demoralized. Some retreated into the woods and others joined the rest of the regiment.

The 5th Grenadier regiment now moved further to the east and succeeded in crossing in the vicinity of Jaulgonne. Varennes was captured with very little difficulty and the advance in a southeasterly direction was begun. The mission of the regiment was to clear the slopes of Hill 231, cross the Surmelin, and assist the regiments of the 10th German Division in the capture of the Bois D'Aigremont.

The crossing had been considerably delayed and therefore the rolling barrage had started forward before the Germans were prepared to follow. The assaulting echelons were hurriedly formed and pushed forward toward Moulin Ruine.

The French on the right of the 38th Infantry had withdrawn and the Germans were able to make considerable progress. They reached the northern slopes of Hill 231 and as soon as there was sufficient daylight machine gun and rifle fire was directed at the right flank of Company E, 38th Infantry. The supporting platoon of this company launched a counter attack against the Germans which was successful in driving them off the nose of the hill temporarily. The German attack was pressed however and the entire flank of the railroad line was threatened. Detachments of the 5th Grenadiers were swinging to the south and endeavoring to envelope and cut off the forward battalion. Company F, 38th Infantry now became engaged and, by repeated attacks from their position on the nose to the north of Moulin Ruine, prevented the Germans from reaching the high ground overlooking the Surmelin. A considerable number of the machine guns which the Germans had pushed forward were captured by the Americans in these attacks.

Through the area vacated by the French, however, the attack was going forward and it was not long before Companies of the 5th Grenadiers were to the south of Moulin Ruine. Here they met and were engaged by the two companies of the 1st battalion, 38th Infantry which, after leaving small detachments to hold Paroy and Launay, had moved up the eastern slopes of the Surmelin in order to protect the exposed right flank of the Regiment. Desperate fighting for the possession of the heights continued for several hours but the 38th Infantry threw back all the attempts of the enemy with severe losses. To quote from the "Drama of the Marne" written by Lieutenant Kurt Hesse, of the 5th Grenadier regiment:- "I have never seen so many dead, never such fearful scenes of battle. The Americans had annihilated two entire companies of ours in close combat on the opposite (south) bank. They had lain in the corn in a semi-circle, had permitted them to approach and then, at a distance of 30 to 50 paces, shot down almost all of them. It must be admitted that this enemy had good nerves, but he displayed bestial brutality."

By 9:00 A. M. the initial force of the attack of the 5th Grenadiers had expended itself. Part of their supports were now occupying the railroad line to the east of the American sector and, seeing that their own attack had utterly failed, the regimental commander ordered the withdrawal of the advanced elements to this line, where the dug in and attempted to reorganize.

One of the companies of the 5th Grenadiers—the 6th, under the command of 2nd Lieutenant Oberg—had advanced up the slopes in the mist and smoke and passed out of sight of the Americans into the woods on the eastern slopes of the Surmelin. As it became light, this company saw columns of Germans advancing south up the Surmelin valley, and assumed that they were troops of the 5th and 6th Grenadiers. Instead they were prisoners being sent to the rear. This company, having advanced approximately four miles to the south along the right flank of the 38th Infantry without meeting serious opposition, now were in a position to the northeast of the two companies of the third battalion, 38th Infantry, which had been holding the right of the woods line. This battalion had already been moving strong patrols forward to gain contact with the right of the First Battalion. The German company was discovered and immediately attacked. The fight here was in the thick of the woods and continued intermittently until nightfall when the German com-

pany commander and a very few men were able to get away and join the 175th German regiment and later rejoin its own command. The rest had been killed or captured.

The attack of the 5th Grenadiers had failed and no further organized attacks were made by them against the Americans. On the afternoon of the 15th of July the line was improved somewhat as the 38th Infantry then having no pressure on its front retired to the Aqueduct line to escape further flanking movements during the night. The Germans prepared for expected counter attacks and as these did not materialize, the line along the railroad and the town of Varennes was occupied until the night of the 18th of July when orders arrived to evacuate the southern bank of the Marne. The Americans did not notice the beginning of this withdrawal and the survivors of the regiment crossed the river unmolested.

OPERATIONS OF THE 175th INFANTRY (GERMAN)

This regiment crossed the Marne to the east of the sector held by the 38th Infantry. The crossing was made under much the same conditions, as to artillery fire, as those which confronted the 5th Grenadiers. After landing on the southern bank little opposition was encountered until the heights to the east of Surmelin were reached.

Here certain elements of the German regiment came into direct contact with the 38th Infantry and were prevented from progressing further.

The mission of the 175th German regiment, being to advance along the upper slopes east of the Surmelin, the progress was fairly rapid in the area vacated by the French until the advancing troops reached the vicinity of Janvier Farm. Here, for the most part, the advance was checked. The right flank of the German regiment was engaged by the 3rd Battalion, 38th Infantry, while the left was held up by the French resistance. This gain of the Germans had necessitated the abandoning of the battery of the 10th Field Artillery which was located to the east of the American sector. These guns were later recovered, however.

This German regiment at no place made determined attacks of any great size, against the American sector, but rather appeared to attempt to pass by to the south and find a point where they turn westward and cut off the troops in the valley of the Surmelin.

Numbers of Germans, apparently from the 175th Regiment gained the hills east of St. Eugene and were able, from that position, to silence, with rifle fire, a battery of the 10th Field Artillery which was firing from a position just to the south of Saint Eugene.

During the 15th and 16th of July, by day and by night, weak attacks were directed against the American at numerous points along the eastern boundary of the sector but these were repulsed. Snipers gained positions in the woods to the southeast of Connigis and subjected the troops in the vicinity to a sniping fire until they were driven out.

The 175th Infantry was withdrawn across the Marne on the night of the 18th of July.

THIRTY EIGHTH U. S. INFANTRY

Most of the action of this American regiment has already been covered in the descriptions of the organizations engaged in the attack. A few additional details are necessary to complete the story of the battle.

Early in the morning, of July 15th, the Germans, having gained a footing in the village of Mezy, were able to enfilade a part of the line held by the forward companies. The river platoon of Company G having been eliminated, and additional heavy casualties having been suffered by other platoons of that company in the counter attacks, the remainder, together with the detachments from the 30th Infantry, took up positions in the stone pits just to the south of Mezy and held this position until 4:30 in the afternoon.

On the left front of the 38th Infantry the enemy had employed frontal attacks in his endeavor to gain the railroad line. These attacks had been repulsed with great loss, by the riflemen who shot down the Germans where ever they could be seen. In conjunction with the frontal attacks infiltration methods were attempted through and to the west of Mezy with the hope that German groups could be built up on the left flank of the 38th Infantry and that the occupants of the Surmelin valley could be either forced to withdraw or be cut off. This plan also failed of its purpose.

During the progress of the battle, German battalions from both the 398th and the 47th regiments were ordered to maneuver to the east and take the 38th Infantry in the flank. These movements failed as the regiments could not reach a position from which to make a coordinated attack on the sector of the 38th Infantry, while the battle was in progress.

In the areas to the east of the American sector the situation became extremely critical. The Germans had been able to advance in force as far as Janvier Farm and furthermore had pushed groups beyond that line. In places rifle fire was delivered against the right rear of the 38th Infantry. A battery of the 10th Field Artillery, which was firing from a position just south of Saint Eugene, was obliged to suspend firing due to hostile rifle fire from the slopes to the east of the Surmelin. The personnel of the battery returned the fire of the Germans with the machine guns that had been assigned to the protection of the battery.

By noon of the 15th the 38th Infantry was not only holding the original front of the sector and facing the enemy for a short distance on its left flank but was holding a line 5,000 yards long facing east. Three German regiments, the 5th Grenadiers, the 175th and 128th infantry regiments, were known to be to the east of the regiment. If strong, well organized attacks had been made against the Americans from this direction it is quite possible that they would have been successful and that the troops in the valley of the Surmelin would have been cut off. However the situation looked much more serious than it really was, due to the fact that, although the Germans had gained good positions on the flank they had been so severely mauled in getting there that they were unable to press the advantage.

Early in the afternoon orders were sent to the Colonel of the 38th Infantry to withdraw his advanced elements and take up a position along the Aqueduct line.

At 4:30 P. M., July 15th, the order to withdraw reached the 2nd battalion. By this time the German attacks had, in the main, subsided. The withdrawal was executed by moving the companies which were on the railroad line straight to the rear covered by company F from its position on the nose of Hill 231. Company F was then withdrawn covered by the troops along the Aqueduct line. The movement was executed without trouble and with no casualties.

After dark on the 15th the 2nd battalion was withdrawn from the combat positions and assigned a reserve position to the south of Saint Eugene. Casualties in the battalion had been heavy and considerable reorganization was necessary. After the withdrawal of the 2nd battalion the two companies of the 1st battalion, which was also on the right of the Aqueduct line, were withdrawn to a line running from Le Chanet to the Surmelin, and the 3rd battalion was ordered to hold the original Woods line.

Company K, which at the beginning of the engagement, had been in regimental reserve, had, at 7:00 A. M., been placed along the line running from the Surmelin west to Courtelin. At 9:00 A. M. the company was returned to the command of the 3rd battalion and placed with two platoons covering a gap in the Woods line near the Surmelin and the other two platoons were moved to a position in rear of the Woods line on the upper slopes to the east of Connigis, in reserve. This company was again moved in the evening when the withdrawal from the front lines was being made. It was then assigned the task of taking over the portion of the Woods Line east of Company I and connecting with Company L which was in its original position southeast of Launay. During the night of the 15th, a small attack was made against the company by an estimated force of 100 Germans. The attack was driven off and appeared more in the nature of a strong reconnaissance than it did a regular attack.

During the 16th of July some few attacks by the Germans, probably the 175th or 128th regiments, were directed weakly against the right front of the 3rd battalion in the area occupied by L and M Companies. These were easily repulsed. It was desired to hold the right of the Woods Line strongly as it was to serve as a pivot when the line advanced again to the river after the French had regained part of the lost territory to the east. The position held by these companies also afforded an ideal firing position against hostile troops which might occupy the valley of the Surmelin.

There were no further changes in the positions of the regiment during the period July 16th to 19th. Strong patrols were sent to the northeast and located the positions of the Germans. Skirmishes were numerous but not decisive. During this period, the French were working back on the right flank of the regiment and preparations were made to reoccupy the American sector along the Marne.

On the 20th of July the regiment moved forward again without engaging the enemy.

CRITICISM AND COMMENT

As with all combats in position warfare, it was of decisive importance that the enemy be taken by surprise. This offensive of the Germans wholly lacked that element of success. The Allied commanders not only received accurate and trustworthy information during the first week in July as to the general intention of attack and the point and approximate time for the beginning of the attack, but also many of the details. Attacks cannot succeed if the enemy has knowledge of the plans and sufficient time to make adequate preparations to meet them.

The German use of smoke on the Marne, with the hope that it would cover the construction of the bridges and the crossing of the troops was, as usual, of little avail. Smoke to be at all effective must blind the enemy and prevent him from seeing in any direction. A cloud hanging over a certain area in which friendly troops are to operate is worse than no smoke at all.

The Germans, in the attack of July 15th, employed a long preliminary bombardment; including the rolling barrage it lasted more than nine hours. This accomplished little in the way of destruction of the defenses while on the other hand it afforded the Allies time to place themselves on guard and to reorganize where necessary. All the details for the fire and the advance of the infantry over a long period were definitely fixed in advance. It is sure to happen in all such cases that the course of events is different from what had been foreseen and, if the attack is wound up like clock work, a good part of the rolling barrage is wasted. In the case of the rolling barrage over the sector of the 38th Infantry it was all wasted.

Definite news that the attack was to start before daylight was received at Division Headquarters, 3rd Division, and the artillery was notified, no endeavor was made to pass the news on to the infantry who had been required to send large working details far from their positions. As a result these details were caught by the German bombardment and were unable to return to their organizations for several hours. This caused a considerable mixing of units and might have had a serious effect on the outcome if the Germans had been able to advance rapidly behind the rolling barrage.

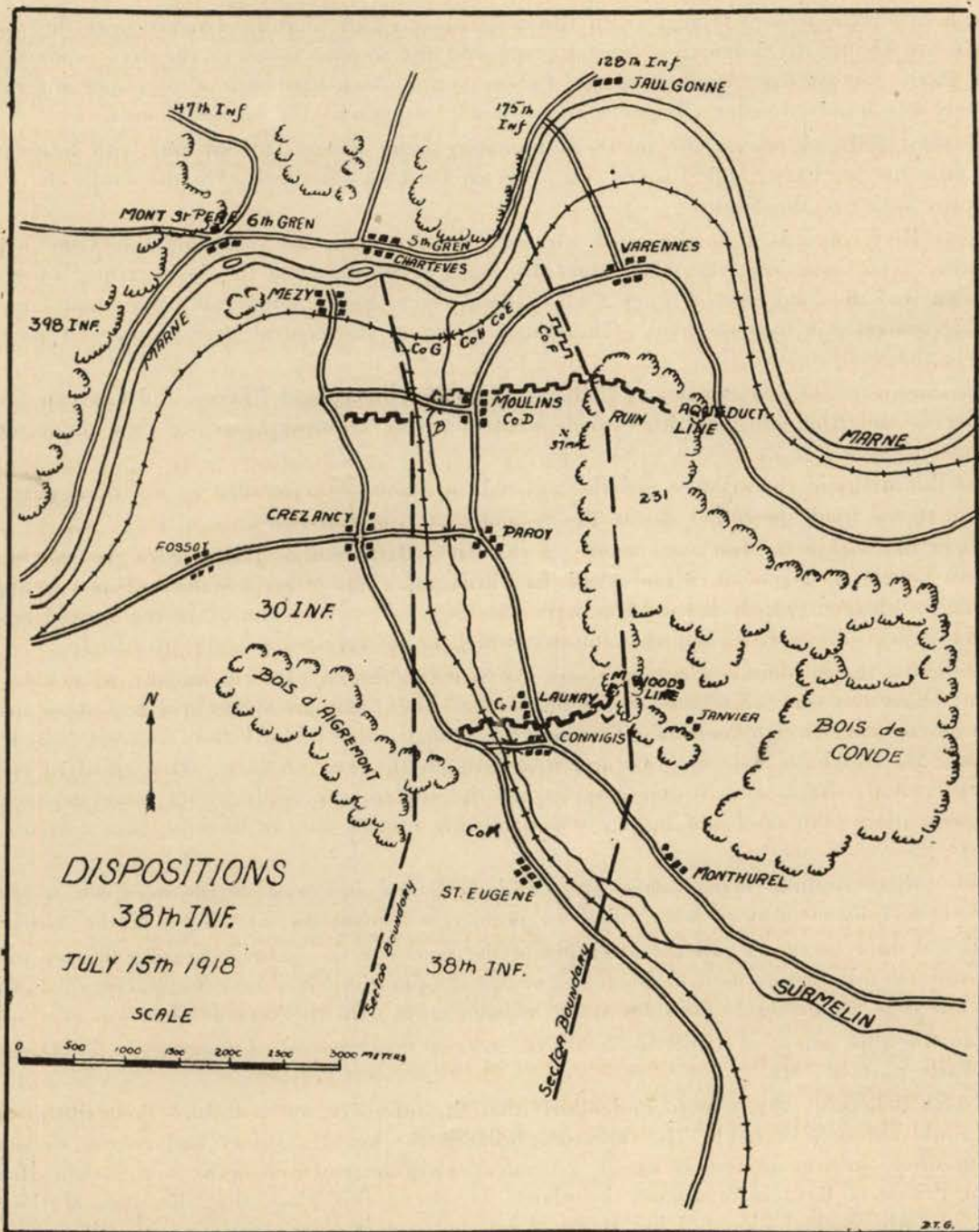
The 38th Infantry had been training intensely in marksmanship and handling the rifle. Each soldier knew his arm and was confident that he could use it to advantage. As the Germans advanced against the railroad line the assault was completely stopped and the entire maneuver failed on account of the well directed fire of the lines of the American riflemen.

Both Americans and Germans had arranged for signal communication by varied means, telephone, radio, light projectors, runners, etc. All wire communication of both sides was shot away within ten minutes and the radio and light stations lasted only a short time longer.

LESSONS.

1. That, except in exceptional cases, a long artillery bombardment is unproductive of results.
2. Close co-operation between the assault echelons and the artillery is of absolute necessity.
3. That if the artillery is tied to a long schedule of fire, rolling barrage, etc., much of the fire will be wasted through unforeseen changes in the situation.
4. That the rifle is still the determining factor in the defense position.
5. That no matter how elaborate the preparations for signal communication may be, the only dependable means, after the artillery fight starts, is by runner.

References:—Special report by Colonel Stacey; Report of Gas attack, by Gas Officer, 3rd Division, July 21, 1918; Personal experience of the Author; Statement of Captain Moss, Captain Barber, and numerous other officers of the 30th and 38th Infantries; Personal Diary of the Author; Report of operations of the 30th Infantry; War Diaries of all organizations of the 3rd Division; Summary of Intelligence, A. E. F.; War Diaries of the 47th and 398th German Infantry Regiments; War Diary 6th Grenadier Regiment; War Diary 10th German Division; Story of the 38th Infantry, By C. E. Lovejoy.



THE AISNE MARNE OFFENSIVE, 18TH JULY 1918—4TH AUGUST 1918.

By

Major William A. McCullough, Infantry

Before discussing the military operations let us consider the geography and topography of this area, occupied by the Germans July 18th, 1918.

In general it appears to be a triangle with Rheims, Soissons and Chateau Thierry near the corners. The last two cities are about fifty kilometers from Rheims and the nearest point in the area is about sixty kilometers from Paris. In addition to these places, Fismes and Fere-en-Tardenois were important railroad centers and nearly two hundred other villages were scattered throughout the occupied area.

An important railroad crosses the northern boundary from Rheims to Soissons with branches running south from Soissons to Paris and Fismes via Fere-en-Tardenois to Paris. On the south the Paris Nancy road follows the valley of the Marne.

The Marne River bounds it on the south for some distance and the Vesle and the Aisne Rivers bound it on the north. The Crise joins the Aisne from the south at Soissons and the Ardre rising south of Rheims flows northwest into the Vesle near Fismes. All of these rivers have innumerable branches, some of which are formidable obstacles in time of flood. The Ourcq, rising in the central part, flows west passing out at right angles to the western face.

The main highways connect Soissons with Paris. Chateau Thierry and Rheims and Chateau Thierry with Fere-en-Tardenois and Rheims. The other roads were relatively unimportant since they connected no large centers.

The stone buildings in the villages and the isolated farm houses surrounded by walls and outer structures of the same material made powerful strong points and centers of resistance.

This salient lies within the last escarpment of the Paris Basin which just fringes the northern border. The lower half belongs to a special region called the Tardenois. This may be described as a country of high hills and plateaus through which the streams have cut deep valleys and ending in the rugged mountains of Rheims. The valleys are fertile and the country which is not forested is well cultivated.

North of this is the Soissonais which is a series of parallel ridges, plateaus and broad marshy river valleys, some of which remain visible for several miles. The highlands are quite arid and stone quarries and natural or artificial caves are numerous. The most prominent ridge is the Villers Cotterets which is twenty-five miles long, 325 feet high and runs east and west through the western face. The stratified rocks tilt towards the center of the Basin and in places appear on the surface especially along some streams. Beneath the rock in such places the sand and lighter soil is quickly eroded and an abrupt ledge remains overhanging the valley.

The whole salient contains many forests large and small and just west of the occupied territory is the immense forest of Villers Cottèress which had an important bearing on the success of the Allied offensive.

It is believed unnecessary to call the attention of the reader to the military bearing in each case of these favorable or unfavorable factors as it becomes the center of operations in succeeding paragraphs of the narrative proper, but it is important to consider them in connection with the various phases as they occur.

To account for this salient it is only necessary to review those papers dealing with the German Offensives of the early part of 1918.

On July 17th it became apparent to Ludendorff that the offensive was a failure since the position south of the Marne could not even be held. He, therefore, ordered the heavy artillery and reserve divisions to the Flanders front where he was anxious to attack as soon as possible, and personally went to the Headquarters of the Crown Prince of Bavaria to discuss the plans. It was at this place that the news of the Allied offensive on July 18th reached him and he, at once, directed reserve divisions towards the rupture. The tide has turned and the events on the German side are subordinated by the action of the Allies at this time.

On the Allied side the question of strategic reserves and their use was imperative to ward off these attacks in the Spring of 1918 but the idea of assuming the offensive was not neglected.

The extension of the French line from the Oise to Amiens (60 kilometers) in order to help the British in March reinforcements again to the British front on the Lys in April and the extension around the Marne salient of 45 kilometers in June had stretched the French reserves seriously. Fortunately the arrival of American troops in large numbers at this time permitted a reasonable reserve force to be organized by relieving, on June 3rd, five American divisions then in training with the British to replace French divisions in quiet sectors and by liberating, on June 19th, six French Divisions with powerful artillery on the Flanders front. This reserve detachment of the Army of Flanders was located near Provins and fell under the command of the 9th Army which was directed to study plans for transporting it to the Abbeville or Paris fronts which were considered by General Foch to be the two most sensitive points on the Allied front.

At this time the Army of Reserves extended from the Somme to the Ourcq with the 1st Army between the Somme and Montdidier, the 3rd Army from Montdidier to the plateau between the Oise and Aisne and the 10th Army extending to the Ourcq.

The Army of the North, later called the Army of the Center, extended from the Ourcq to the Argonne with the 6th Army between the Ourcq and Dormans, the 5th Army to Prunay on the Vesle and the 4th Army to the east of the Vesle.

As soon as that portion of the French line on the Marne salient between the Marne River and Rheims was stabilized, General Foch, on June 5th, directed the 5th Army Commander on that front to prepare offensive plans. Likewise on June 16th, the 10th Army Commander was directed to prepare offensive plans on his front south of the Aisne. This was the Army which had so successfully checked the 4th German offensive, June 9th, towards Compiègne in three days. By June 20th the plans of the 10th Army were completed and one week later approved.

General Foch did not wish to bring on a general engagement in executing these plans but it was foreseen and so arranged that the area gained should be advantageous to launch a general offensive especially towards the Chateau Thierry—Soissons highway from which the single railroad which supplied the enemy could be brought under effective artillery fire.

General Pershing had studied the weakness of the salient and urged the French High Command on June 23rd and July 10th to concentrate American troops to carry out the attack, but the plans already arranged were executed between July 8th and 13th by the 10th Army in the region of Villers Cotterets. All of these preliminary attacks were successful and besides keeping the Germans anxious as to the point of attack had exhausted five of their divisions.

Early in July the frame work of the German offensive became apparent to the Allied High Command and ten days later it was known from observation of enemy activity and prisoners that it would take place in the vicinity of Rheims.

This came in the sphere of action of the French Army and immediate plans for an offensive-defensive battle were formulated.

The Chief of the 10th Army was convinced by the success of his preliminary attacks that further efforts might reduce the salient as did the Chief of the 6th Army on his right. The French Commander-in-Chief therefore, ordered active and secret preparations and organized reserves south of Rheims where the line was not of long standing as it was east of Rheims, in order to resist the impending attack.

On July 12th the plans of the offensive-defensive battle were submitted by the French Commander-in-Chief and were approved by General Foch the following day.

Above all it provided that the continuity of the front be maintained and the enemy brought to a standstill by the 4th and 5th Armies. Then the counter attack was to be immediately taken up by the 10th and 6th Armies on each bank of the Ourcq and the 5th Army south of the Vesle on each bank of the Ardre, concentrating on the plateau north of Ferre-en-Tardenois in case of a rupture in the German lines. Finally, it provided that in order to safeguard the secret, these armies were to assemble their forces and pass to the execution in four days at the most.

Despite the extensive plans of the enemy revealed to General Foch, he waived the possibility of a simultaneous attack to the north of Lys and ordered a group of four British divisions to the Champagne region.

On the evening of the 14th, the Allied divisions in line or concentrating between the Oise and the Aronne numbered as follows:

57 French—more than half of the French Army.

7 American.

2 Italian.

4 British.

A third of this mass, 27 divisions, constituted the counter-attack as follows: 18 divisions, of which two were American and two were British, for the 10th Army attack between the Aisne and the Ourcq; 9 divisions, of which three were American, for the 6th Army attack between the Ourcq and the Marne.

The 10th Army was supported by 470 batteries, 375 light tanks and 40 squadrons and attacked without artillery preparation.

The 6th Army was supported by 230 batteries, 170 light tanks and 28 squadrons and attacked after a half hour preparation of artillery fire. The order of battle for the 18th is shown on Sketch II.

Since the final reduction of the salient was a series of interdependent actions principally by American and French forces, an account of the principal ones which carried the battle front to the final positions along the Aisne and Vesle follows.

THE ATTACK OF THE 10TH ARMY

The 10th Army which consisted of five Corps had the most difficult mission since that part north of the Aisne was to hold while the divisions between the Aisne and the Ourcq were to break through, advancing on Ferre-en-Tardenois, while pivoting on the 153rd Division astride the river on the north.

The first objective was the crest west of Pernant, Saconin-Breuil, Chaudin, Vierzy and Villers-Helon. The second objective—the plateau between the Chacrise and Oulchy-le-Chateau. There was to be no artillery preparation but a barrage of the division artillery with a regiment attached.

From north to south between the Aisne and the Ourcq were the 20th, 30th, and 11th Corps, the 20th Corps forming the apex of the wedge to be driven into the western face of the salient. The mission of the 20th Corps was to outflank the northeastern edge of the Retz Forest, capture Chadun and Vierzy and to reach the plateau northeast of Hartennes and hold the southern outlets of the Ravine of the Crise.

It was composed of the following divisions from north to south—1st U. S. Division, 1st Moroccan Division, and 2nd U. S. Division. The American divisions formed the 3rd Corps which was not in position to conduct the offensive on July 18th but retained administrative control.

The 1st Division was assigned to the 20th Corps by the 10th Army on July 15th while in a rest area near Beauvais. It immediately embussed and was in position behind its zone of action on the 17th. That night it moved to the assault positions over difficult terrain in a heavy downpour and artillery bombardment. At 4:35 A. M. July 18th the division advanced in a line of regiments—regiments in column of battalion in the following order from north to south: 28th, 26th, 16th, 18th with the 153rd French Division on the left and the 1st Moroccan Division on the right. The Division supported by 48 French Schneider Tanks and covered a front of about 2,000 meters.

The attack was very successful although the second brigade was held up by the Missy ravine and the failure of the 153rd Division on the left to advance beyond the ravine to the north. The same condition prevailed on the 19th and the attack which was launched at 4:00 A. M. came to a halt and another attack organized for 5:30 P. M. which was successful.

On the 20th the division was ordered to take Berzy-le-Sec and gained some ground along the center front.

On the 21st the attack called for at 4:45 A. M. was carried out to a line north of Buzancy which was held all the next day. In the night the division was relieved by the 15th British Division after an advance of eleven kilometers in four days. The division had 7,800 casualties and captured 3,500 prisoners and 68 guns.

In the meantime, the 1st Moroccan Division and the 87th French Division which relieved it had kept abreast of the right flank of the 1st Division.

ATTACK OF THE 2ND DIVISION

This division was directed to move on July 15th from a second line position between Vaux and Bouresches to the 20th Corps. The troops arrived on the 17th at Villers Cotterets and had to proceed at once towards the line of departure on the right of the 1st Moroccan Division through the Forest of Retz. The Attack Order was issued en route and following a long and difficult march over congested roads, the division deployed barely in time to cross the line of departure at 4:35 A. M. with 54 Saint Chamond tanks in support. The regiments were in columns of battalion in order from north to south: 5th Marines, 9th Infantry, 23rd Infantry and the 6th Marines in reserve. The advance progressed satisfactorily throughout and outdistanced the 38th French Division on the south but was later held up at Vierzy. Here it was necessary to organize an attack late in the afternoon in order to gain their objective. The next morning, July 19th, the attack was resumed and before noon the western outskirts of Tigny reached. That night the division was relieved having gained eight kilometers in two days. It lost 3,800 casualties and captured 3,000 prisoners and 66 guns.

Thus in one day the first objective was gained by the 10th Army and by the 21st the entire system of supply in the salient menaced. At this date the pressure on the southern face caused a general withdrawal and a new mission assigned to the 10th Army of holding while the 5th and 6th Armies swung forward. The whole advance of the 10th Army was delayed by the Misy and Crise Ravine with the exposed plateau between and the strong reinforcements of the 9th Army which Ludendorff threw in to hold the 10th Army from closing the salient. These reinforcements brought the strength from six divisions with four in reserve up to twenty-five opposing the 10th Army, and had to detrain great distances in rear and march up since all the railroads around Soissons were under fire and no motor transportation was available. On August 1st, as the whole front moved towards the Vesle, Soissons was captured and elements of the 6th Army captured the heights north of Grand Rozoy which enfiladed the Crise Valley and the plateau to Fismes, thus hastening the retreat. On the 20th of July the 9th Army entered the line between the 5th and 6th Armies.

By the 20th of July Ludendorff realized that it was impossible to hold south of the Marne and ordered a withdrawal and at the same time the flank along the Vrise on the west and the Ardre on the east must hold. As the Germans are forced northward, Ludendorff decides on the 23rd to retreat to the Ourcq and later to the Vesle, meantime giving up the idea of an offensive in Flanders in order to supply reserves.

OPERATIONS OF THE SIXTH ARMY

For the attack on July 18th the 6th Army had five Corps in line from north to south as follows: 2nd, 7th, 1st U. S., 38th and 3rd, extending from a point on the Savieres River southeast of the Faverolles to Dormans. This Army was to pivot on the right of the 1st U. S. Corps at Vaux and conform to the attack of the 10th Army on the left.

4TH DIVISION

The 4th Division was split up with the 7th Brigade in the 2nd Corps and the remainder of the division with the 7th Corps for the attack on July 18th. The 7th Brigade reenforced the 33rd French Division on the left of the 2nd Corps adjoining the 10th Army, while the 8th Brigade fought with the 164th Division on the right of the 7th Corps.

The 7th Brigade was engaged two days and assisted the 33rd Division in an advance of eight kilometers. The 8th assisted the 164th Division in penetrating eight kilometers in three days to the Bois de Chatelet when it was relieved. The 4th Division entered the line again, relieving the 42nd Division, between August 1st and 3rd and reached the Vesle on the latter date.

1ST U. S. CORPS

The 1st U. S. Corps attacked July 18th with the 167th French Division on the left and the 26th U. S. Division, which had relieved the 2nd Division on the front the 6th of July on the right. The latter division with regiments abreast had a difficult mission of holding on the right near Vaux while the other brigade swung forward in the attack with the 167th on its left.

On account of difficult terrain and the failure of the 167th Division to gain the hills in its front, the advance of the 26th Division was limited to the first objective until the 21st when the enemy withdrew. On this date the mission of the Corps was to sweep forward on the end of a line pivoting on the Aisne to force the enemy behind the Vesle. It followed the retreating force slowly to Trugny and later captured it. On the 22nd the 56th Brigade, 28th Division, reenforced the 26th Division and they pushed forward towards the Fere-en-Tardenois-Jaulgonne Road which was stubbornly defended by the rear guard as a means of retreat. An advance of seventeen kilometers was made by the night 24-25 and the Division was relieved by the 42nd Division, having suffered 5,000 casualties.

42ND DIVISION.

The 42nd Division relieved the 26th Division on the night 24-25 of July and the next day the 167th Division on the left, thus occupying the entire 1st Corps front. Serious opposition was encountered in the Bois de Fere and then followed a rapid withdrawal of the enemy to the Ourcq on July 27th. Sergy was captured on the 29th after a two days attack. That night part of the 4th Division was ordered to reenforce the 42nd by the 1st Corps. The next day a salient was made in the center with severe losses throughout and the same conditions prevailed on the 31st. Between August 1-3rd, the division was relieved by the 4th Division after an advance of about nine kilometers in a week.

38TH CORPS—3RD DIVISION

The 38th Corps was on the right of the 1st U. S. Corps and had the 39th and 3rd U. S. in line from left to right. These divisions did not advance on the 18th but when the 1st Corps began to pivot with the line on the Aisne they closely followed the enemy which was forced to retreat by pressure on the north. The Marne was crossed and a bridge head established with little opposition on July 21st while Chateau Thierry was occupied by the 39th Division. Severe resistance was encountered July 22nd from the high wooded ground above the Marne especially from machine guns in the Bois de Fere and Bois de Ris on each flank of the advance as the stubborn rearguard was forced north on the Jaulgonne-Fere-en-Tardenois Road.

On the 27th a commanding hill was captured near Roncheres which enabled the place to be taken the next day. This brought the advance to a strong defensive line behind the Ourcq running through Fere-en-Tardenois—Sergy—Cierges.

On the night of the 29th the Division was relieved by the 32nd after a continuous service from the 1st of June and a difficult advance of fifteen kilometers. The casualties totaled nearly 6,000.

28TH DIVISION

This division relieved the 39th Division which was on the left of the 3rd Division on July 28th and made little progress the next day on account of the fire from Bois Meuniere on its right in front of the 3rd Division, and was relieved by the 32nd Division on the 30th.

32ND DIVISION

This division relieved the 3rd Division beginning the night of the 29th and the following day in conjunction with the 28th Division made an attack with little success. On the 31st it took over the front held by the 28th Division and came under the administrative control of the 3rd U. S. Corps, covering the entire front of the 83th Corps. Cierges was captured on this date with difficulty and on August 1st all the hills north of the Ourcq which controlled the valley on each flank, thus assisting the advance materially. Between August 1st and 2nd an advance of six kilometers was made and an equal distance on August 3rd. On August 4th the advance included Fismes and on the left bank of the Vesle where the Germans organized stiff resistance on the other side. A total distance of thirteen kilometers had been made in six days.

OPERATIONS OF THE 5TH ARMY.

On July 18th the 5th Army had the following Corps in line from left to right: 1st Colonial Corps, 5th Corps, 2nd Italian Corps and the 1st Cavalry Corps extending from Dormans to a point about ten kilometers east of Rheims. A British Corps of two divisions took its place on the left of the Italian Corps on the 19th which materially assisted the attack down the Ardre Valley, but the attack from this flank was not pushed rapidly enough through lack of reserves to assist the initial success to any great extent. Later on the capture of Mount Bligny which was a commanding height assisted in harrassing the enemy retreat.

As a result of the reduction of the salient seventy division had to be broken up, leaving twenty-six in reserve in an exhausted condition. The losses were 35,000 and 700 guns. The menace on Paris was over and the morale of the Allies heightened. The Paris-Nancy railroad was freed and over two hundred villages restored to France. The initiative was gained by the Allies and the turning point of the war passed.

ANALYSIS AND CRITICISM.

The success of the Allied Commander-in-Chief was due to his correct estimate of the situation which was disclosed by obvious actions of the enemy prior to his last attack and by consideration of the possible means left to the enemy to rectify the difficult position in the occupied salient.

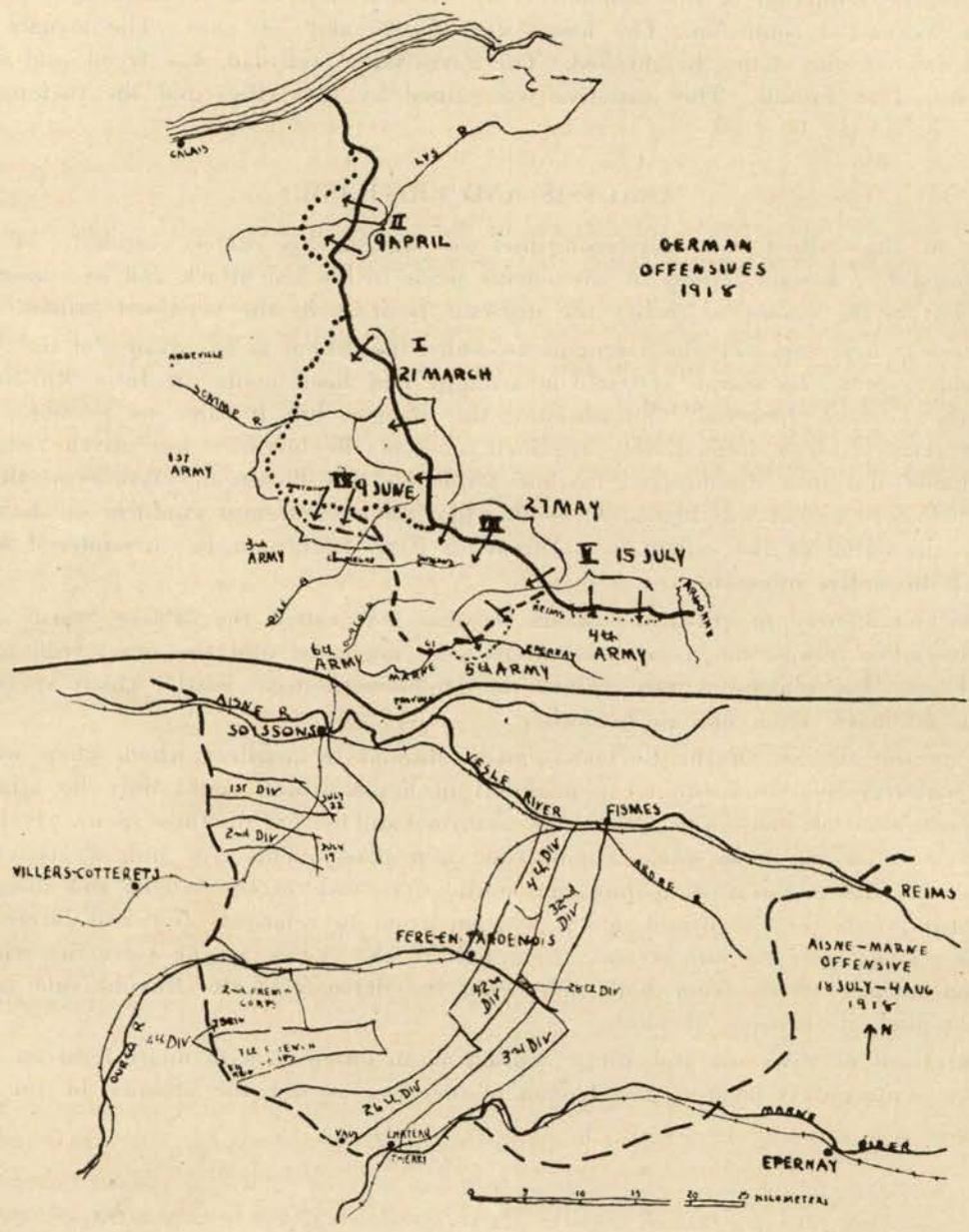
Above all it was necessary for the Germans to widen the salient as an advance of the Allies on either flank would seriously hinder the supply system. One attempt had been made on June 9th for the purpose of cutting off the Soissons reentrant and lessening this danger, but it came to a sudden halt in three days. The 10th Army almost immediately regained some of the territory lost on the edge of the Villers Cotterets Woods and thus discouraged further action in this direction. Action on that face, therefore, had been a failure and it was logical to assume that the next attempt would be on the other reentrant at Rheims since the value of the salient as a threat on Paris could not be surrendered without admission of failure of the entire offensive.

Moreover in the anxiety to crush the Allies in what was called the "Peace Storm" before the arrival of more American troops, the usual precautions were neglected and the exact front and hour were known to the Allies. The plan of action evolved the defensive-offensive battle which spelled defeat and victory, merging gradually from one to the other.

By cutting up the advance of the Germans east of Rheims by artillery which knew when and where to fire and by withdrawing the resistance to positions in depth which could only be attacked after exhausting and hazardous advances, the shock was absorbed and most of the force spent. It then remained to take up the offensive at the most advantageous time and place. This was judged accurately when the German forces were fully committed against the southeastern face of the salient and the defense of one of the two critical points for the whole salient was entrusted to relatively few and inferior troops. The same method of cutting off the salient was attempted by the Allies as the Germans tried on Rheims, namely: a simultaneous attack from both sides—but the drive from the Rheims side lacked necessary reserves to accomplish its mission at once.

The concentration of divisions and the execution of an offensive with many light on a front such as this in the space of four days insured the element of surprise, as did the absence of the usual artillery bombardment.

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THE OPERATIONS OF THE 28TH INFANTRY
IN THE AISNE—MARNE OFFENSIVE,

JULY 17—23, 1918.

By

Capt. Clarence R. Huebner, Infantry

THE 28TH INFANTRY AT MORTFONTAINE JULY 17, 1918.

The action of the different units of the regiment, throughout this operation, will be covered from front to rear.

In compliance with orders from the 2nd Brigade, the 28th Infantry, less the 1st Battalion and Supply Company, marched to Mortfontaine, from the vicinity of Pierrefonds, during the night of July 16-17th, 1918. It arrived in Mortfontaine at 3:00 A. M. July the 17th. Regimental Headquarters were located near the western exit of the village, about 100 yards west of the church. The 2nd and 3rd Battalions bivouaced in the western edge of the village. The rolling kitchens were brought up in trucks during the day of July 17th. The 1st Battalion remained with the remainder of the division in the vicinity of Pierrefonds. The Supply Company less detachment with 1st Battalion, arrived during the morning of July 17th.

The Regimental Commander, the Adjutant and two runners, made a reconnaissance, during the morning of July 17th, of the positions the regiment was to occupy during the night of July 17—18th. The Brigade Commander accompanied the Colonel on this reconnaissance.

During the reconnaissance it was decided to place the 1st line battalion in the vicinity of the ravine running northeast of Cutry. The two assault companies to be in the area just east of the ravine and the two support companies just to the west. The machine gun company to be placed in rear of the assault companies.

The 2nd line battalion, to be placed in the open field about 500 meters west of the ravine running northeast from Cutry.

The 3rd line battalion, division reserve, was to be placed in the woods near La Fosse a Trure.

Each man was issued two large French canteens during the morning of July 17th. These canteens were issued because nearly all of the water in the area had been contaminated with Yperite gas, therefore making it almost impossible for the men to get water after they left Mortfontaine.

Riflemen, selected from the newest replacements, were attached to Companies C and D, 3rd Machine Gun Battalion, during the day of July 17th. Both of these companies were habitually attached to the 28th Infantry for all operations, and they were very short of their required personnel. The men attached to them were to be used as ammunition carriers in the machine gun squads.

The Regimental Commander attended a conference at Division Headquarters on the afternoon of July 17th when the plans for the operation were thoroughly discussed.

The Commander of the 1st Battalion, 2nd's in Command, 2nd and 3rd Battalion Staff Officers, and all the Company Commanders of the 2nd and 3rd Battalions and of Companies C and D, 3rd Machine Gun Battalion, were assembled at Regimental Headquarters at 5:00 P. M. where the Regimental Commander issued verbal attack orders. The plans for the operation were thoroughly discussed in order that each commander would understand the exact part his unit was play in the attack.

The attack orders assigned the 2nd Battalion, with Company C, 3rd Machine Gun Battalion attached as the 1st line battalion. The 3rd Battalion with Company D, 3rd Machine Gun Battalion attached, as 2nd line battalion; the 1st Battalion, with Machine Gun Company 28th Infantry attached, as 3rd line battalion.

Strict march discipline was to be maintained during the march forward to the line of departure. No smoking, lighting of matches or the use of electric torches was to be permitted. Intervals of fifty meters were to be maintained between platoons. Maps were to be issued to the Battalion Staff Officers and Company Officers from the Battle Command Post of the Regiment.

All units of the 2nd and 3rd Battalions were to be in position before 1:30 A. M. July 18th and report made to the Regimental Commander at that hour.

The Regimental Battle Command Post was to be located in a large dugout 300 meters east of Le Chaffeur shortly after dark.

The Commanders of the 2nd and 3rd Battalions reported for duty just as the Regimental Commander finished issuing his orders. They had been in Paris with the Composite Company of the Regiment and had just returned. They were not aware of the impending attack until they reported for duty, so it was necessary for the Colonel to reissue his orders.

The Commander of the 2nd Battalion, after receiving his instructions for the operation, was directed to proceed to the Battle Command Post of the Regiment in a Ford truck as soon as it was dark and make such reconnaissance as would enable him to become familiar with the avenues of approach to the line of departure and to join his battalion as it marched by the Command Post of the Regiment. The battalion was to march forward to the Command Post under the 2nd in Command.

When the conference at Regimental Headquarters was completed all unit commanders proceeded directly to their respective organizations, and issued such orders as were necessary and made the necessary preparations for the march forward that night and the attack the next day.

The orders of the Commander of the 2nd Battalion prescribed that Companies H and G, right to left, would be the assault companies. Companies E and F, right to left, would be in support. Company C, 3rd Machine Gun Battalion was to support the attack by attaching one platoon to Company G and one platoon to Company H. Company Headquarters and the other platoon to be in reserve and to follow near Battalion Headquarters.

THE MARCH FORWARD TO THE LINE OF DEPARTURE

Regimental Headquarters moved forward to the Battle Command Post as soon as it was dusk and the Commander of the 2nd Battalion, with one runner from each company followed shortly afterwards.

The 2nd Battalion assembled in column of platoons, 50 yard intervals between platoons, in the following order of march; Battalion Headquarters, Companies G, H, E, F, and Company C, 3rd Machine Gun Battalion. Each rifleman had 220 rounds of ammunition and two defensive hand grenades. The men carried these grenades in the breast pockets of their blouses. Gas masks were carried in the alert position.

The Battalion marched at 9:30 P. M. via the trail 600 meters north of Mortfontaine-Raperie Road, thence along the same trail to the 1st Aid Station to Les Longues Rayes, thence along unimproved road to Le Chaffeur, thence along trail past the Regimental Command Post. The road running south from Fe de Pouy was cleared at 10:15 P. M. Guides having a slip of paper showing to which company they belonged were picked up on this road.

Just after crossing the road where the guides were picked up a violent rainstorm started. The darkness became so intense that it was impossible for the men in ranks to see the men in front of them. The trail which was bad at best from recent shelling, now became a quagmire of mud and it was necessary to close the units without distance and have the men hang on to the equipment of the men ahead. Great difficulty was experienced in keeping the column from being broken, as the men were constantly slipping and falling in shell holes. As the column approached the front, the roads and trails were filled with hundreds of horses, cannon, motor trucks, tanks and artillery on the way to their positions. This added to the difficulty of the battalion and it was only by almost superhuman efforts on the part of the officers and the men, that the battalion ever reached its destination.

The Battalion Commander joined the column as it passed the Regimental Command Post. The column was deployed at this point and the several companies proceeded to their respective positions guided by the French guides, who were with them for that purpose. Maps were to have been issued to the Staff and Company Officers at this point but they had not arrived from Division Headquarters and the only map in the battalion was the one the Battalion Commander had. All of the units of the battalion, except Company H, arrived at their respective positions about 2:00 A. M. and the Moroccan Division which was holding the front line withdrew to the right.

Company H was not as fortunate as the remainder of the battalion. When the company started to descend into the ravine northeast of Cutry, the enemy commenced to harras that part of the area with artillery fire. The French Guide became excited and seemed to loose his sense of direction. The Company Commander, not having a map or a compass did not realize he was going in the wrong direction until he arrived in Cutry. He was in a terrible dilemma. He learned from some French soldiers that he was in Cutry and that some Americans were east of there. Later he found the Adjutant of the 26th Infantry, who gave him the general direction of his position.

After receiving these directions he proceeded northeast and at 4:15 A. M. he lead his company by the Command Post of the 2nd Battalion 26th Infantry, where its Commander told him where his position was. It was beginning to get light enough to see at this time and it would not do for him to climb out of the ravine and go to his position, as the enemy would see him and thereby we would lose the effect of surprise. He continued his march up the ravine until he reached the Command Post of the 2nd Battalion 28th Infantry, where he reported to the Major, what had happened to him. He was then directed to form his company under cover of the steep slopes of the ravine in attack formation and then to mass his men near the top. The company was to emerge at a run at zero hour and take their position in the assault and close on the barrage.

The 3rd Battalion formed for the march forward just in rear of the 2nd Battalion, in column of companies, the companies being in column of platoon, 50 yards between the column. It followed the 2nd Battalion to the Regimental Command Post. The road running south from the Fe de Pouy was cleared at 10:30 P. M. and guides joined at this point. The battalion experienced about the same difficulties as the 2nd Battalion experienced in its march forward. After passing the 1st Aid Station at Les Longues Rayes, the column was broken and three rifle companies were lost. The Regimental Commander sent out runners to find and direct them to their respective positions, which the runners succeeded in doing. The entire battalion was in position shortly before 4:35 A. M.

The 1st Battalion had a much more difficult task to perform on the night of July 17—18 than either of the other battalion of the regiment. It was in the woods near Pierrefonds, about 10 kilometers west of Mortfontaine, and was forced to make its long march forward over roads that were congested with almost every kind of military transportation and equipment there being only one map in the battalion and no guides, it was necessary to keep the column connected in order to reach the destination.

The battalion arrived in the woods at La Fosse a Trure about 5:30 A. M. or one hour after the attack started. The men were exhausted from the fatigue of the long march forward and were badly in need of rest. No orders had been received from the Division upon arrival at this point. The Brigade Adjustant found the battalion and ordered its Command to move his command forward in the regimental zone of action and reported his action to Division Headquarters.

The Field and Combat Trains of the regiment remained at Mortfontaine during the night of July 17—18th.

THE ENEMY AND HIS DEFENSIVE POSITION ON JULY 18, 1918.

The enemy defensive positions in front of the 28th Infantry were as follows: The front line, consisting of a series of shallow trenches, and occupied by his outguards, extended in a general north and south line 300 meters east of the Tranchee de la Plateau.

His line of resistance extended thru the Raperile in a north and south direction, being about one kilometer east of his line of surveillance and consisted of organized shell holes and shallow trenches. The Raperie was organized as a strong point in the line of resistance and was occupied by approximately one rifle company and five large machine guns. Other machine guns, both heavy and light, were scattered broadcast throughout the line of resistance.

The reserve position was located in the Missy aux Bois Ravine. This ravine was highly organized with machine gun nests disposed according to the latest German method, which is the method we now use, and enabled the enemy to covered every approach with dense bands of enfilade machine gun fire.

The 6th German Division held the front of the 2nd Brigade, with its reserves located in the Missy aux Bois Ravine. All of the divisional artillery was located in or near this ravine. The 11th Bavarian Division held that part of the line in front of the 153rd Division with its reserve near Saconin-et-Brieul.

THE FIRST OBJECTIVE.

A battalion of the 153rd Division, on our immediate left, began moving forward to the line of departure about 4:25 A. M. and the enemy outguards saw them. Numerous flares were lighted by the enemy all along the line and the German protective barrage fell on our line at 4:30 A. M. This barrage was very severe, but our men were so thoroughly instructed that not a man showed himself and the enemy was unaware of a general attack until our own rolling barrage fell at 4:35 A. M. Our barrage fell on the enemy's line of surveillance and seemed to cause great consternation among his outguards. These outguards sent numerous flares up, which were repeated back as far as the eye could see.

The assault companies moved forward to the attack at 4:35 A. M. and soon closed on the barrage. Numerous German outguards were encountered in the enemy's line of surveillance, but they quickly surrendered or were killed in their shallow shelters.

Battalion Headquarters followed closely behind Company H. It suffered many casualties before it reached the enemy lines. The Artillery Liaison Officer, three or four of the 1st Aid men and most of the communication personnel were killed or wounded. This was a serious blow because it left the battalion without any mechanical means of communication.

The support companies moved forward at 4:35 A. M. and passed thru the German barrage, which was falling on our old front line and the ravine running northeast of Cutry. Both companies suffered heavy casualties from this barrage. The Company Commander and one Lieutenant of Company F were killed and the company was so badly disorganized that a halt and reorganization of it became necessary as soon as it passed our old front line. This halt and reorganization delayed the company considerably and it did not rejoin the assaulting companies until the 1st Objective had been reached.

The assault companies continued their advance, following the barrage closely, until they reached a position about 200 meters west of the Raperie and the enemy's line of resistance. At this point, they met with heavy rifle and machine gun fire, most of it coming from the Raperie, which pinned them to the ground. On account of the level ground, the support platoons of both companies were forced to take cover from the enemy fire being directed at the assault lines. Something had to be done quickly to relieve this situation, as the barrage only 15 minutes in front of the 1st Objective. The support companies were not within supporting distance at this time and the only troops which were available for maneuver was the Scout Platoon of the Battalion. This Platoon was composed of one Lieutenant and 35 enlisted men. The men were all expert shots and had been selected on account of their good shooting ability and former bravery in action. The Scout Lieutenant was ordered to attack the Raperie with his platoon. Two squads of the platoon opened fire on it from the front and the other two squads were maneuvered to a position on the flank from which enfilade fire could be delivered on it. As soon as fire was opened by the squads on the left flank, the two in front, lead by the Lieutenant, charged the enemy. One platoon of Company H, lead by its Lieutenant, joined this charge. Both Lieutenants were severely wounded as they were about to close with the enemy; but the men, inspired by their leaders, continued the charge and succeeded in capturing the position. Five heavy machine guns and about 100 prisoners were captured in and around this strong point. The enemy's casualties had been very heavy on account of the accurate shooting of our men.

The capture of the Raperie lessened the fire on our assault companies and the advance was continued, the men firing from the shoulder as they moved forward in the high wheat.

On account of the rapidity of the advance forward from the Raperie, many Germans, who had hidden themselves in beet piles and small underground shelters, were not located by our men. As soon as our lines passed, the Germans would come out of their shelters and open fire from the rear.

The judicious use of the hand grenades carried by the men soon put a stop to this sort of practice.

The assaulting lines moved forward to the 1st Objective without encountering much resistance with the exception of the St. Amand Farm, which lay in the sector of the 153rd Division on our left. One platoon of Company G assisted the French in the capture of this farm.

The 3rd Battalion moved forward at 4:35 A. M. and encountered the full force of the enemy's protective barrage. Great difficulty was experienced in crossing the ravine northeast of Cutry. The battalion suffered about 25 percent casualties and were badly disorganized. It reorganized, after it had passed thru the enemy barrage, in the open field near the enemy's old front lines. After reorganization the battalion moved forward and followed about one kilometer in rear of the assault battalion.

THE CAPTURE OF THE MISSY AUX BOIS RAVINE.

The assault lines moved forward from the 1st Objective closely following the barrage, which at this time was rather thin as only the heavier calibers were firing.

The tanks came up about this time and took their place in front of the assault lines.

With the aid of the tanks, the high ground about 300 meters west of the western edge of the Missy aux Bois Ravine was reached with little difficulty.

Upon reaching this high ground, the men of the assault companies were greeted with a wonderful view. The Missy aux Bois Ravine lay before them in full sight. The enemy was attempting to save some of his artillery and many horses and artillery men were shot at a range of less than 300 meters. Three German batteries of 77's located on the eastern edge of the Missy aux Bois Ravine opened direct fire on our advancing lines and tanks. Five of the tanks were destroyed by direct hits. The other three did not come forward to this high ground but moved off to the right under the cover of the high ground to their front.

The assault companies moved forward, notwithstanding the enemy's effort to stop them with artillery fire and descended into the Missy aux Bois Ravine. Here they were met with terrific rifle and machine gun fire from positions in the ravine and on the eastern slope. They had not progressed more than 100 meters when they were stopped by enfilade machine gun and direct artillery fire coming from machine gun nests and a battery of 77's located in or near Brioul, which was in the French sector.

The 26th Infantry, which had been abreast of us on our right flank up to this time, was stopped by enfilade fire coming from our front.

The 153rd Division on our left was having very severe fighting and as yet was unable to enter the Missy aux Bois Ravine. The village of Saconin-et-Brioul had been very strongly organized by the enemy and its garrison was resisting stubbornly.

When it was determined that the assault companies were definitely stopped, the two support companies of the battalion were ordered to extend the line to the left and attack and capture Brioul and the defenses in front of it. This attack had not progressed more than 300 meters when it was stopped by terrific machine gun and artillery fire from the vicinity of Le Mont d'Arty, Saconin-et-Brioul, and the ravine running east and west just north of Brioul. The casualties were steadily increasing and it looked bad for the battalion. The machine guns of the battalion were not to be found any place. It was afterwards discovered that the riflemen who had been detailed to carry ammunition for the guns had thrown away their boxes of ammunition and had picked up rifles and rejoined their own companies. The machine gunners, who had suffered heavy losses from the enemy fire directed at the assault companies, were struggling forward, very much overloaded, and arrived too late to be of any value in this attack.

The Commander of the 3rd Battalion heard the heavy firing to his front, and came forward ahead of his battalion and met the Commander of the 2nd Battalion on the western edge of the Missy aux Bois Ravine. After consultation it was decided to use the 3rd Battalion in an attempt to push on. Three companies were used in assault and the fourth was held in reserve on the western edge of the Missy aux Bois Ravine. One company attacked and captured Le Mont d'Arty and then swung to the right and attacked the height south of Saconin-et-Brioul. The other two companies attacked the enemy located in the ravine just north of Brioul. Their right flank guided on the left of Brioul. The 2nd and 3rd Battalions, the 153rd Divisions on the left and the 26th Infantry on the right, attacked at the same time. The great pressure brought to bear

on the enemy's flank enabled entire line to move forward. The fighting was defended his positions to the last. In fact, very few if any prisoners were taken by try in this advance. Our men waded the mud and water, in many places to advance in spite of heavy casualties. Many glorious feats of valor were performed the entire success of this advance was due to the efforts of the individual soldiers regardless of the casualties. One of the outstanding cases, was where a young some way worked his way forward to the eastern edge of the ravine and reached east of the battery of 77's that were located just east of Brioul. He immediately and by his efforts alone the enemy were unable to serve the guns. He killed them sent forward and finally the enemy withdrew and left the battery in his possession.

The eastern slope of the Missy aux Bois Ravine was captured about 10:30 A. M. The line was reorganized and the attack resumed. The assault progressed about 300 meters was stopped by heavy fire from the front. There being no reserves left to renew the line was established by the men digging in where they found themselves. The left of the line followed the unimproved road running from Saconin-et-Brioul enters the improved road running from Brioul to the Paris-Soissons Road. The right of the line resting on the right of the regimental zone of action. The casualties of both battalions had been so great and the line head was so wide, that one thin front line was established. (55)

The 153rd Division on the left having captured the eastern edge of the Missy aux Bois Ravine ordered one battalion of their troops to relieve the 28th Infantry in that part of the line north of the unimproved road running from Brioul to the Paris-Soissons Road.

The 2nd and 3rd Battalions were reorganized after the relief was completed, which was about 4:00 P. M.

The 3rd Battalion then took over the front line of the regiment. The 2nd Battalion went into a support position on the eastern edge of the Missy aux Bois Ravine, just east of Brioul.

While the fighting was going on in the Missy aux Bois Ravine, it was discovered that great numbers of the enemy were emerging from a large cave in the vicinity of Le Mont d'Arty and that they were firing on our troops from the rear. This cave had not been captured by the troops that had previously attacked and captured Le Mont d'Arty. The reserve company, which had been left on the western edge of the Missy aux Bois Ravine, attacked the enemy at once and took them on the flank. The Germans were driven back in the cave and they refused to surrender. It was impossible to bomb them out as the entrance was covered with machine guns from within. This made it necessary to lay seige to the entrance. The commander of the enemy garrison held out until about 4:00 P. M. when he came out under cover of a white flag and surrendered his entire force, consisting of twenty officers, including a Commandant, and between three and four hundred men. Several horses, officers mounts fully equipped, a great number of machine guns and trench mortars were also captured in this cave.

An attack was ordered to take place at 5:30 P. M. but was recalled before it started. Both battalions distributed their units in depth and organized the ground held for defense. The regiment made no further advance until the morning of July 19th.

The Regimental Command Post was moved forward about 5:00 P. M. to the large cave at Le Mont d'Arty. The Regimental Aid Station was also located there about the same time.

During the early part of the evening, about 70 Germans, mostly Red Cross men, suddenly appeared before the Colonel and asked to be taken prisoners. These men had hidden in a tunnel and did not surrender with the remainder of their comrades who had been taken a few hours before. All of the German Surgeons and 1st Aid men were retained to help dress the wounded. About 40 other prisoners were retained as little bearers. All of the wounded were gathered during the night and were brought to this cave for 1st Aid. The place was overflowing with wounded men who were evacuated as fast as possible.

The 1st Battalion, division reserve, was moved to the 1st Objective, during the afternoon of July 18th and this position was organized for defense.

The Field Trains and Combat Trains of the regiment moved forward from Mortfontaine to the vicinity of Couerves during the afternoon of July 18th. An attempt was made to get food and water forward to the front lines but this was not successful.

The regiment had not reached its 3rd Objective but it had gone beyond the 2nd against terrible resistance. The 2nd and 3rd Battalions had gone into the attack that morning nearly full strength. Now their companies looked like platoons. The 2nd Battalion was reorganized into five small rifle platoons and one machine gun platoon, all commanded by sergeants. All the officers, expecting the Battalion Commander, had been either wounded or killed.

The 3rd Battalion was in little better shape, as Company M had been retained in reserve, and therefore suffered but few casualties. The other three rifle companies and the machine gun company had lost about 50 per cent of their men.

The night of July 18—19 was fairly quiet and most all of the men, excepting the outguards, secured a much needed rest.

THE ADVANCE TO THE PARIS—SOISSONS ROAD JULY 19, 1918.

The enemy, becoming alarmed at the advance of the 1st Division during the day of July 18th, brought forward the 34th German Division and placed it in position east of Ploisy. Numerous snipers and machine gunners were hurried forward, the snipers being placed along the Paris-Soissons Road and the machine guns were scattered broadcast, covering the flat open ground with dense bands of machine gun fire. A strong point which was located astride the Paris-Soissons Road about 600 meters to the left of our zone of action, was occupied by what seemed to be a battalion of riflemen, well supported by machine guns. This strong point had been constructed by the French, prior to May 28th, 1918. It was well organized and was completely surrounded by two bands of wire entanglements. This position commanded the ground for a distance of 1200 meters in every direction. The enemy's line of resistance was on high ground about one half way between Ploisy and Missy aux Bois.

Orders were received during the night of July 18—19 to continue the attack at 4:00 A. M. July 19th, the objective being a line thru Berzy le Sec and Buzancy. The Artillery barrage was to come down on the 3rd Objective of yesterday at 4:00 A. M. and was to stand for 45 minutes. It was then to advance at the rate of 100 meters every three minutes.

The battalions of the regiment were disposed as follows:

3rd Battalion, assault; 2nd Battalion, support.

The 1st Battalion was released from Division Reserve and placed at the disposal of the 2nd Brigade.

The 3rd Battalion moved forward a few minutes after 4:00 A. M. and was met with heavy rifle and machine gun fire from the front and left flank. The battalion continued to move forward slowly in spite of losses. The Battalion Commander was very severely wounded at the very beginning of this attack.

The 26th Infantry on our right was able to reach the Paris-Soissons Road where it was stopped by enemy fire from the strong point on the left. It attempted to cross the road but was repulsed with heavy losses.

Company M, which was the left support company of the 3rd Battalion, seemed to lose its direction and veered off to the left. The enemy evidently had prepared for such a movement as not a shot was fired at the company until the Paris-Soissons Road was reached. As the leading units of the company reached this road, a withering enfilade fire from the enemy strong point on the left was opened on it. This fire was so intense that the entire company, with the exception of four or five men, was annihilated.

The remainder of the 3rd Battalion began veering off to the right, but finally reached the Paris-Soissons Road, but were unable to cross same on account of fire from the left. The men took cover along the western side of the banks of the road and in the drainage ditch.

The 2nd Battalion moving forward in support was met with heavy rifle and machine gun fire from the front. The 3rd Battalion being separated, left a large gap in the line. At least two machine guns and several snipers were in this gap and they turned their attention to the 2nd Battalion when it attempted to come forward. The battalion attacked at once straight to the front and after heavy fighting succeeded in killing the enemy machine gunners. As the battalion neared the Paris-Soissons Road it was subjected to a heavy fire

from the left, but succeeded in reaching the road with 35 or 40 men who took cover along the western side of the banks of the road, Some few of the men and one machine gunner succeeded in crossing the road and took up a position in the drainage ditch.

The casualties in the two battalions had cut the fighting strength down to about 120 riflemen, 4 machine guns and two officers. In this weakened condition it was impossible for them to continue the attack and the men were told to dig in where they were. Two machine guns were placed in the front line and two a little to the rear. A few men who had been stragglers or who had been slightly wounded were gathered up and organized into a small platoon. All the German machine guns that were in that area were turned about and manned by these men.

About this time the enemy could be seen forming for a counter attack in the vicinity of the strong point on the left. The artillery was notified thru the 26th Infantry, and artillery fire was requested. One battalion of the 7th Field Artillery was given the message by the Adjutant of the 26th Infantry as it was moving forward near Missy aux Bois. It galloped forward to the Paris-Soissons Road under cover of a small ridge and wheeled its guns into line, guns were hub to hub, and opened on the enemy with direct laying. This fire soon disorganized the enemy formation and the counter attack was not attempted.

One company of the brigade reserve was placed at the disposal of the Regimental Commander and it was moved to a position about 300 yards to the west of the Paris-Soissons Road.

The three remaining tanks of the regiment had gone around Missy auz Bois and then advanced to the attack. One was destroyed east of the Paris-Soissons Road in the zone of the 26th Infantry, the other two succeeded in reaching Ploisy where they were either destroyed or captured.

The 1st Battalion, brigade reserve, was placed at the disposal of the Regimental Commander, owing to the weakened condition of his other two battalions. It arrived east of Brioul about 1:00 P. M. and took up a defensive position.

The Field and Combat Trains moved to Cutry on the morning of July 19th so as to be able to move forward in case the lines advanced. Long range artillery fire was directed at them, with an enemy aeroplane adjusting the fire. The Supply Officer was severely wounded and heavy casualties occurred among the men and animals. The trains sought cover in the woods and ravines nearby and remained there the rest of the day.

THE CAPTURE OF PLOISY JULY 19th, 1918

During the afternoon of July 19th the entire division was ordered to attack at 5:30 P. M. The 28th Infantry in close liaison with the 153rd Division on the left, was to make the main effort, the other regiments of the division conforming to the movement. The line was to be advanced to the western edge of the Ploisy Ravine and defensive positions were to be organized there.

The 1st Battalion, which had suffered but few casualties, was ordered to execute a passage of lines through the 2nd and 3rd Battalions, and carry out the mission assigned the regiment. The 2nd and 3rd Battalions were to be organized into one group and follow as support.

The 1st Battalion formed for attack, normal formations, just east of Brioul, and moved forward in time to cross the Paris-Soissons Road at 5:30 P. M. It was met with terrific rifle and machine gun fire, coming from the enemy strong point on the left, just after it crossed this road. The casualties were heavy but the battalion continued to advance.

The 153rd Division also attacked at 5:30 P. M. and the enemy strong point that had caused the 28th Infantry so much concern was captured about 5:45 P. M. after very heavy fighting. When this strong point on the left fell the entire line was carried forward to the Ploisy Ravine.

Severe hand-to-hand fighting continued throughout the entire night for possession of the village of Ploisy and the Fe de Mt de Courmelles. Fe de Mt Courmelles had been organized as a strong point by the enemy and was strongly garrisoned. It also commanded our entire line to the south. One officer and about one platoon of Company B attacked and captured this farm, only in turn to be counter attacked by the enemy. The enemy counter attack was so powerful that the few men of Company B that had just captured the farm were overwhelmed and all died fighting gallantly. Other men of Company B made a second attack on the farm and succeeded in recapturing it. The left of our front line rested at this point during the remainder of the night

of July 19-20th. The fighting in the village of Ploisy was desperate and it was well towards the morning of July 20th that the village was finally in our possession. While the losses of the 1st Battalion had been very heavy, the losses of the enemy were appalling. At least one battery of 77's had been captured and many prisoners were taken. The enemy dead were piled everywhere.

In the meantime, the 2nd and 3rd Battalions were reorganized into one rifle company and one machine gun platoon. This organization will hereafter be referred to as the 2nd Battalion. The Commander of the 2nd Battalion and a 2nd Lieutenant of the 3rd Battalion were the only remaining officers. The rifle company was spread in one thin line across the zone of action and the machine gun platoon followed in the rear of the center of this line. The battalion moved forward to the high ground which lies about one half way between Ploisy and Missy aux Bois and organized a position of defense. The enemy shelling was very heavy during this advance and the Commander of the 2nd Battalion was wounded just before the new position was reached.

The remainder of the monograph will not be written from the personal experiences of the writer but will be taken from sources other than his own.

The men of the regiment had not had any food or water, excepting that carried on their persons, since leaving Mortfontaine, and were suffering terrible from want of same. Hot food and water was brought forward to the battalions of the regiment during the night of July 19-20 in a train composed of most of kitchens and water carts of the regiment. Six of these vehicles were destroyed by shell fire during this move and many casualties were inflicted among the men and animals of the train. It was only with great difficulty that the food was brought forward but it was a case of where the sacrifice was worth the gain.

THE FIRST ATTACK ON BERZY LE SEC JULY 20th, 1918

The enemy again tried to stop the advance of the 1st Division; and the 42nd German Division was put in the line near Ploisy during the night of July 19th.

Orders were received from the 20th Corps on July 20th stating that on account of difficulties the 153rd Division had encountered, the 1st Division was charged with the mission of capturing Berzy le Sec, which was formerly included in the zone of action of the 153rd Division. The zone of action of the 1st Division was extended to the northern edge of the village.

The orders of the 1st Division were received during the morning of July 20th. The 28th Infantry assisted by the 26th Infantry was given the mission of capturing Berzk le Sec.

The artillery, which had moved forward, delivered a powerful preparation on the enemy's front line and Berzy le Sec from 1:15 to 2:00 P. M. and then put down a rolling barrage which advanced at the rate of 100 meters every four minutes.

The 1st Battalion, in conjunction with the troops on its right and left, attacked at 2:00 P. M. following the barrage closely. The line moved forward to a point about 500 meters west of Berzy le Sec, where they were stopped by heavy rifle and machine gun fire coming from the village.

The individuals in the front line units dug in where they were stopped and the lines remained in this position during the night of July 20-21.

The 2nd Battalion followed the assaulting battalion at 500 meters as support. When the 1st Battalion was stopped the support dug in on the eastern edge of the Ploisy Ravine.

The Regimental Command Post moved forward to Ploisy during the afternoon of July 20th.

The Kitchen Section of the Combat Train moved forward to the Missy aux Bois Ravine during the day of July 20th. The Field Trains and Combat Trains, less the Kitchen Section remained at Cutry.

The night of July 20-21 was spent in reorganizing the different units of the regiment, giving the men hot food and waters and preparing for an attack early the next morning.

THE CAPTURE OF BERZY LE SEC JULY 21st, 1918.

The enemy made a great effort to hold Berzy le Sec as it was the key point of the defenses of the Chateau Thierry-Soissons Railroad and as long as it was in German possession the valley of the River de la Crise afforded good cover for the forming of reserves to make counter offensive to relieve the pressure on the southern end of the Chateau-Thierry Salient. Berzy le Sec was being garrisoned by remnants of the 6th, 34th, 42nd,

German and 11th Bavarian Divisions. This garrison was reenforced during the night of July 20-21, 1918 by the 46th German Division which had just come up.

Berzy le Sec and the adjoining terrain, was organized into a powerful defensive position. The stone houses were converted into veritable forts and every avenue of approach was swept with dense bands of machine gun fire. In addition to the rifle and machine gun defense one battery of 77's were placed in the very front line for anti tank attack defense.

The attack orders of the 1st Division were received during the night of July 20-21 and prescribed that the 1st Brigade on the right and the 153rd Division, reenforced by one regiment of the 69th Division, French, on the left would attack following a rolling barrage at 4:45 A. M. to the 1st Objective, which was a line running northwest and southeast along the edge of Berzy le Sec. The barrage was to stand for one hour in front of the 1st Objective and cease. The 1st Brigade then to conform to the movements of the troops on its right.

The 2nd Brigade, reenforced by the remnants of one company and the 3rd Battalion 18th Infantry, was not to be accompanied by a rolling barrage, but a powerful artillery fire for destruction was to be placed on Berzy le Sec and neighboring ravines. At 8:00 A. M. this fire was to lift and the 2nd Brigade was to advance and occupy the ground outflanked by neighboring units. After the 153rd Division and the 1st Brigade had completely disengaged their front, the 2nd Brigade was to pass into Division Reserve.

The 1st Brigade advanced at 4:45 A. M. following their barrage closely, but suffered heavy casualties from the left. It reached the 1st Objective on schedule time and held that line until the 2nd Brigade came up.

The 153rd Division did not attack at 4:45 A. M. as directed but moved forward at 8:00 A. M. and was met with heavy resistance from its front at the very start. It finally reached its 1st Objective but never attempted to go beyond that point.

At 5:30 A. M. the artillery concentration dropped on Berzy le Sec and continued with crushing effect until 8:30 A. M. when the fire lifted in front of the 2nd Brigade. At 8:30 A. M. all of the 28th Infantry, the elements of the 18th Infantry and the 2nd and 3rd Battalions 26th Infantry, all in one line, and lead by the Brigade Commander in person, moved forward to the attack. Our troops were subjected to heavy direct artillery, rifle and machine gun fire which caused heavy casualties in our ranks, but the line swept on. Berzy le Sec was captured and by 9:15 A. M. the last German had been driven out of the village or had been taken prisoner. The line was then pushed forward about 500 meters east of the village and consolidated for defense. One battery of 77's that fired on our men until the gunners were shot down, was captured. In addition to the many prisoners and the spoils of war that had fallen into our hands the Germans lost their last covered position to form for an offensive.

On account of the 153rd Division failing to move forward from its 1st Objective the 2nd Brigade did not pass in to the Division Reserve but held a very dangerous front line and the 1st Brigade had pushed ahead and were now holding the Chateau of Buzanzy and the ridge east of the River de la Crise. The gap caused by this was almost one kilometer wide and caused grave concern to the Division Commander. No attempt was made to fill this gap during the day of July 21st, but on the morning of July 22nd the 26th Infantry pushed forward and occupied the Sucerie and connected up with the 1st Brigade on the right and the 28th Infantry on the left.

No attempt was made by the 28th Infantry to push its lines forward during the remainder of the day of July 21st and 22nd. The front line was consolidated and the few remaining machine guns were placed in positions to command the approaches to Berzy le Sec. Many of the enemy machine guns were also used for this purpose.

THE RELIEF JULY 22-23, 1918.

Orders were received during the night of July 21-22 stating that the Division would be relieved during the night of July 22-23 by the 15th Scottish Division.

The advance parties of the Scottish Brigade that was to relieve the 2nd Brigade arrived in the sector on the morning of July 22nd and a reconnaissance of the positions were made.

One guide per company went to Missy aux Bois and met the incoming units at 5:30 P. M. and guided them to their respective positions.

The relief of the Division was made difficult by the numerous aeroplanes the enemy sent over our lines to bomb our support and reserve positions.

The relief was completed early in the night and the regiment was assembled on the Paris-Soissons Road just east of Missy aux Bois. The regiment then marched to a point several miles southeast of Missy aux Bois, via the Paris-Soissons Road, where hot food was served and the men enjoyed a long deserved rest.

About noon on July 23rd trucks arrived and the remnants of the regiments, less the Field and Combat Trains, was conveyed to the Dammartin-en-Goele Area. Regimental Headquarters was located in the village of Survillers. The Battalions were located in the small villages in the immediate vicinity of Survillers. The Field and Combat Trains marched overland and joined the regiment on July 24th, 1918.

The casualties of the regiment in this operation was 56 Officers and 1,765 enlisted men killed or wounded.

These casualties do not include those of the attached elements who suffered in like proportion.

ANALYSIS AND CRITICISM

In making a study of this operation it will be seen the 28th Infantry was assigned a most difficult mission. It was given a frontal mission and at the same time the mission of bringing up the left flank of the 2nd Brigade, of the 1st Division and of the 20th Corps. The troops on the left flank belonged to another Corps. This made it very difficult as it was only thru the 10th Army that the movements of these two units could be co-ordinated. This in a large way was responsible for most of the difficulty the 28th Infantry encountered in this operation.

The preparation and orders for carrying out the mission assigned to the 28th Infantry were as full and complete as the circumstances would permit. Those points in reference thereto which admit of criticism are:

1st. The failure of Battalion and Subordinate Commanders to make any reconnaissance during the day of July 17th. There were very good reasons for not permitting this reconnaissance to be made. A French Division was holding the front over which the 1st Division expected to attack. The attack was to be a surprise and any unusual movement of Americans in this area would be sure to be noticed by the enemy and the element of surprise would be lost.

2nd: The failure of G-2 of the Division to provide maps for subordinate commanders: This caused great difficulties throughout the entire operation as the officers most concerned were dependent entirely on their sense of direction and the French guides who led them into position.

3rd: From the light of after events it will be seen that the Brigade and Regimental Commanders erred in directing that the support companies of the assault battalion be implaced just west of the ravine running northeast of Cutry. This ravine was a difficult obstacle and with the enemy's barrage falling into it, was almost impassable. It would have been better to have emplaced the support companies on the eastern edge of this ravine.

4th: Orders required the support battalion to follow so close behind the assaulting battalion that it lost about one fourth of its strength in passing thru the enemy's barrage.

5th: The Brigade orders prescribed normal formations. Even the exact formation of the assault platoons were prescribed. Little or nothing was left to subordinate commanders. However, under the circumstances it may have been justified. This was the first major offensive in which the Brigade participated. Most of the subordinate commanders were all young men. Nothing had ever been written about the formations desired. The Brigade Commander took no chances.

Before passing to the battle most favorable mention of the officers and the men of the regiment in getting to their respective positions on the night of July 17th-18th must be made. They went into positions they had never seen, without maps or compasses, on a night that was extremely dark and over almost impassable roads and trails. The success of this movement can be attributed only to the iron will and determination of the officers and men.

The movement of the French Battalion on the left which brought the protective barrage of the Germans on our lines, might have been disastrous; except for the fact that the morale and discipline of our regiment

was very high. As it was our command that did not seem to be affected in the least. The men held their positions to the exact second of the zero hour and then rose out of the ground like one man and dashed to the attack.

It will easily be seen that the success of the battle during the first two days of the attack was in the hands of the subordinate commanders. The advance was so fast and the fire so heavy that it was the individual on the spot who made the decisions and then carried them out.

The loss of so many officers during the battle speaks well for the German method of snipers placed well back of the front lines armed with rifles equipped with telescopic sights with the mission of picking out the leaders and firing on them.

To sum up the results of this battle: The 28th Infantry advanced over eleven kilometers against heavy resistance. It succeeded in bringing up the difficult flank of the Division and captured nearly as much ground to the left of its sector as it did in its own. It fought and decisively defeated elements of six German Divisions. It continued to advance after losing fully 60 percent of its fighting strength. Its losses in this operation were 56 Officers and 1,765 men killed and wounded.

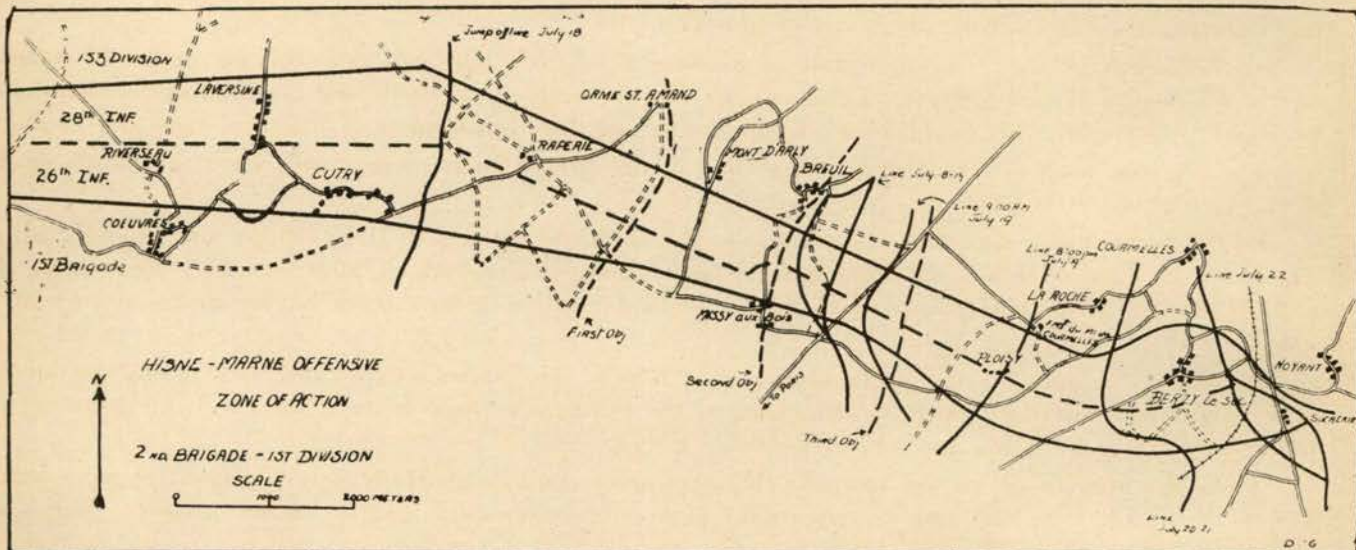
LESSONS

Some of the lessons to be learned from this operation are:

1. Surprise is an essential element of a successful attack.
2. In combat, three things are of vital importance. Reconnaissance—Communication—Liaison. The first must be made by each unit commander before an engagement to ensure for his unit its proper route to the line of departure, its correct deployment and its proper direction; and further, it must be continuous throughout the action. The second and third can only be maintained by constant effort on the part of every commander.
3. To regain fire superiority and restore mobility, reserves should always be so located that they can be quickly engaged.
4. A regimental commander must make his plans and preparations for an attack before it starts. Once the attack is launched, the conduct of the assaulting units are in the hands of the smaller unit commanders. The regimental commander can influence the action by the use of his reserves and supporting weapons.
5. Once an attack has been launched, personnel and material must be used to force a successful conclusion.
6. Command Posts of Battalions and larger units should be placed in position where they do not come under the direct fire of the enemy and should move forward from one covered position to another. The Commander, with a small detail, can conduct the troop leading from a more advanced position.
7. Reorganization should be carried on throughout the action whenever the time and necessity presents itself.
8. Any unit that has for its purpose the support of riflemen must be self contained and cannot depend on them for any assistance other than protection.
9. When rolling barrages are used to assist the advance of infantry, objectives must be prescribed and arrangements made for the barrage to rest in front of these objectives a sufficient time for the advancing riflemen to overcome resistance and then follow the barrage when it moves forward.
10. A rolling barrage that advances without closely following infantry is not only a waste of ammunition, but leaves the infantry without proper protection.
11. Artillery is the long thrusting bayonet of the higher commanders. In bayonet fighting, the thrust is always directed at a vulnerable part of the body. The divisional artillery should be used in the same manner. To bombard areas is only wasting ammunition which is difficult to secure. Artillery fire should be concentrated on critical points for maximum assistance.
12. The infantry attack has as its basis the fighting spirit and aggressiveness of its officers and non-commissioned officers with fearless, intelligent leading on their part, and the individual initiative on the part of the individual soldier. It is the duty of all leaders to stimulate and cultivate these qualities in time of peace

and in the training areas after war has been declared. The soldier in combat will only do those things which he has actually done in training. To tell him what to do in combat, without requiring him to practice it in training, is only wasting your breath.

References: Personal experiences of the Author; 1st Division History; Final Report of General Pershing; Operation Orders 20th Corps (French) Field Orders No. 27, 1st Div.; Field Order No. 34, 2nd Brigade; Personal Statements of several Officers and men; Memo 718, 1st Division, July 19. 1918; Field Order No. 29, 1st Division; Operations and Reports, 1st Division.



OPERATIONS OF THE 1ST DIVISION (U. S.)
IN THE SOISSONS OFFENSIVE

JULY 16TH TO 25TH, 1918

By

Capt. Elmer C. Goebert, Ord. Dept.

THE PATH OF THE FIRST DIVISION.

The Twentieth Corps of the X. French Army held the line running from the Aisne south through Cutry, crossing the Villers Cotterets Ridge about three kilometers west of Longport.

As extracted from Field Order No. 27, Headquarters First Division A. E. F. France, July 16, 1918 the northern limit of the division was on a line running toward the east from Fme—d. Poney to Laversine to a woods 1200 meters northeast of Cutry to Raperie; Mont Plaisir Fme. to a Point on Paris to Soissons road 2000 meters northeast of Cravancon Fme. The southern limit ran eastward from a point 1500 meters southeast of Mortefontaine to the north edge of Bois Vaubern to Ru de St. Aignon ou de Retz to a point 400 meters northeast of LaClaux Fme. to a cross road 300 meters north of Cranvancon Fme to a cross road 500 meters northeast of Chaudon.

Between these limits the front was about 2800 meters. The terrain was almost ideal for defense and the Germans had taken full advantage of the fact.

To the south of the Aisne and west of Soissons is a high bare plateau, cut by numerous ravines which are deep and well wooded. These ravines run generally in a north and south direction and offer excellent opportunity for establishing strong points and for concealment of machine guns and artillery.

The plateau, itself is fertile and at the time of the offensive was covered with wheat fields, which offered excellent cover for infantry and machine guns.

In the path of the American First Division lay the three ravines of Missy, Ploisy and Chazelle, all of which are low and swampy, and form natural obstructions to the path of advance. The slopes from the plateau into the ravines are steep which makes them difficult to cross without having an enemy present to contend with.

Beyond the ravines lay the valley of the Crise River. This valley is broad and marshy, while to the east is the plateau of Buzanzy, which, in the hands of the Germans, afforded them an excellent command of the area between the Aisne and Villers Cotterets Ridge.

There are many roads in the area, the improved ones running generally across diagonally from southwest to northeast. The east and west roads are as a rule unimproved and in many instances only cart tracks.

The principal towns of the area are Cutry, Ploisy, Berzy Le Sac and Buzanzy, while scattered here and there over the entire terrain are small villages, many of which played important parts in the fighting.

Like in most European countries, the houses were principally of stone and well built, and made excellent locations for placements of machine guns for defensive situations. The Germans took full advantage of their value in organizing their defenses.

THE ORDER OF BATTLE

On the night of July 17th, 1918 the First Division formed and went forward into the line.

The order of battle was as follows:

Major General Charles P. Summerall, Commanding

Colonel Campbell King, Chief of Staff.

1st Infantry Brigade, Brigadier-General John L. Hinse, (16th Infantry, 18th Infantry, 2nd Machine Gun Battalion.)

2nd Infantry Brigade, Brigadier-General Beaumont B. Buck, (26th Infantry, 28th Infantry, 3rd Machine Battalion.)

1st Field Artillery Brigade, Colonel L. T. Holbrook, (6th and 7th Field Artillery, 75 mm. guns, 5th Field Artillery, 155 mm. how. 1st Trench Mortar Battery.)

Special Troops:

1st Machine Gun Battalion, 1st Regiment Engineers, 2nd Field Signal Battalion.

To the extreme right and adjacent to the 1st Moroccan Division was the 18th Infantry distributed in depth from the front to rear as follows:

3rd Battalion and Company D, 2nd Machine Gun Battalion.

1st Battalion and Machine Gun Company, 18th Infantry.

2nd Battalion and Company C, 2nd Machine Gun Battalion.

The 16th Infantry was to the left of the 18th and in depth from front to rear.

1st Battalion and Machine Gun Company 16th Infantry.

2nd Battalion and Company A, 2nd Machine Gun Battalion.

3rd Battalion and Company B, 2nd Machine Gun Battalion.

To the left of the 16th was the 26th Infantry from front to rear.

2nd Battalion and Company B, 3rd Machine Gun Battalion.

3rd Battalion and Company A, 3rd Machine Gun Battalion.

1st Battalion and Machine Gun Company 26th Infantry.

On the left was the 28th Infantry from front to rear.

2nd Battalion and Company C, 3rd Machine Gun Battalion.

3rd Battalion and Company D, 3rd Machine Gun Battalion.

1st Battalion and Machine Gun Company, 28th Infantry.

To the left of the 28th was the 153rd Division of First French Corps.

The Stokes mortar and 37 mm. guns of each regiment supported the assault or accompanied the support battalion. A company of engineers was attached to each brigade, one to the battalion of French tanks and two companies to the regiments of field artillery.

The artillery support was as follows. The First Brigade was supported by the 6th Field Artillery while the 7th Field Artillery supported the 2nd Brigade. The 5th Field Artillery pieces were further to the rear in a position west of Coevres, and concentrated their fire wherever needed over the front.

Field Hospital No. 3, Kitchens, Military Police, Headquarters, Sanitary and like units took station to the rear in convenient localities where they could best serve their purpose.

Opposed to the First Division were elements of the VII. German Army under von Boehn. The 42nd Division, a part of the XIII. Corps was directly in front of the American First Division. To the right of the 42nd Division was the 6th Division of Staabs' Corps and to the left the 47th Division, a part of the XIII. Corps.

Almost from the very start of the offensive this German order of battle was changed so that by the close of activities on July 22nd, there were six divisions between the 6th and 47th divisions from the reserves in an effort to check the advance of the American First Division.

JULY 18TH, 1918.

The zero hour arrived at 4:35 in the morning of July 18th. The artillery without any preparation opened up and laid down an offensive barrage directly in front of the infantry and advancing at the rate of 100 meters in two minutes to the first objective which was an unimproved road running across the sector from southwest to northeast and passing through Tilleul de la Glaux. At the first objective, the barrage stood for twenty minutes, while the infantry came up and cleared the area which covered a strip about two kilometers deep.

Almost immediately upon the opening of the Allied guns the German batteries opened fire, but the fire was not powerful and disclosed a lack of sufficient defensive artillery protection. However they did cause many casualties among the men of the First Division.

The artillery in this offensive was not able to place down a close barrage on account of having to fire from map data entirely. The Germans thus were able to come out of their dugouts and set up machine guns after the barrage had passed over them. The infantry was faced with the job of cleaning out these nests as they came upon them, which would have been avoided had the barrage been close.

The line of defenses of the Germans offered little or no resistance but in the second line there was considerable work for the "mopper ups". The Germans had been taken entirely by surprise when the offensive opened, and even in their second line of defenses, they did not have time to thoroughly man their positions before the infantry of the American First Division was upon them. The line of prisoners soon started to come in and the wounded to flow to the rear.

The first objective was reached about 5:30 A. M. and following the barrage which had proceeded to the second objective at the rate of 100 meter in two minutes, where it was to stand for forty minutes, the infantry moved out for the line running from Cravancon Farm to the edge of the Missy aux Bois Ravine.

The American troops soon overran batteries of the German artillery and killed or captured the men at the guns. The Germans had by this time awakened to what was happening and stiffened the resistance. Machine gun squads were sent out into wheat fields and to every important point.

On the left flank of the 28th Infantry, Saint Amand Farm put up a stiff resistance and the strong point had to be taken by direct assault. The left flank was now closing in on Missy aux Bois Ravine. Up to this point the main mission of the 5th Field Artillery had been to place its full force of 155 mm. guns into the ravine. It was believed that the ravine could not be taken without severe fighting, which proved to be true. For detailed account of the taking of Missy aux Bois Ravine see the preceeding article.

The 26th Infantry met practically no resistance until it came to the head of Missy Ravine. Its advance at this point, like the 28th, was retarded, and only after desperate fighting was it able to come up on the line with the 28th Infantry. The fighting experienced by the 26th was so severe that as early as 7:15 A. M., the third battalion was passed through the second to freshen up the advance.

The 16th and 18th Infantry made better progress. They had, however, met with heavy machine gun fire from hidden nests in the wheat fields and the artillery had cut loose on them from the vicinity of Chaudun, inflicting severe loss. In addition the more rapid advance of the first brigade had exposed the left flank of the 16th Infantry, which was subjected to enfilade fire.

The first brigade pushed on, however, and had reached the second objective by 9:00 A. M. With a view to further pressing forward the first battalion of the 18th Infantry was passed through the third, and the second of the 16th Infantry passed through the 1st.

At the Paris-Soissons Road the tanks were heavily shelled and two put out of commission. When they later crossed the road practically all were destroyed. The fire of the Germans at this point was extremely heavy, the road offering an excellent target with the result that severe losses were inflicted upon all the units crossing the road.

The first brigade in its advance had kept abreast of the Moroccan division on its right, had reached its final objective of the day and taken in its path Missy aux Bois and Chaudun, the former going to the 16th Infantry which established its regimental headquarters in the town, while the latter was taken by the 18th Infantry.

The rapid advance of the infantry had lengthened the range of the artillery fire so that it became necessary to move forward. In order that the fire be not interrupted the advance was made by sending one-half of the units forward at a time.

The 7th Field Arillery moved from its position in front of Laversine to a position about 1,000 yards northwest of Tilleul de la Glaux. The 6th Field Artillery advanced to the line of the first objective about 900 yards southwest of Tilleul de la Glaux, sending one of its batteries into position at a road junction on the western slope of Missy Ravine about 1,000 yards east of Tilleul de la Glaux. The 5th Field Artillery moved into position south of Coevures.

JULY 19TH, 1918.

On the morning of July 19th at 4:00 A. M. the second day of the battle was opened. The objective of this assault was a line from Berzy-le-Sec to Buzanzy.

The original instructions for the day's operation as found in Field Order No. 28, Headquarters 1st Division A. E. F., which had moved to the west of Coevres) ordered the second brigade to move forward, the first brigade to hold its position until the two were on line and then both move forward.

As on the previous day a barrage was to be laid down by the artillery without any preparation,—the troops to advance behind. The barrage was to move forward 100 meters every three minutes.

The regiments maintained their same relative position from right to left and opened the attack with the following battalions in depth:-

18th Infantry, First Battalion,

Third Battalion,

Second Battalion in reserve

16th Infantry, First Battalion,

Third Battalion and Co. B. 1st Engineers

26th Infantry, Second and Third Battalions left to right,

First Battalion,

28th Infantry, Second Battalion,

Third Battalion,

First Battalion.

During the night the Germans had dug Machine gun emplacements in front of the 153rd French Division and the Second Brigade of the American First Division. These guns were so placed as to enfilade the First brigade and the 1st Moroccan Division. It became the task of the Second Brigade to clean out these machine guns which task was accomplished by the use of tanks. In advancing to the Soissons—Paris Road, the Second Brigade was not by heavy fire delivered from the front of the French 153 Division which was not able to keep up on line with the 28th Infantry, so that the latter's left flank became exposed. So stiff was the resistance met that by 9:00 A. M. the Second Brigade had only been able to advance about 700 yards.

The First Brigade had not been able to follow the instructions of holding, due to the Moroccan Division advancing and the result was that the gap between the two brigades was increased rather than diminished. To remedy this condition, a second attack by the Second Brigade was organized for 5:30 P. M.

The position of the artillery was changed for this attack. The 6th Field Artillery moved one of its batteries to the south of Missy aux Bois. The Third Battalion 5th Field Artillery moved to a position northeast of Cutry, the Second Battalion southeast of Cutry and the 1st Battalion took position south of Cutry just beyond the original jump—off line.

Again the order of battle was changed, the 1st Battalion 26th Infantry taking the line relieving the 3rd Battalion which went into reserve. In the 28th Infantry, the First Battalion was taken from Division reserve and passed through the regiment to the front.

By 8:00 P. M. the Second Brigade had accomplished its mission. It had driven forward nearly 2 kilometers, closing the gap between the Brigades and establishing a line running from the west of the town of Ploisy generally south to a point just west of Chazelle.

For the second time in this day the Artillery moved its position,—the 6th Field Artillery moved all its units up to the south of Missy aux Bois, the 7th Field Artillery taking position east of the Soissons—Paris Road with one battery in position to the southwest of Ploisy.

The Germans by this time had realized the seriousness of the situation confronting them, for, where there had been but one division, the 42nd, opposed to the American First Division, there were now four in the order from north to south: 11th Bavarian Division, 34th Division, 42nd Division and 28th Division. An effort was being made to hold line by superiority of number of men and artillery.

JULY 20, 1918.

The third day of the battle opened on the afternoon of July 20th, 1918, the morning having been taken up in the formulation of plans and organizing the ground.

In the original plan of action the town of Berzy le Sec was an objective assigned to the French Division on the left of the First U. S. Division. The French Division, namely the 153rd, which had this task, had not been able to advance with the same speed as the Americans, they having met with delay in Missy aux Bois Ravine, accordingly, Berzy-le-Sec was assigned as an objective of the American Division by Headquarters of the X. French Army on July 20th.

The heavy Artillery opened up at about 12 M. from their new positions. All the Artillery positions had been slightly changed, four batteries of the 6th Field Artillery having moved to east of Chaudun and one battery of the 7th Field Artillery moved to join the battery already southwest of Ploisy. The 5th Field Artillery advanced and took up position in the Missy Ravine just west of Missy aux Bois.

The fire of the 5th Field Artillery was concentrated on Berzy le Sec for the purpose of destroying the German position which was strongly held.

A standing barrage dropped at 1:15 P. M. and stood until 2:00 P. M. when it advanced preceding the infantry. The rate of advance was set at 100 meters in four minutes.

The First Brigade met with stiff resistance in the Chazelle Ravine running south toward the Villiers--Cotterets Ridge but by hard fighting were able to advance the line about 2,000 meters crossing the Paris--Soissons Railroad to the west of Aconin Farm.

The Second Brigade failed to reach its objective this day, even though having at its disposal the Divisional Reserve Battalion of the 18th Infantry which had been placed east of Missy Ravine.

After passing to the east of Ploisy, the ground rises into a ridge which runs from southwest to northwest. The Germans allowed the Second Brigade to come up to a point about 300 meters west of Berzy le Sec on this ridge and then opened a very accurate fire on the left flank from 105 howitzers and 150 mm. guns. The explosion of these shells added to which was a heavy machine gun fire, rapidly depleted the already thin line of the Americans, so they were forced to stop short of their objective.

The First Brigade in this day's fighting refused its left flank and covered the gap between the line of the Second Brigade and its newly established line.

The conclusion of this days fighting brought relief for the First Moroccan Division, who were replaced by the 87th French Division during the night. On the left of the American First Division, the 153rd French Division. The dawn of the next day saw the American First Division still on the line, the only one of the divisions that had begun the assault, to remain unaided.

The engagement on the 20th saw the American First Division opposed by four divisions which had been in the day previous, from north to south: 11th Bavarian Division, 42nd Division, 34th Division and 28th Division, and in addition, one fresh division, the 46th Reserve Division from the reserve of the German XV Army, and placed in the line between the 34th and 28th Divisions.

JULY 21ST, 1918.

The afternoon of the twentieth had not been as successful as was desired, and as a result it was decided to take the town of Berzy--le--Sec on the 21st. It was planned to attack at 4:45 A. M., the First Brigade having as its objective the plateau of Buzanzy, including the city, while the Second Brigade was to take Berzy--le--Sec and establish the line to the east of the city crossing the Soissons--Chateau-Thierry Road, running on down to the east of Buzanzy.

Elements of the Second Battalion, 18th Infantry, were to be placed in the attack for the Second Brigade, since the 26th and 28th Infantry had been reduced to a handful in the operations up to this point.

The plan of attack had to be changed because of the inability of the French Division on the left of the First American Division, to attack before 8:30 A. M. The changes made required the First Brigade to jump off at 4:45 A. M., all of the artillery to cover the advance and concentrate on the left flank, which would be

exposed by this operation. The Second Brigade was to jump off at 8:30 A. M. after an artillery preparation of three hours concentrated against Berzy-le-Sec.

The First Brigade jumped off at its zero hour behind the barrage and by gallant fighting carried on, passed the Chateau-Thierry Road up on to the plateau of Buzanzy, captured Buzanzy and occupied its objective. To the 18th Infantry belongs the credit of capturing this last objective; and in carrying out the task, it is said they captured more men than they had in line.

The Artillery concentration on the wooded area in front of Berzy-le-Sec started at 5:30 A. M. At 8:30 A. M. the concentration lifted on to the town and the Infantry, personally led by Brigadier-General Beaumont B. Buck and his staff advanced to the attack. As the attacking wave approached the artillery lifted over the town and by 9:15 A. M., the Infantry was on its objective, having captured a battery of 77 mm. guns, many machine guns and men.

The line between the Second and First Brigade was now established and the final objective attained. The communications of the Germans, namely the Soissons-Chateau-Thierry Road and the railroad were in the hands of the Allies, and the position on the plateau of Buzanzy gave them complete control of Soissons.

There were now six German Divisions arrayed before the First American Division, against one Division when the offensive opened. The Divisions from north to south were the 11th Bavarian, 42nd Bavarian, 34th, 46th, 28th and 20th Divisions. The front line covered about 3,500 meters and had been turned toward the east in the south so that it ran generally from northwest to southeast.

THE LAST DAY IN LINE.

Throughout the 21st day of July the First American Division was expecting to be relieved, however, due to delays, the 15th Scottish Division scheduled to take over the sector failed to arrive and information was received toward night that the relief would not take place until the next day.

The First American Division was practically inactive on the 22nd of July except that the Germans had been giving trouble by sniping from the vicinity of Sucerie. To eliminate this the 26th Infantry advanced the line until it included Sucerie.

The Germans were active on this day both with airplanes and artillery. The planes, which were armed with machine guns flew low and inflicted many casualties. They also accurately located the line and certain artillery positions upon which artillery fire was opened.

The 15th Scottish Division began to arrive in the morning and at midnight, July 22nd, 23rd, the Scottish Division took over the sector.

The First Field Artillery Brigade and First Ammunition Train, together with the First Sanitary Train were loaned to the Scottish Division,—their units not having arrived and on the 23rd of July the American Artillery laid down a barrage in back of which the Scottish Infantry advanced.

The First American Division began to assemble in the Retz Forest on the morning of July 23rd. The company kitchens were set up and the respective units assembled around them, only small groups were left of what had five days before had been companies for, in personnel, the Division had paid heavily. The remnants of companies came in commanded by sergeants, corporals, and in one case, a private, while the battalions were commanded by Captains and Lieutenants. Three of the regiments lost every officer above captains, except the colonels, while the 26th Infantry lost every one of its field officers and was commanded by Captain Barnwell R. Legge when it came out of the line.

During the nights of the 23rd-24th and 24th-25th, the British units relieved the 1st Sanitary Train, the 1st Ammunition Train and the 1st Field Artillery Brigade so that the entire Division was out of the line by sunrise July 25th, 1918. In the meantime the Infantry units were transported in French trucks to Dammartin-en-Goele on July 23rd for rest.

The accomplishments of the American First Division were gratifying. It had forced the recrossing of the Marne by the Germans, and consequently what proved to be the retreat which was ended only by the Armistice November 11th, 1918. It had through hard fighting advanced eleven kilometers, taken 3,500 prisoners

of whom 125 were officers, captured 75 cannon, 50 mortars, 500 machine guns and much ammunition and supplies.

The losses in the First American Division in personnel, (as summarized by the First Division History from the the casualty records of the Division) killed or died of wounds, are:- 77 officers, 1,637 men; wounded 157 officers, 5,335 men; missing 76 men; captured 35 men.

The total loss of personnel by the Germans is not known but the number lost to them by capture would indicate that the killed and wounded were many.

ANALYSIS AND CRITICISM

A careful study of the American First Division in the Soissons Offensive July 18th to 25th, 1918, like many other of the operations leads to possibility of criticisms, the value of which, however, is seriously questioned, because in the final analysis, the Division wrote a page in the history of nations. It is well after all has been done for one to say, "Why did they not do this way or that?" but the small things, which many times are responsible for one's decision during the strain of any excitement are so rarely known to the critic that, his (meaning the critics) whys and wherefores are as a rule not sound. It is therefore with certain reservation that the following is written.

The two elements which were the foundation to success of the operation in the Allies Aisne-Marne offensive of July 1918 were first surprise, second secrecy, and it would appear that the American First Division was forced to do and sacrifice many things in order to obtain these vital elements.

On July 11th the Division was at Nivillers a distance of about 90 kilometers from the jump-off line of July 18th. Surprise and secrecy as well as self-preservation limited the movement to the hours of night so that elements of the Division in many instances did not reach the line in advance of the zero hour, but came up on the march deployed and went right on. Let us study the natural result of this condition:-

First,—It resulted in the violation of the accepted fundamental principal of reconnaissance before action, for how could proper reconnaissance be made under such condition.

Second,—It forced the Artillery to fire by map calculations which meant that the assault barrage led the troops at sufficient intervals to allow the Germans time to come out of their dugouts, set up and man machine guns, which inflicted severe losses on the American troops.

Third,—It forced the men, badly fatigued as a result of a 10 kilometer march from the woods of Compiègne during the night of July 17th-18th, to go into action without a single minute's rest.

Fourth,—It gave the machine gun platoon no time to select proper positions to assist in the offensive, thus causing heavy loss in their personnel.

The close of the first day's fighting saw the Division in rather a dangerous position. The First Brigade had either through good leadership or weaker resistance, gained its objective while the Second Brigade had not come through to where it should have been. The result was the gap of at least 1,000 meters upon which the Germans were able to pour enfilade fire. In this way the 16th and 18th Infantry lost many of its men. It would appear that a lack of control of brigade existed, otherwise the advance would have been so regulated to avoid such a condition.

Another thing is marked and stands out distinctly in this offensive namely the inability of the French 153rd Division on the left to take the objectives assigned as its tasks,—thus causing the Second Brigade of the First American Division to extend its front beyond its boundary limit. The first effect of this failure was when the Americans were forced to go up the Missy Ravine and take the German position in the vicinity of Breuil and then again when the taking of Berzy-le-Sec was assigned to the First American Division, it was directly due to the inability of the French to accomplish their share of the job.

Finally there seems to have been an unusual sacrifice of officers in this engagement. Whether this was due to an over-zealous desire to demonstrate superb leadership on the part of the officers or just one of the happenings of the fight, cannot be definitely determined.

LESSONS.

The important lessons brought out in the operations of the American First Division in Soissons offensive, July 16th—July 25th, 1918, is first, that when the enemy is sufficiently weakened by engagement in another direction, it is possible to sacrifice practically any of the so-called sound principles of warfare in favor of the element of surprise.

The German attention was cocentrated around Rheims on July 18th when the Allies struck from the Aisne to the Marne. In order to surprise the Germans, there was practically no reconnaissances made except such as in a general nature made known the location and strength of the Germans in the vicinity of the operation; flanks of Brigades were seriously exposed. units were intermingly and confused but still success resulted.

Second,—The importance of motorization of artillery units with speeds of movement sufficient to enable rapid advance when engaged in the offensive, is apparent from the experiences gained in this offensive.

Third,—Power of maneuver is a factor of motorization as a result of the necessity for night movement of troops in modern warfare.

Fourth and last,—The machine gun, while a formidable weapon can be silenced by proper use of the assaulting elements of foot troops. The Germans made every effort to hold the American troops by machine guns without success, which is evidenced by the fact that some 500 machine guns were captured in an area of about 25 kilometers, or twenty for every square kilometer.

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OPERATIONS OF THE 2ND DIVISION (U. S.) IN THE SOISSONS OFFENSIVE
JULY 16TH TO 25TH, 1918

By

Capt. M. K. Pigman, Infantry
TERRAIN.

The Marne salient was a veritable wedge driven into the Allied lines, the apex of which rested at Chateau-Thierry. The western side was outlined by the Oureq and the Aisne valleys, the southern side by the Marne River. The base of the wedge lay along the Vesle River and hinged on the high ground around Soissons and the Mountains of Rheims, a distance of about fifty-five kilometers. While the center stretched from Chateau-Thierry to Fismes, some thirty-five kilometers in depth.

The country within the salient is studded with high hills, broad plateaus and dense forests. The plateaus scattered irregularly throughout the area are clustered with numerous farms and villages and during July are covered with high standing wheat fields. These villages are mostly constructed of stone and are easily converted into strong centers of resistance.

Numerous rivers, with their tributaries, cut deep valleys and ravines, natural barriers that are easily defended by a determined enemy through the area.

The roads generally are hard surfaced and broad and the railways offer excellent communications.

The two most important forests are Villers-Cotteret: and Rheims, however many forests are to be found and the stream lines are generally wooded.

PLANS OF THE GERMANS.

The Germans had not considered the Allies capable of taking the offensive at any time soon. Consequently no elaborate defenses had been constructed in the Soissons area. Also they expected the coming drive to be so successful that it would end the war. They therefore were holding the line south of Soissons very lightly, in order to use the other available troops during the contemplated offensive. The morning of the attack of the 18th found only six divisions in the front line with four in close support.

THE OPERATIONS OF THE 2ND DIVISION.

The orders for the concentration of the 2nd Division in the area of attack found it occupying a second line of defense near Montreuil-aux-Lions, where it was employed in the construction of a defense system west of Chateau-Thierry.

This division had been withdrawn from the vicinity of Belleau woods where it had seen almost forty days of continuous fighting, and at Montreuil-aux-Lions it was still exposed to the shelling of the German heavy artillery. In addition to this it had suffered severe casualties and was in need of replacements.

At this time the 2nd Division was composed of the following units: 9th and 23rd Infantry, 5th and 6th Marines, 12--15 and 17 Artillery Regiments, 4, 5, and 6th M. G. Bn., 2nd Trench Mortar Battery, 1st Field Signal Battalion, 2nd Engineer Regiment and 2nd Sanitary Train.

On the night of the 14th the 2nd Artillery Brigade under Brigadier General Boley was ordered to proceed by forced marches to Betz; Thence to Taillefontaine where it came under the orders of the XXth Corps. On the night of the 15th orders for the move of the Division were received. During the night of the 16th the dismounted units were placed on trucks and moved to the vicinity of Pierrefond-Retheuil and Taillefontaine, while the mounted organizations were to proceed by marching. This same night Division Headquarters was moved to Carrefour de Nemour.

The move was fraught with many difficulties and vicissitudes. Not even the Division Staff knew their ultimate destination. The trucks were simply ordered to proceed to a certain point when they would be met by a French Staff Officer, who would direct them further, in some cases, the staff officer was late and this resulted in unnecessary delay and many misdirections by French officers who thought they knew the ultimate destination. However, the troops finally arrived during the morning of the 17th in the vicinity of Taillefontaine, where they were unloaded from the trucks.

As soon as they had unloaded from the trucks orders were received to proceed at once toward the front

line. All day of the 17th was spent in marching toward the front through the dense forest of Retz. Late in the evening the advanced units had arrived opposite Division Headquarters at Carrefour de Nemour and several hours afterward the last Infantry unit had cleared this point. While the units were passing Division Headquarters, the Brigade and Regimental Commanders received the orders for the attack the next morning at 4:35.

It was already late when the attack orders were received, and they were still several kilometers from the front line.

By this time the roads leading forward had become congested with artillery, tanks, trucks, etc., and the Infantry was forced to take to the paths and ditches leading through the woods. To make matters worse a heavy electrical storm broke during the early part of the night, followed by heavy rain. The night was unusually dark and many of the French guides sent to lead the Battalions to their positions failed to arrive, while others were lost in the return trip. All these conditions naturally led to considerable confusion, straggling, and intermingling of units which in time slowed down the advance.

In spite of this, however, the Assault Battalions of the 9th Infantry managed to effect a relief about midnight and attacked in good order at H Hour. The 23rd Infantry and 5th Marines were not so fortunate however. They had encountered many difficulties and many misdirections. The 23rd Infantry and the leading elements of the 5th Marines did not reach the line until the barrage had opened up and were just deploying when it fell.

None of the Machine Gun Battalions and Companies or 37 mm. platoons arrived in time to participate in the attack on the first day.

THE PLAN OF ATTACK.

The line of departure extended from Chavigny Farm north about $2\frac{1}{2}$ kilometers. The Germans still held the eastern edge of the Retz forest in front of Verte Feuille Farm.

Three successive objectives were assigned the Division, outlined approximately by north and south lines through Beurepaire Farm, Vauxcastille, and Vierzy, at distances of about 3, $4\frac{1}{2}$ and 6 kilometers respectively from the line of departure.

The attack was to be made by the 5th Marines, the 9th Infantry, and the 23rd Infantry from left to right. Each Regiment attacking in column of Battalions, as follows: The 5th Marines with the 1st Battalion in the assault line, the 2nd Battalion in support, while the 3rd Battalion constituted the Brigade reserve of the 4th Brigade; The 9th Infantry attacked with the 1st Battalion as assault Battalion, the 2nd Battalion in support and the 3rd Battalion, in Regimental reserve; the 23rd Infantry attacked with the 1st Battalion in assault line, the 2nd Battalion in support and the 3rd Battalion in Brigade reserve of the 3rd Brigade.

The 2nd Engineers and 4th Machine Gun Battalion formed a Divisional reserve, while the 6th Regiment of Marines constituted a special corps reserve.

The 2nd Field Artillery Brigade reenforced by the 268th French Field Artillery Regiment was to support the attack from the vicinity of St. Pierre Agile, where it had gone into positions on July 16th. The 15th Field Artillery was to support the 3rd Brigade while the 12th Field Artillery was to support the 5th Marines. Each Brigade was to be supported by a Group of French tanks. The Infantry was to advance under cover of a rolling barrage, and a brief halt was prescribed for consolidation of each objective.

THE TERRAIN.

The terrain within the sector of the 2nd Division was peculiarly adapted to defense. Deep and narrow ravines ran transversally across the front, each within supporting distance of the other. From the edge of the woods the plateau slopes gently upwards from the Forest de Retz until it drops abruptly off into the broad valley of the Crise River. This plateau was studded with many farms and small villages, the fields, at this particular time of the year, were covered with wheat, and harbored countless machine gun nests, guarding all approaches from the west. These farms were highly organized centers of resistance, among them were such strongholds as Beurepaire Farm, Verte Feuille Farm, Vierzy, etc.

THE ADVANCE.

The attack of July 18th logically is divided into two phases: the first phase covers the advance until the troops were held up in front of Vierzy; the second phase covers the night attack and culminated in the capture of Vierzy and the advancing of the lines beyond.

The First Phase—The 1st Battalion, 9th Infantry attacked in good order, jumping off with the rolling barrage, it encountered little resistance and by 7:45 had captured and consolidated its first objective with very slight losses. Somewhat late, the 23rd Infantry came up on its right without about the same results. The 1st Battalion, 5th Marines, advanced north of the Paris-Maubeuge road, they had just been able to reach the line and were still deploying when the barrage fell, they were to keep in touch with the 1st Moroccan Division on their left. The 2nd Battalion, 5th Marines, was to support the 1st Battalion and keep liaison between the 3rd and 4th Brigades, however, due to the many misdirections, 2 companies got off in rear of the 1st Battalion and one company south of the Paris-Maubeuge road; while one company failed to get up until late in the day. Due to the sharp change in direction after reaching the first objective, the two companies of the 2nd Battalion moved across the rear of the 1st Battalion and into the 1st Moroccan sector and captured Chaudun in the 1st Division sector. The one company south of the Paris-Maubeuge road captured Verte Feuilles Farm about the same time that Beaurepaire Farm fell.

As soon as the first objective was consolidated, the advance was continued and by 9:30 A. M. the strongly defended ravine of Vauxcastille fell and the lines advanced to the highground about a kilometer beyond. Here the advance was held up by fire from Vierzy, Lechelle and Charantigny. Repeated attacks upon Vierzy had failed and by 4:00 P. M. the line run approximately north and south through the outskirts of Vierzy. From Beaurepaire Farm on the right the French 38th Division, on the right of the 3rd Brigade, failed to advance, this left the right flank of the 2nd Division exposed.

Second Phase—Communication between Division Headquarters and the front line failed from the jump off. In order to learn what was happening up in front, General Harbord started forward to make a personal reconnaissance. Purely by accident he met Brigadier General Ely, commanding the 3rd Brigade, who was out making a reconnaissance, and from General Ely, General Harbord learned of the situation up in the front line. A renewal of the attack was accordingly ordered for 4:30 P. M. toward the Bois de Hortennes and the Chateau-Thierry Road.

General Ely experienced some difficulty in returning to his Headquarters, which had been moved forward to Beaurepaire Farm, and it was 4:30 before he could get in communication with the regimental commanders and issue his orders for the attack. Each regimental commander declared it would be impossible for them to attack before 6:00 P. M., while the Tank Commander requested at least one hour more. Finally orders were issued each commander to attack as soon as he was ready, but at least by 6:00 P. M.

By this time the 1st and 2nd Battalions, 5th Marines has succeeded in taking the second objective and the 3rd Battalion had moved up in support. The 1st and 2nd Battalion, 9th Infantry, with 2nd and 1st Battalions, 23rd Infantry, in the order named held Vauxcastille and the high ground overlooking Vierzy. The 3rd Battalion, 9th Infantry, had moved up into support while the 3rd Battalion, 23rd Infantry, still remained in Brigade reserve in the woods near the line of departure.

The attack was to be made in the following order: the 2nd Battalion, 5th Marines, supported by the 1st Battalion, 9th Infantry, and the 2nd Battalion, 9th Infantry, supported by the 3rd Battalion, 9th Infantry, were to advance in the sector north of Vierzy; the 2nd and 1st Battalion, 23rd Infantry, supported by the 1st Battalion, 5th Marines, were to capture the town of Vierzy. Fifteen tanks were assigned to each regiment and each regiment was to be supported by a regiment of artillery.

By this time the Machine Gun units began to arrive in line and were used in the attack. The artillery had pushed forward early in the morning to be in position to support the advancing troops but at this time they were being employed by the Corps in executing counter-battery work. The order of attack necessitated the withdrawing of the 1st Battalion, 5th Marines, from the lines and marching them to Vauxcastille ravine in support of the 23rd Infantry. All of this consumed some time, and consequently the 23rd did not attack until about 7:15 P. M.

At 7:15 P. M. the 1st Battalion, 5th Marines, advanced ahead of the 23rd Infantry and captured Vierzy, they were assisted by the French tanks in this operation. While the Marines were clearing up the outskirts of Vierzy, the 2nd and 1st Battalions of the 23rd Infantry passed through and advanced the line to the high ground about a kilometer east of Vierzy, here they met increased resistance and were forced to halt.

The 2nd Battalion, 9th Infantry, advanced about a mile to its final objective for the day and was stopped by heavy fire from the woods around Lechelle.

The 2nd Battalion, 5th Marines, and 1st Battalion 9th Infantry, met very heavy resistance and were stopped on the line of their final objective in front of Lechelle. At this point, a number of tanks going to the rear from Bois de Lechelle drew a heavy artillery bombardment down upon the 5th Marines, and the Moroccans, on their left. This compelled the Moroccans to withdraw quite a distance to the rear, thus exposing the left flank of the 2nd Division. By 9:00 P. M. all advance had stopped and orders were given to dig in. In this they were assisted by the 2nd Engineers from the Division Reserve.

Due to the difficulty of the flank divisions in advancing, the push of the 2nd Division had created a salient in the enemy's lines and communications with the flank divisions had been lost, this left both flanks exposed to enfilade fire of the enemy. The difficulty in getting into position at the jump off and the sharp turns in direction of advance, at each objective, resulted in the units being badly oriented throughout the day. Units were very much mixed and had suffered such casualties that further effort by them was impossible. With the assistance of the 2nd Engineers, however, units were assembled and the line rapidly reorganized. During the day the 6th Marines and the 3rd Battalion of the 5th Marines moved forward to the edge of the woods west of Beaurepaire Farm.

As a final result of the day's fighting we see the 2nd Division resting on its final objective of the day.

THE ATTACK OF JULY, 19 1918.

The attack of July 19th marks the third phase of the attack and the last day's fighting of the 2nd Division in the Soissons offensive. The attack of the 20th Corps was ordered renewed at 4 A. M. the 19th. However, this order did not reach the Division Headquarters until about 2:00 A. M. of the 19th. This attack could not be carried out at this time by the 2nd Division for three reasons: first, their flanks were already exposed and it would have been courting disaster to attempt any further advance until the flank divisions had come up; second, a survey of the front line units found them badly used and incapable of any further efforts; third, to attack it was necessary to bring up the reserves, and this could not be done by 4:00 A. M. finally a modifying order delayed the attack until 7:00 A. M. and returned the 6th Marines to the control of the Division.

The Plans for the attack were as follows: The 6th Marines and the 6th Machine Gun Battalion preceded by tanks, were to make the assault. The 1st Battalion, 2nd Engineers, and the 4th Machine Gun Battalion were to remain in Division Reserve. Artillery preparation was to start at 6 A. M. and the assault to start at 7 A. M. Division Headquarters was established at Beaurepaire Farm with 3rd and 4th Brigade Headquarters at Vierzy. The Infantry was to advance under cover of a rolling barrage.

The 6th Marines received the order for the attack about 5 A. M. they were then about four kilometers from the front lines. To reach the front lines it was necessary to march across the open under the observation of the enemy and subjected to heavy artillery fire. The 1st and 2nd Battalions deployed in line under fire while the 3rd Battalion followed in support at about a kilometer distance. The line was preceded by slow moving tanks and under the fire of the enemy progress was slow and casualties many. As a result it was 9 A. M. before they passed the front lines.

After passing the front lines the assault units advanced about a kilometer, but by this time resistance had become so heavy that further progress was impossible. The assault units took cover in some old German trenches on the outskirts of Tigny, here they were reenforced by the 3rd Battalion, 6th Marines and the 1st Battalion, 2nd Engineers was placed in support.

The line remained in this position throughout the day, enfiladed on both flanks and subjected to heavy artillery fire, it suffered heavy casualties. Late in the afternoon the 38th French Division came up on the right and relieved the situation somewhat, but further advance was impossible.

RESULTS.

This marks the last advance of the division in the Soissons attack. The division suffered heavy casualties, and consequently were relieved on the night of the 19th, with the exception of the 2nd Field Artillery Brigade, by the 58th Colonial Division.

The 2nd Field Artillery Brigade remained in action with the 58th Colonial and 12th French Divisions until it was relieved on the 25th of July.

The division was first moved to the woods west of Verte Feuilles Farm in Corps Reserve. On the 20th the division less the 2nd Field Artillery Brigade was relieved from further duty with the XX Corps, and moved to the Nanteuil rest area as Army Reserve of the Xth French Army.

ANALYSIS AND CRITICISMS.

It had been evident even since the forming of the Marne salient that the sides near its base were very vulnerable to attack, not only because of the narrowness of the salient but also because of the extent and direction of the line of supply to the troops occupying the salient. In examining the distinguishing features the following stand out. The Soissons-Fismes-Rheims Railway cuts directly across its base and for the greater part parallel the Vesle River. On the Western side and parallel to the side one of the main highways of the salient running from Soissons to Chateau-Thierry is paralleled throughout by a narrow gauge Railway, both the railway and highway lay only four or five miles within the German lines. Over these two lines practically all of the supplies were transported to the troops along the Marne and within the apex of the salient. In this situation the Germans had to maintain a front from a flank and that front within easy striking distance of the Allies. An advance of only a few miles would sever the communications and compel the retirement of the Germans from the nose of the salient. If this advance was made from both sides simultaneously it would hasten their retirement and might result in disaster to the German VII Army, since it would threaten the Paris-Fismes Railway and would deprive the Germans of its use in withdrawing the men and material behind the Vesle River.

Another feature that favored the Allies was the dense forests along the west side of the salient that screened the movements of the concentration of troops until the time to strike.

Realizing fully their perilous position, the Germans saw that they must hold the gap between Soissons and Rheims open at all costs, through which they could retire their men and material. For this purpose they massed their troops in great strength around Soissons and Rheims. In this they were successful and succeeded in retiring to the Vesle and later to the Aisne.

Here we have a splendid example of the application of that principle of strategy of striking at the communications of the enemy without exposing your own; and of that other closely related principle—that where two Armies are in such position, that an attack from either cuts the communications of the other, that Army whose communications are cut or even seriously threatened will invariably turn back and fight for its communications rather than press forward along its original front.

The attack of the 2nd Division revealed serious faults in technique. The communication system to the Division Headquarters from the front line fell down completely from the very start, as a result the Division Commander was not informed of what had happened or was happening in his front, except for the information gained by personal reconnaissance, and consequently exerted practically no influence on the outcome of the attack.

Generals and Colonels delivered their messages and orders in person, in one instance a Colonel of the regiment led one of his battalions in the attack and the utmost confusion reigned throughout the 18th of July.

The French General Staff fell down in the transport of troops and caused them to reach their destination late. The failure of the French front line units to send guides to meet the relieving troops resulted in many misdirection and the difficulty of woods and weather led to much straggling and mixing of units.

The 2nd Division in two days fighting had captured over 3,000 prisoners, some 150 guns, numerous machine guns and had advanced approximately 8 kilometers with a loss of about 4,000 men and officers. The

mounted organizations failed to arrive in time to take part in the first day's fight.

Looking at the enemy's side—Ludendorff assigns three reasons for the success of the Allies:

1. Diminished strength of the divisions.
2. Artillery not distributed in depth.
3. Over-hasty throwing in of reserves.

LESSONS TO BE LEARNED.

1. That an Army's communications are vital to its being, destroy them and the battle is lost. Even threaten them and disaster will frequently follow. That to destroy the communications of an enemy we must first secure the safety of our own.

2. The value of tanks in warfare is two-fold—moral and physical.

3. That every effort should be made to develop a communication system that will stand the strain of battle.

4. That thorough training should be given combat units in night marching over varied ground and under all sorts of weather conditions.

5. That the element of secrecy as it relates to movement of units can be carried too far and result in lack of efficient co-operation and systematic co-ordination.

6. That a unit is limited in its operation, to the speed of the wheel transportation.

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OPERATIONS OF THE THIRD DIVISION AT THE MARNE, JULY 19—29, 1918.

By

Capt. Paul C. Paschal, Infantry.

INTRODUCTION.

On July 15, 1918, when the last great German offensive was started, the 3rd Division held the south bank of the Marne River from Chierry, which is just east of Chateau Thierry, to a point about one and one half kilometers east of Mezy. The German offensive had been directed against the front of the sector occupied by this division and as the division had been on front line duty for six weeks when the offensive began, the troops of the division were rather worn during the period covered by this paper, and the units of the division, especially the 6th Infantry Brigade and the 7th Infantry Regiment, had suffered heavy losses. On July 18, 1918, the Allied offensive on the west side of the Marne salient began during which the right of the First American Army Corps, in the line northwest of Chateau-Thierry acted as a pivot the line to the north swinging eastward. On July 20th a new and larger pivotal movement began, the pivot this time resting on the hills southwest of Soissons and the Allied line extending to the south swinging eastward. In connection with this movement, the Third Division crossed the Marne River and took up the pursuit of the retreating Germans.

THE TERRAIN.

The Marne River is about sixty yards wide in this area and is too deep to ford. It is in a deep valley, the banks of the river not rising to their full height, about 500 feet, until about a mile from the river. The hills on the northern side are higher than those on the southern side. They rise much more abruptly than those on the southern bank, in some places almost forming precipices. There are small villages along both banks of the river, from which rise partially wooded slopes to the tops of the hills. The villages and forests had suffered heavily during the recent operations in this area. The main outlets from the Marne valley along this section are the Surmelin valley to the south and the Jaulgonne gorge to the north. Many forests extend over the hill tops and a few extend for miles to the north. From the hills above Jaulgonne to Le Charmel extends a wide ridge, the first large ridge north of the river. The entire area is dotted with villages and farm, all of which were skillfully used by the enemy in retarding the pursuit. All buildings had thick stone walls which gave protection against small arms fire. All open space had been under cultivation at the end of May, when the civilian population had fled south before the German advance. The country is generally rolling and well suited to defensive operations.

The Paris-Metz railroad runs parallel to and along the south bank of the Marne. The only other railroad in the area is a branch line running south from Mezy down the Surmelin valley through Montmirail. Many improved roads run through the area in all directions. The most important east and west road is the tourist route from Paris to Metz following the southern bank of the river. The most important north and south road is the road leading up the Surmelin valley into the Marne valley, crossing the river and then leading out of the valley to the north through the Jaulgonne gorge. Besides the improved roads, there are large numbers of unimproved roads and trails throughout the area. On July 19th, there was not a bridge across the Marne in the entire sector as these had been destroyed when the French were driven across the river about the end of May.

SITUATION ON JULY 19TH AND 20TH.

On July 19th, 1918, the division held its old sector along the south bank of the Marne from Chierry to a short distance east of the Surmelin River, the right flank regiment refusing its line to connect up with the French on the right. The Germans occupied the north bank of the river and the south bank east of Surmelin Brook. The division was operating under the 38th French Army Corps at this time. On its right was the 73rd French Division and on its left the 39th French Division. On the 20th, patrols reported that the Germans had recrossed to the north bank of the river, and that afternoon the right flank of the division moved forward.

THE MARNE RIVER IS CROSSED

Early in the morning of July 21st, the 4th Infantry, in persuance of Field Orders No. 9, Third Division crossed the Marne River. One battalion crossed at Chateau-Thierry and two battalions at Chierry. After effecting the crossing, this regiment moved east, one battalion following the river bank and two battalions going further north through the Bois de Barbillion. When night came, the advanced companies were in Mont St. Pere with combat patrols in Charteves. Two battalions were in the eastern edge of the Bois de Barbillion northwest of Mont St. Pere. The regimental C. P. was established at Gland.

The 7th Infantry had been concentrated at Fossoy preparatory to crossing the river. Late in the afternoon of July 21st, one company succeeded in crossing by boat. Footbridges were built across the Marne at Fossoy and Mezy by the 6th Engineer Regiment during the night of July 21-22. Three other companies of the 7th Infantry crossed the Marne over these bridges during the night, so by morning one battalion of the 7th Infantry had crossed to the north bank of the Marne.

CONDUCT OF THE GERMAN WITHDRAWAL

Before beginning the movement of the 3rd Division to the north and northeast, it is better to take up at this point the methods used by the Germans in conducting the withdrawal. The troops that made the attack of July 15th had been withdrawn from the line, and the line had been taken over by new troops. In making the withdrawal, numbers of machine guns and snipers were left behind in woods and villages to delay the advance of the Americans and allow time for the main bodies to withdraw. Quite often farm houses were occupied by a number of machine guns which offered serious resistance. The crews of these machine guns manned their guns until killed or captured. Captive balloons were used to keep close watch on all open spaces so that artillery fire could be directed on troops moving into these open spaces. Fire was also directed on covered areas which troops had been observed entering. Aeroplanes were not only used in controlling artillery fire on troops, areas and the bridges built across the Marne but the aeroplanes themselves swooped low and fired on troops with machine guns when the opportunity offered. Nightly bombing raids were carried out on both forward and back areas and against the bridges built across the Marne. The artillery fired constantly on areas where troops were known to be. Wooded areas were drenched with mustard gas. In short, everything possible was done to delay the American advance, lower their morale and harrass them.

ADVANCE OF THE 5TH INFANTRY BRIGADE JULY 22ND.

Now let us return to the 5th Infantry Brigade which we left on the night of July 21st. Early in the morning of July 22nd, the two battalions of the 7th Infantry remaining on the south bank of the Marne crossed to the north bank as did also the 8th Machine Gun Battalion. The entire 5th Infantry Brigade was now north of the Marne.

Pursuant to Field orders No. 10, Third Division, the 1st Battalion, 7th Infantry began advancing northeast early in the morning of July 22nd. It reached a point in a ravine east of La Theoderie and south of La Tieulerie Farm, where it was held up by machine Gun and Artillery opposition. The 2nd Battalion 7th Infantry was sent forward in support of the 1st Battalion, the 3rd Battalion being held at Mont St. Pere in reserve. During the night of July 22-23, the 3rd Battalion relieved the 1st Battalion.

On this same day, July 22nd, the 1st Battalion, 4th Infantry advanced through Le Psoutier toward Le Charmel. The 2nd Battalion was sent in support of the 1st Battalion and moved forward in rear of and to the left of the 1st Battalion. The 1st Battalion was held up in the woods just east of Moulin Doly by stiff machine gun resistance and halted here for the night. The 2nd Battalion was held up by machine gun and artillery resistance in the valley of Ru de Mont L'Eveque. Here it connected up with the right flank of the 1st Battalion, 7th Infantry and halted for the night.

Liaison had been so poor this day and reports had been so conflicting that the Commanding General of the 5th Infantry Brigade had a patrol sent out during the night under command of a major to find out just what the situation was. The patrol did not find the troops in line but unwittingly walked into La Tieulerie Farm where the Major was killed and the patrol dispersed by the enemy.

THE 38TH INFANTRY CROSSES THE MARNE

Meanwhile on the east of the sector, the 3rd Battalion, 38th Infantry had moved into Mezy at nightfall July 21st with the intention of crossing the Marne. This battalion remained here under heavy artillery fire until the 6th Engineers completed the foot bridge about 3:00 A. M. July 22nd, when the crossing began. This was completed about 4:00 A. M. The battalion was then placed in attack formation and advanced through and to the east of Charveves, through le Psontier Farm and up the steep wooded slope to the crest of the hill. During this advance no resistance had been encountered other than fire from hidden snipers and machine gun fire. The battalion was now reformed in the shape of a lozenge or a diamond with scouts sent ahead and to the flanks. The advance began through the woods in a generally northeast direction. Machine gun resistance soon forced a deployment and the advance was then continued in wave formation. The resistance became more severe when the opening in the woods west of Jaulgonne was reached. Here a sharp engagement took place but the enemy was finally drive out. Although contact with the 5th Brigade on the left had been lost the advance continued until the northeast edge of the woods was reached. At this point fire from Les Franquettes Farm prevented a further advance.

During the afternoon, a man in the uniform of an American officer appeared on the left of the battalion saying, "Major (giving the name of Bn. Com'd'r) sent me to take charge here." He moved a platoon forward in the open until just opposite Les Franquettes Farm. During this time no fire had been directed at the platoon. However when opposite the farmhouse, a band of machine gun fire was put down behind the platoon by machine guns in the house. In the meantime, this man in an American officer's uniform disappeared. Instead of running back through the bank of fire as the Germans evidently expected, the platoon laid down and dug in. Here it remained until night, when it was moved back into the edge of the woods.

In the meantime, the 1st Battalion, 38th Infantry had crossed the river at Mezy about two hours behind the 38th Battalion. It moved, in advance guard formation, up the road toward Jaulgonne. Such resistance as was met was taken care of by advance guard elements. The village of Jaulgonne was entered and cleared of the enemy as was also the hill to the west. Contact was established with the third battalion on the left but contact could not be gained with the French on the right. About noon the advance towards Le Charmel was started in two columns on the two parallel roads leading from Jaulgonne to Le Charmel. Small flank and advance guards were provided. The advance was very rapid and leading patrols were soon reaching Le Charmel and Le Charmel Chateau. However, about this time, this advancing battalion was attacked on the left from the direction of Les Franquettes Farm, and simultaneously a counter attack was launched against it from north and northwest of Le Charmel. Reports indicated that the enemy was making an effort to surround the battalion, so the battalion withdrew and established a line east of and in prolongation of the line held by the 3rd Battalion. In this withdrawal a few prisoners were lost. This line ran just north of Jaulgonne and to Barzy-sur-Marne on the east. The 38th Infantry then dug in and remained in this position throughout the next day, making no further effort to advance. The 2nd Battalion, 38th Infantry was held in reserve. The French had not established their line at Barzy-sur-Marne at this time so communication was very difficult. The French crossed the river at Marcilly on July 22nd facing east and were finally able to wheel their line and come up abreast of the American line on July 24th.

A CONTINUOUS LINE IS ESTABLISHED BY THE 3rd DIVISION.

On the evening of July 22nd the 5th Infantry Brigade was halted on the line of Rue de Mont L'Eveque and extending eastward with the Foret de Fere. The units in this line from right to left were: 1st Battalion, 4th Infantry, 2nd Battalion, 4th Infantry, and 3rd Battalion, 7th Infantry. On the morning of July 23rd the 1st Battalion, 4th Infantry advanced through Foret de Fere to the edge of the woods southwest of Les Franquettes Farm with little difficulty, and established connection with the 38th Infantry on the right. An attack was made on Les Franquettes Farm but this met with such heavy machine gun fire and the troops making the attack were subjected to such heavy artillery fire that the attack was not a success. The battalion was forced to withdraw to the edge of the woods and entrench. The 2nd battalion, 4th Infantry was directed to move forward from near La Theoderie and connect up with the 1st Battalion. In its advance, it was held up by fire from La Tieulerie Farm. This place was finally taken but the battalion dug in in the valley south of the farm and did not advanced to the line as directed. The 3rd Battalion, 4th

Infantry was sent forward to assist the 1st Battalion at Les Franquettes Farm but came under heavy artillery fire and dug in about one and one half kilometers northeast of Moulin Doly.

The 3rd Battalion, 7th Infantry wandered north through Bois de Mont L'Eveque and patrolled as far north as Grange Marie Farm. It ended up in the south edge of the Bois de Mont L'Eveque and halted on the left rear of the 2nd Battalion, 4th Infantry.

THE 30TH INFANTRY RELIEVES THE 38TH INFANTRY.

On the morning of July 23rd, the 30th Infantry which was now at Essises, about 15 kilometers south of the Marne, in division reserve marched north and crossed the river at Mezy. This regiment had been out of the line to secure new rolling kitchens, transportation and animals to replace those destroyed in the German bombardment of July 15th. The regiment was now only partially equipped. The battalion commanders received orders before reaching Crezancy to report to the Brigade Commander in Crezancy. Here the Brigade Commander ordered each battalion commander when he reported to cross the river and report to the Colonel commanding the 38th Infantry for instructions.

The 3rd Battalion was in the lead and crossed the river first. The Battalion commander went to the C. P. of the 38th Infantry but the regimental commander was not there. He went in search of this officer and ran into his own regimental commander, who directed him to issue extra ammunition, move his battalion into Foret de Fere and fill a gap between the 38th Infantry and the 4th Infantry. The battalion moved, with covering detachments in front, and by means of patrols learned that no such gap existed. This was reported and after dark orders were received to relieve the 3rd Bn., 38th Infantry. This was accomplished between midnight and daylight.

In the meantime, the 2nd Battalion, 30th Infantry, crossed the river and the battalion commander went to report to the Colonel commanding the 38th Infantry. On his way he met his own regimental commander who directed him to place his battalion under cover near Charteves, which was done. During the night however, this battalion was sent to relieve the 1st Battalion, 38th Infantry.

The 1st Battalion, 30th Infantry, crossed the river and was held in reserve near Charteves. However, the next morning, Cos. A and B were attached to the 2nd Battalion and Cos. C and D to the 3rd Battalion and joined these units.

During the morning of July 24th, the 2nd Battalion with Cos. A. and B attached advanced northeast along the Jaulgonne Le Charmel Road. One company was in the lead, with one company echeloned to the right rear and another to the left rear. During the advance, machine gun nests and snipers were encountered and overcome. When the leading company reached the edge of the woods north of Ru de la Belle Aulnel very heavy enemy machine gun fire was met coming from Le Charmel and Le Charmel Chateau. The left company, about the same time, met heavy machine gun fire from the direction of Le Charmel. At this time it was about 300 yards north of Argentol. As the French on the right had not come up, as contact was lost on the left, and as large enemy forces were reported to be in Foret de Ris, no further attempt was made to advance.

The officer commanding the 3rd Battalion and Cos. C and D received at 8:46 A. M. an order to attack at 8:55 A. M. This he was unable to do but proceeded to make plans to attack as early as practicable. Preparations had to be made slowly as it was planned to take Les Franquettes Farm by surprise and it was desired that the enemy should not observe undue movement. At 11:30 A. M., the attack began with three companies in the assault echelon and three in reserve. The assault companies advanced in thin lines. Machine guns to be used in the consolidation of the ground taken were carried in the third and fourth waves. The Fourth Infantry advanced detachments through Foret de Fere to cover the left flank. Franquettes Farm was taken and the advance was continued to Bois du Charmel under heavy artillery fire. Enemy detachments in Bois du Charmel were rapidly driven back. The advance continued until the southwestern group of houses in Le Charmel were occupied. Here contact was lost on both Flanks and the resistance stiffened so the advance was halted and the command dug in. Contact was established that afternoon with the 39th French Division on the left and several hundred yards to the rear. The right elements of this division advanced with assistance from the Americans and prolonged the line to the northwest. Contact with the 2nd Battalion on the right could not be established before nightfall, so one support company was moved to the right and faced east. Contact with the 2nd Battalion was established the next afternoon. During this advance, a large ammunition park with great quantities of ammunition was captured.

During all of July 25th heavy artillery fire was directed at this line as well as machine gun and rifle fire. A great deal of mustard gas was shot into the woods. Counter attacks were threatened but machine gun fire on critical areas prevented this. The matter of supply in this part of the line was very difficult.

THE 5TH BRIGADE TAKES UP THE ADVANCE.

July 24th was spent by the 5th Brigade in getting in position north of Jaulgonne and in the eastern edge of Foret de Fere preparatory to executing a passage of lines and continuing the advance. Accordingly, in compliance with Field Orders No. 14, Third Division, the commanding General of the 5th Brigade directed the Brigade to advance in two columns on the morning of July 25th. The 4th Infantry was to advance on the line, Le Charmel, La Fosse Farm, Villardelle Farm, Roncheres, The 7th Infantry was to advance on the line, Le Charmel Chateau, Chalet de Villardelle, eastern edge of Roncheres. The 39th French Division was now on the left; the 4th French Division was on the right.

The 3rd Battalion, 4th Infantry began the advance about 6:00 A. M. executed a passage of lines and entered Le Charmel about noon. By evening Le Charmel was occupied in spite of machine gun nests in the town, to the east near Le Charmel Chateau, and to the north in the southern edge of Vente Jean Guillaume, and also in spite of continuous fire of gas and shell. During the night, the 2nd Battalion was advanced into the town in support of the 3rd Battalion.

The 3rd Battalion, 7th Infantry advanced east toward Argentol with a view to moving upon Le Charmel Chateau through the woods east of the Jaulgonne-Charmel Road. Upon reaching a point a few hundred yards north of Argentol, it came under heavy fire of gas and high explosive, sustained heavy losses and was rather badly disorganized. The other two battalions, following at supporting distance, were subjected to a line fire in Bois du Charmel and dug in on the southeastern edge of these woods. Shortly after dark, the 30th Infantry was moved back on a supporting line to prevent this regiment from becoming mixed with the regiments of the 5th Brigade.

On July 26th, the Commanding General of the 5th Brigade was directed to designate a battalion from each of his regiments to join with a battalion of French Infantry on the right and another on the left in an attack to clear the machine gun nests out of the southern edge of Vente Jean Guillaume and the grounds of Le Charmel Chateau. The instructions, issued by the Colonel commanding the Infantry of the 39th French Division, involved getting the two American Battalions lined up in the open south of Le Charmel in liaison with the French on both flanks and attacking northeast through Le Charmel which was already held. There was not time to study the ground and make preparations and barely time to get the battalions into position. The commanding General, 5th Brigade was not consulted, although his battalions were attacking in his sector. The attack was to be preceded by a two hour preliminary bombardment. As soon as this bombardment started, the Germans put down a heavy barrage, which inflicted many losses. Such elements as passed through this only advanced as far as Le Charmel and took shelter in the cellars there. The French, on either flank, did not advance at all. After dark, the Brigade commander moved both battalions involved in this attack back in reserve.

On July 27th, patrols from the troops in Le Charmel cleared out the machine gun nests in the grounds of Le Charmel Chateau. In the afternoon, the advance was taken up on a one battalion front. The 3rd Battalion, 4th Infantry moved forward, advancing through La Fosse Farm to Villardelle Farm.

On the morning of July 28th, the advance of the 3rd Battalion, 4th Infantry was resumed. Roncheres was taken during the morning in spite of machine gun and artillery resistance. The 2nd Battalion, 4th Infantry was now moved forward to Roncheres to pass through the 3rd Battalion and take up the advance.

Early in the morning of July 29th, the 2nd Battalion, 4th Infantry started the advance from Roncheres. The advance was held up in the open north and northeast of Roncheres by heavy machine gun fire from Bois de Grimpettes and Bois de Meomiere. Patrols were pushed up near the edge of Bois de Grimpettes and advanced elements reached a line about 400 meters south of the woods before nightfall.

THE DIVISION IS RELIEVED.

During the night of July 29—30, the sector was taken over by the 32nd American Division and on the 30th, the last Infantry of the 3rd Division crossed to the south bank of the Marne River, the last of the 6th Brigade having crossed on July 27th.

THE DIVISIONAL ARTILLERY DURING THE OPERATIONS.

In the data that has been available in this research, little was shown as to the role of the artillery in these operations. However, in messages from the 6th Infantry Brigade on July 22nd, the location of the 76th Field Artillery and about half of the 18th Field Artillery is given as near Champillion Farm and Mont St. Pere. This is the artillery normally supporting the 5th Brigade. No bridge was available on which the artillery in the eastern part of the sector could cross the river until the 22nd. At least a part of the 10th Field Artillery crossed on July 23rd. The artillery brigade remained in support of other infantry after the infantry of the Third Division crossed to the south bank of the Marne. On August 2nd the divisional artillery was withdrawn to the south bank of the Marne.

THE DIVISIONAL ENGINEERS DURING THE OPERATIONS.

No bridges existed across the Marne River at the beginning of these operations, all having been destroyed when the French were driven across the river in May. The first crossing at the western end of the sector was made over bridges built by the French. As stated above, two footbridges, supported by casks, were built across the river at Fossoy and Mezy by the 6th Engineers during the night of July 21—22. On the 22nd, a pontoon bridge was built at Mezy from German equipment captured near this site. On the 23rd, a heavy trestle bridge was sartered at Mezy. This was built of timbers cut from the woods. It was opened to traffic at noon July 27th and the pontoon bridge at this point was moved to Jaulgonne. In addition to this, the Engineer regiment did much work in repairing roads, improving approaches to the bridges and repairing bridges which were often injured by artillery fire.

MATERIAL CAPTURED DURING THE OPERATIONS.

A great number of machine guns with their equipment and ammunition, several one pounder cannon, three 77mm. field pieces and vast stores of artillery ammunition were taken during these operations. Sufficient pontoons and pontoon equipage for about thirty bays of span, six pontoon wagons in full repair, two pile drivers, much bridge timber and miscellaneous building equipment was also taken.

LOSSES

The losses on either side are hard to calculate as no definite figures are given. The losses of the 3rd Division for the period July 15 to 30 are given as about 7700 officers and men. It is estimated that approximately half of these casualties took place in the operations north of the Marne.

There is nothing to give even a probable number of German losses in killed and wounded. The Third Division took about 800 prisoners between July 15 and 30. A study of the operations during this entire period indicates that not more than 200 of these prisoners were taken during the operations of July 19 to 30.

ANALYSIS AND CRITICISM.

THE HIGH COMMAND.

In any analysis and criticism of these operations, it must be born in mind that this division had been doing front line duty since about the first of June and that just before the period covered by this paper, the division had been engaged in a hard action in defending the south bank of the Marne River. During the period that the 3rd Division occupied this sector, the sector on the right was successively occupied by four separate divisions and the sector on the left by three separate divisions. Great criticism should therefore be directed at the French high command which kept the division in line for such a long period and especially for requiring a tired division which had suffered heavy casualties and much of whose equipment had been destroyed to force a crossing over an unfordable stream in the face of the enemy.

STAFF WORK.

It would seem that better staff work at Division Headquarters might have resulted in greater results being obtained from the efforts of the combatant units. For the first few days, we find a number of battalions "milling around" through the area but apparently without sufficient coordination. If a line had been quickly organized on the north side of the river and a coordinated attack made along the entire line, it is believed that the results would have been greater.

COMMAND.

As battalions of the 30th Infantry moved forward from Essises, the Commanding General of the 6th Brigade south of the river directed the battalion commanders to report to the Colonel commanding the 38th Infantry north of the river for instructions. In doing this, the commanding General of the 6th Brigade relegated his function of command to the Colonel commanding the 38th Infantry and in so doing failed in his duty. He was placed in his position to command his Brigade and had higher commanders desired the Colonel commanding the 38th Infantry to command the 6th Brigade, he would have been assigned to that duty. The fact that the Colonel of the 38th Infantry was more in touch with the situation is no excuse for this action. It was the duty of the Brigade commander to be accurately informed as to the situation and to issue his own instructions to the units of his command.

COORDINATION.

After the battalions of the 30th Infantry crossed the Marne, they were intercepted by the Colonel commanding the 30th Infantry before the battalion commanders had reported to the Colonel of the 38th Infantry as directed by the Brigade Commander. The Colonel commanding the 30th Infantry then gave instructions to his battalion commanders in regard to the disposition of their battalions. Here is shown a decided lack of co-ordination. If the Brigade Commander desired the battalion commanders of the 30th Infantry to get their instructions from the Colonel commanding the 38th Infantry, he should have informed the Commanding Officer of the 30th Infantry of this. If he desired that the instructions be given to the battalion commanders by the Colonel commanding the 30th Infantry, he should have directed the battalion commanders to report to this officer, even though the commanding officer 30th Infantry got the instructions from the Commanding Officer 38th Infantry.

INFORMATION OF THE SITUATION.

A lack of definite information in regard to positions of front line battalions appear to have existed at all headquarters. This may have come about through vague information sent by battalion commanders or on account of proper use not being made of the information received at higher headquarters. In any case, we find the 3rd Battalion, 30th Infantry being sent to fill up a gap in the line which did not exist. This emphasizes the fact that battalion commanders must make full and definite reports and that higher commanders must cause this information to be placed in such form as to keep them constantly informed of the situation.

RESERVES.

When the 30th Infantry entered the line, two battalions were put in line and the other held in reserve. Before this regiment began any operations, the reserve was divided equally between the two battalions in line, leaving the Regimental Commander no reserve. This was a shirking of responsibility on the part of the Regimental Commander as it put on the battalion commanders the responsibility of deciding when the reserves should be used and for what purpose. The disposition was more over tactically unsound.

FLANK PROTECTION.

The 1st. Battalion, 38th Infantry advanced, with both flanks exposed, from Jaulgonne toward Le Charmel. The movement was unsuccessful, as a withdrawal became necessary and prisoners were lost. While the aggressiveness shown is to be commended, the officer responsible for an advance without proper flank protection throws himself open to criticism. A narrow salient, a very dangerous thing, was formed in the line by the advance. For the movement to be successful, the units on the right and left should, at least, have advanced enough to protect the flanks. This would also have widened the salient.

AGGRESSIVENESS.

The 2nd and 3rd Battalions, 4th Infantry on July 23rd and the 7th Infantry on July 25th having missions which called for an advance to or beyond the front lines abandoned these missions on account of artillery fire and dug in. Here was shown lack of aggressiveness. A unit should not abandon its mission merely to seek cover against artillery fire alone. Shelled areas can be avoided or formations can be taken up which will minimize losses.

TIME FOR ISSUE OF ORDERS.

The attack of two American and two French battalions in the vicinity of Le Charmel on July 26th was very poorly planned and failure was all that could be expected. The troops should not have been formed for the attack in the open and under enemy observation. Moreover, orders should have been issued in sufficient time to allow proper reconnaissance to be made. It would seem that it would only have been ordinary courtesy for the French officer in charge of this attack to consult with the Commanding General of the 5th Brigade, since the battalions of the 5th Brigade were attacking in the brigade sector. This Omission is to be criticised all the more since the French officer was dealing with troops of an Allied nation instead of troops of his own army.

BATTALION ORGANIZATION.

Although no previous mention has been made of it, as a general rule, each battalion mentioned in this paper had a machine gun company attached to it when it went into line. These machine gun companies were either the regimental machine gun companies or companies from the brigade machine gun battalions. It would seem that if normally a machine gun company is going to operate with a rifle battalion, it should be an integral part of the battalion. The battalion commander should be allowed to have direct charge of the training of all units which he normally commands in action. This would also be in the interests of better team work. This has been well taken care of in our new organization.

USE OF HOWITZERS.

No mention is made in any reports consulted during the preparation of this paper regarding the use of three inch trench mortars 37 mm guns except in the report of the Chief of Staff of the division. This report states that in the advance trench mortars proved to be practically useless, it being impossible to transport them or the necessary ammunition with the troops, but the 37 mm guns were used with great success against machine guns. A study of these operations makes it plain that here was an excellent chance for effective use of howitzers and accompanying guns. Although not taught, it appears that an accompanying tank could be effectively used in operations of this nature.

ATTACK AGAINST MACHINE GUNS.

Frontal attacks were too often made against machine guns. These proved costly and in most cases futile. Very light lines and flanking movements proved much more effective.

MORALE.

The small units appear to have been very well led. Small unit commanders led their units with aggressiveness and good judgement. The fighting spirit and morale of the officers and enlisted men of Infantry units during the advance is truly remarkable when the time that they had been in line and the time that they had been actively engaged is taken into consideration.

THE GERMAN WITHDRAWAL AND USE OF MACHINE GUNS

The Germans conducted a masterly withdrawal. To withdraw after once being committed to action is most difficult, as there is great danger of having the withdrawal turned into a disorganized route. The tactical dispositions made prove very effective. A prodigal use of machine guns to hold the enemy back while the columns made their escape was the principal method used to cover the withdrawal. The power of machine gun was proved beyond a doubt as was also the use of machine guns as a defensive weapon.

LESSONS

The lessons to be learned from these operations are stated briefly below. These have been covered more fully in the Analysis and Criticism.

1. Subordinate commanders must keep their superiors informed as to the situation at all times and superior commanders must cause all information to be put in proper form for use.
2. The flanks of a unit must be covered at all times.
3. A narrow salient is very vulnerable.
4. Aggressiveness is necessary to accomplish an offensive mission.

5. Troops cannot be formed for attack in the open and under enemy observation with any degree of success.
6. Orders must be issued in sufficient time to allow for preparations and reconnaissance.
7. A machine gun company should form an integral part of an Infantry battalion.
8. The 37 mm. gun is a most useful weapon against enemy machine guns.
9. The transportation of 3" trench mortars and their ammunition will be a very difficult problem to solve in an advance.
10. Rifle units should not seek to overcome machine guns by frontal attack but should overcome them by very thin lines and flanking movements.
11. The machine gun is a weapon capable of developing great fire power and is especially suitable for defensive operations.

Reference:—Report of General Pershing; Letter of Col. R. H. C. Keltin to Col. Fox Connor, July 30, 1918; Report of Chief of Staff, 3rd Division; Field Orders No. 9. 3rd Division; Story of the Thirty Eight; Report of Commanding General, 5th Infantry Brigade; Report of Commanding General, 6th Infantry Brigade; Report of Commanding Officer, 6th Engineers; War Diary, 5th Grenadiers. (German); War Diary, 6th Grenadiers. (German); War Diary, 47th Infantry. (German); War Diary, 398th Infantry. (German); War Diary, 10th Infantry Division. (German); Messages of July 22, 1918 from Headquarters 6th Infantry Brigade; Personal Observation of Major M. S. Lough, Inf; Personal Observation of Major L. McD. Silvester, Inf; Personal Observation of the author.

THE ST. MIHIEL OFFENSIVE.

1918

By

Major Arther R. Underwood, Infantry.

INTRODUCTION.

In September of 1914, while the French troops were still driving back the Germans from the Marne, and the battle was raging along the Aisne, a large force from the German stronghold at Metz, pushed across the Woivre plain and gained a foothold in the Meuse barrier. This force penetrated the lightly guarded plateau, by way of the Spada defile, and seized a bridge head across the Meuse river at St. Mihiel. They were prevented from enlarging their gains by troops which were rushed north from Toul and south from Verdun. Fort Camp des Romains near St. Mihiel was surrounded and later captured. This fort was one of the line of forts which constituted the eastern defense system of France. It was the only fort of this system, outside of those at Verdun, which was captured during the War.

The Germans, unable to go farther, organized the naturally strong, defensive, topographical features of the salient on lines which they successfully held against all attacks for four years. The salient formed by this line was called the St. Mihiel Salient. It ran from the Moselle at Pont-a-Mousson, twenty-five miles west to St. Mihiel, then north fifteen miles to Frenes.

RESULTS OF THE FIRST BATTLE OF ST. MIHIEL.

The Germans in this offensive did not succeed in isolating Verdun or in striking Sarrail's Third Army in the rear, thus breaking the French line at the pivot. However, they achieved lasting results which were felt by the Allies throughout the war. They had cut the railroad communications from Commercy and Toul to Verdun. The important Paris—Nancy railroad line could be reached by long range artillery fire with consequent interruptions. They held a passage through the formidable Meuse Heights and a bridgehead across the Meuse River, from which an offensive could at any time be launched at Verdun or central France. But most important of all it eliminated the possibility of this region being used for preparation of an attack on Metz, the Briey iron mines, the Saar coal basin, or the key junction of German supply system at Longuyon.

GENERAL CHARACTER OF TERRAIN.

At the western edge of the salient we have the Meuse valley, cut during countless ages deep into the Meuse plateau. Then the plateau itself, a jumble of heavily wooded hills and blind ravines, a most difficult country to operate in. Through this plateau, as if cut in ancient days by some tributary of the Meuse, runs the Spada defile making a fairly easy route from St. Mihiel to Vigneulles. The plateau falls abruptly several hundred feet to the Woivre plain. The plain is formed of a strata of clay which underlies the limestone formation of the heights. This strata is in some places 600 feet thick and is impervious to water. The water therefore unable to seep through the soil, forms the lakes and marshes with which the plain is studded. When it rains, all streams overflow their banks, being greatly widened and deepened. The plain rises gradually until it merges into the heights of the Moselle, another limestone formation called the Haye plateau. These heights drop into the Moselle trench similarly to those at the Marne river. Due to this rise towards the east, the trenches, cut by the streams flowing east into the Moselle become deeper and as they approach the Moselle. It is this clay formation that during the winter rains turns the plains into a vast slough almost impossible for man and beast.

GERMAN USE OF TOPOGRAPHICAL FEATURES.

During four years the Germans had done their best to increase, artificially, the already strong positions provided by nature. At the northern end of the salient were the strong Combres heights with the deep valley of Les Eparges in its front. Then the line ran south over the Meuse plateau to St. Mihiel, making full use of this broken country. At St. Mihiel the tip of the salient was armed by incorporating the captured Fort Camp des Romains in the defences. This fort was greatly strengthened. It is on a hill about 450 feet above the river and commands by observation and guns the bridge head and surrounding terrain. Here the line turns to the east through the wooded heights of the Foret de Apremont and drops to the plain of the Woivre. It crosses this plain to the Bois de Prete on the Haye plateau where it joins the Michel Stellund, a part of the Hindenburg line, at the Moselle, above pont-a-Mousson. The Bois de Prete, has an elevation of

1200 feet and controls its sector.

The plain itself is dominated by Le Mont and Mont Sec. Le Mont is a ridge running in a northeasterly direction from the Meuse Scarp. By some freak of nature this ridge and Mont Sec were left when the Woevre plain was being formed by erosion. At the end of Le Mont and detached from it is Mont Sec, a conical butte which rises about 380 ft. above the plains. This butte is the dominating feature of the landscape. It was here that the Germans had their observation posts for all that part of the line. These O. P's were shell proof and could not be located by their opponents. They had large telescopes and could see, as the Doughboys said, "when you batted your eye". On the rear side of the butte were commodious dugouts for the garrison of that sector. Tunnels lead into the hill from which the observers climbed through thirty foot chimneys up into the O. P's. In the village of Mont Sec at the foot of the Butte, a large concrete chamber was built in a ruined house. This was a telephone exchange with lines running to the many artillery positions hidden in the neighboring woods. Attacks in this sector had always been broken up by the terrific artillery concentrations which the observers on Mont Sec were thus enabled to place at any point in the sector.

About six miles north of Mont Sec the Meuse plateau jutted out into the plain in the shape of a great bastion with the village of Hattonchatel at the point. This was the stronghold which protected the plain during feudal times. Here the Germans established another observation post with battery positions along the crest.

About two miles inside the salient was a line of trenches forming a second salient. Hattonchatel was about at the center of this smaller salient, which also rested firmly on the Michel position at its base.

THE AMERICAN SECTOR.

While General Pershing and his staff were enroute to France, they made plans for pinching out this salient. Soon after landing General Pershing was promised that when he had enough men sufficiently well trained he would be given that job. In the mean time the sector was to be used by the American Divisions for their front line training. This sector was assigned to the Americans in conjunction with the southern ports of St. Nazaire, La Palice, and Bassens because the railroads leading from these ports to the northeast could best bear the added burden of supplying another army. This route did not cross the lines of supply of either the British or the French and would least interfere with them.

In conference with General Petain on May 19, 1918 it was agreed that the American army would soon take over the Woevre Sector but the German offensive delayed this action. However the counter offensives against the Marne salient in July and the Amiens salient in August, had put the Allies in such shape that we could go ahead and form the First American Army. Marshal Foch, wishing to gain possession of the strategic railways of this sector, agreed, and General Petain arranged the details on August 9th.

The American Divisions were scattered all along the Western Front, but by August 30th, the concentration of both troops and supplies were well under way.

THE ENEMY TROOPS.

The German forces in the salient were called "Army Detachment C" and were organized into three corps Groups. The Gorze Group had in its front line the 77th Res. Div. from Limey to Flirey and the 10th Div. from Flirey to Xivrez. The 255th Div. from Moselle to Limey was put under command of the Gorze Group after the attack had started. The St. Mihiel Groups comprised the 5th Ldw. Div. in the Apremont Sector and the 192nd Div. extending north of St. Mihiel. In the Combres Group were the 35th Austro-Hungarian Div. near St. Remy and the 13th Lw. Div. near Les Eparges. The 31st Div. and possibly the 1st Austro-Hungarian Div. were in reserve, while the 123rd, 107th, and the 88th Divisions were hurriedly brought up later.

Army Detachment C was commanded by Gen. Fuchs but Gen. Von Galwitz, a very able general, commanded all troops from Verdun to Nancy and gave the salient his personal attention during the attack. Of the nine German and Austro-Hungarian Divisions, one was listed as 1st class, six 2nd or 3rd class, and the remainder, 4th class. The 1st class division, the 10th Division, had been filled with recent drafts and its fighting powers lowered.

THE AMERICAN TROOPS.

General Pershing took command of the 1st American Army which was composed of the 1st, 4th and 5th Corps. The 1st Corps under Major General Hunter Liggett was formed of the 82nd, 90th, 5th and 2nd Divisions in the order named from right to left in line, and the 78th Division in reserve. Its right was astride

the Moselle north of Pont-a-Mousson and its left extended beyond Limey. The 4th Corps (89th, 42nd and 1st Divisions, with 3rd Division in reserve) under Major Gen. Joseph T. Dickman extend the 1st Corps line beyond Xivrez to a point south of Mont Sec. On the left of the 4th Corps and around the tip of the salient and as far north as Mouilly was the 2nd French Colonial Corps. From there to the northern end of the salient were our 26th Div., the 15th French Colonial Division, and our 4th Division which formed the 5th Corps commanded by Major Gen. George H. Cameron. The 35th and 91st Divisions made up the Army reserve while the 80th and 33rd Divisions were available should they be needed. The total number of troops in this offensive was approximately 500,000 of whom 70,000 were French,

THE PLAN OF ATTACK.

General Pershing's plan was for the 1st and 4th Corps pivoting on the Moselle to make the main attack swinging northward to Vigneulles. The 5th Corps was to execute a similar maneuver connecting with the 1st Corps at Vigneulles and thus bottling up all the troops still at the tip of the salient. The French Colonial troops were to make a holding attack of sufficient strength to prevent troops in their front from escaping before the jaws of the trap were sprung.

THE FINAL OBJECTIVE.

The final objective was at first tentatively fixed as the line Marieulle (east of the Moselle) Heights south of Gorze-Mar la Tour-Etain. This would have meant breaking the Michel Stellung and was what both General Pershing and General Petain wanted to do. Marshal Foch, however, had planned the Meuse-Argonne Offensive, and directed that the St. Mihiel operation be limited to the taking of the salient. On Sept. 2, General Petain, by Marshal Foch's direction, issued instructions for the attack. These instructions gave the number of divisions to be used in both the main and secondary attacks and the Thiaucourt-Vigneulles line as an objective. From the way these forces were divided it appears that Gen. Petain had already written the orders with a view of penetrating the Michel Stellung division of the Hindenburg line, and afterwards only changed the names of the objectives. The 1st, 2nd and 4th Divisions with some Corps troops and most of the army artillery were to be withdrawn the fourth day of the battle and sent to the Meuse-Argonne front.

THE JUMP OFF.

On the southern front the attack started at 5:00 A. M. after a preliminary bombardment which lasted four hours. The artillery and a limited number of tanks supported the advance. It had stopped raining before H hour but the fog and mist hid our lines as they advanced on the enemies' wire. Lanes in the wire were cut by men detailed for that purpose.

THE ARTILLERY.

Most of the artillery was masked behind the 4th Corps which was to make the major effort. The artillery had not attempted to destroy the wire but had concentrated on the artillery positions and trenches. Every known enemy gun position had two heavy guns or howitzers firing on it. Every machine gun position had one heavy or two light pieces concentrated on it. Trenches, command posts and billets were covered with high explosive while the railroad artillery fired on rest camps and communications in the back areas. At 5:00 A. M. the 75s formed a moving barrage that advanced one hundred meters every four minutes. Every sixth shell on the 1st Division front was a smoke shell.

THE ADVANCE OF THE 1ST DIVISION.

I will take up the advance of the 1st Division, as it was on the moving flank and had the hardest job to perform. It had to pass almost in the shadow of Mont Sec protecting its own left flank and that of the division.

The weather cleared about 8:30 in the morning. Mont Sec looked like a volcano in eruption. It remained one of the eruption of Mont Taal in the Philippines in 1911. This wonderful observatory which had so often proved its worth to the Germans, was deluged with smoke, gas, and high explosive shell and was completely blinded. The 1st Division, the 26th, 28th, 16th and 18th Regiments from right to left in line, attacked with one battalion in the assault echelon. The 18th Infantry was charged with protecting the exposed left flank. This was done by dropping off a battalion at designated positions as they advanced. The assault echelon followed closely behind the barrage. At the Rupt de Mad the barrage halted for twenty minutes

on the trenches across the stream. The infantry found some places where they could ford swollen stream. At others the engineers threw across foot bridges which had been prepared and brought along for that purpose. The first day's objective was reached at 12:20 P. M. and the troops began to organize the ground gained, against probable counter attack. The artillery had a hard time getting up on account of the deep mud.

During the afternoon the Corps ordered the Division to continue the advance and the leading battalions moved out at 5:45 P. M. with one company in the lead.

At 10:00 P. M. one company of the 28th Infantry was astride the Vigneulles-St. Benoit road and this road was closed to the enemy still in the tip of the salient. The rapidity of the advance is shown by the capture of the officers and men of a battalion staff while they were seeking a rendezvous designated for their battalion which would have been within our lines. A patrol of the 18th Infantry reached Vigneulles during the night Sept. 12—13 and captured an Austro-Hungarian major there. This patrol reported the village still occupied by the enemy. However, when a battalion of the 18th Infantry moved up the next morning about 7:00 A. M., they found the 102 Infantry of the 26th Division had already occupied the village. The jaws of the pinchers had come together but the two German Divisions which had been at the tip of the salient had escaped.

THE ADVANCE OF THE TROOPS ON THE SOUTH.

The 42nd, 89th and 2nd Divisions made the main assault and gained from ten to twelve kilometers the first day. During the night the 1st Division which had been keeping in touch with the 42nd and protecting the left flank of the 4th Corps, made its swinging movement toward Vigneulles and came up abreast of them. The 5th Division on the first day, maintained connection between the 2nd and 90th Divisions which was the pivoting division for that day's movement.

THE ADVANCE FROM THE WEST.

The 5th Corps started its attack, in accordance with orders at 8:00 A. M. Sept. 12th. The 4th Div. held the pivot while the 26th Div. pushed forward over difficult ground towards Thillot. At 7:30 P. M. the Division Commander received a message changing their objective to Vigneulles. The 102nd Infantry was gotten together and started at 9:00 P. M. for Vigneulles. This regiment marched in column of squads six miles straight into territory still occupied by groups of the enemy, and arrived at Vigneulles at 2:00 A. M. Sept. 13th. They captured a wagon train which was passing through the village, in which they found seventy French boys of about fifteen years old being carried into Germany. They also took an empty truck train on its way into the salient, railroads cars of ammunition and provisions and many prisoners.

THE GERMAN REACTION.

As early as the end of August the Germans had noticed much movement behind the American lines. The High Command gave orders on August 8th for the withdrawal to the Michel Stellung. However, the time of the attack took them by surprise and caught them in the midst of the movement. Their heavy guns had been dismounted the night before. Our preliminary bombardment gave them warning that the attack was about to start. Therefore at one o'clock in the morning a general movement of heavy guns and supplies from the salient started. The 31st and 123rd Divisions were brought up in close reserve in the salient. At 11:15 A. M. it was reported that we had already broken through the 77th Division. The Gorze Group as it could not get in touch with the Higher Command ordered the 31st and 123rd Divisions to make simultaneous flank attacks against the advancing troops, the 31st through Thiaucourt and the 123rd in the direction of Vieville.

At 11:50 A. M. a report of the Gorze Group read, "The enemy is southeast of Thiaucourt and at Tautecourt Farm. The 77th Division appears to be annihilated. No information yet concerning the counter attack of the 31st and 123rd Divisions." A translation of the document continues: "At the time of this report the enemy had already advanced to within one kilometer of the main line of resistance of the Michel position. Furthermore, the left wing of the 10th Division had undoubtedly been outflanked and driven back by the six kilometer penetration near Thiaucourt. There was not only danger of a break through at the vital point of the Michel position but also a serious threat at the line of retreat of the Mihiel Group which was still in the salient." "The situation required an immediate decision. If the troops in St. Mihiel Sector were to be saved from capture there could no longer be the slightest delay in ordering the withdrawal of the front to the

Michel position. Army Headquarters therefore issued the following orders to the Mihiel Group at noon."
"The withdrawal will begin at once."

Upon receipt of this order the Mihiel Group Commander issued the following order:

"1. The Loki movement will begin at once. The defense will be transferred to the Schroeter zone (right flank of the Group one kilometer east of Deuxmonds, left flank of Group at Champrez Pond.)

"2. The Schroeter zone will be held until the receipt of further orders. The forces available for defense will be grouped accordingly.

Rear guards (Infantry and special weapons and single pieces of artillery) will remain in contact with the enemy and will fall back to the Schroeter zone only when forced to do so by the enemy. In such an event they will do everything possible to impede the enemy without themselves being drawn into a combat whose issue cannot be foreseen.

"3. The security garrisons in the Schroeter zone will establish liaison with the army groups on the flanks and with each other. The fact of the completion of this operation will be telephoned, in clear, to Corps Headquarters by the Divisions.

"4. As for the artillery, only those sections of guns required for the support of the most advanced battalions will be left in front of the Schroeter zone. All the rest of the artillery will at once be withdrawn behind the Schroeter zone and will be placed in position there insofar as required. All apparently dispensable batteries will be brought into condition of readiness for the withdrawal to the Michel I zone.

"5. All explosions and destructions which have been prepared will be carried out insofar as the short space of time available permits. Of special importance are all measures which will impede the rapid progress of the enemy. In this category is included besides the blowing up of roads, the blowing up of all water supply constructions.

The Commanding General,

(Signed) LEUTHOLD.

The 5th Ldw. Div. placed batteries on the Cote de Meuse to help protect the right flank of the Gorze Group. At 1:52 P. M. this division reported that Pannes and Nonsard had been surrounded by the Americans and captured. They also reported that tanks co-operating with infantry were advancing toward Heudicourt and that they sending two battalions into the Gorze Zone to counter attack this outfit. At 2:30 the Gorze Group reported that large forces of infantry with tanks and cavalry were preparing for an attack in the woods north of Montsec. The 5th Ldw. Div. immediately turned its artillery on the woods. At 2:30 P. M. the German Corps Headquarters moved from St. Benoit to Lachaussee. At 3:00 P. M. the commander of the Gorze Group reported that the 10th Division had been pushed back to Beney and the garrison at Mont Sec had been given orders to withdraw. At 5:30 P. M. the counter attack of the 31st and 123rd Divisions was reported to be in progress and gaining ground. About this time the 14th Assault Battalion arrived from Briey and was assigned to the 5th Ldw. Division. The 88th Division in reserve was ordered to occupy a part of the Michel position between the Ldw. and the 192nd Divisions. During the night the 5th Ldw. Div. withdrew to the Michel line under the protection of its two battalions east of Heudicourt and three companies on outpost south of St. Benoit. At 2:30 A. M. the 192nd Div. began to arrive at Jonville. These divisions had not been followed up by the French. Our advance on the south had not cut the Vigneulles-St. Benoit road as that from the west had not reached the St. Maurice-Jonville road. Thus it was that the two German divisions at the tip of the salient escaped capture. However, they did not escape without losses. This is shown by the German report of casualties of the two divisions for Sept. 12th.

5th Ldw. Div.

Killed	1 officer	25 men
Wounded	3 officers	65 men
Missing	7 officers	523 men

192nd Div.

Killed	0 officer	21 men
Wounded	0 officer	71 men
Missing	14 officers	609 men

THE ADVANCE CONTINUES.

During the morning of the 13th the French troops moved up to Vigneulles showing the tip of the salient had been swept clear of all Germans. All of our objectives had been reached by the afternoon of the 13th. The 82nd Division pivoting on Norroy extended its left across the Moselle keeping in touch the 90th Division. The 90th had hard fighting in the strongly organized Bois de Prete. The advance of the 13th, 14th and 15th pushed our lines to a position in front of the Michel Stellund line.

The 1st Corps had taken Bois de Prete, Thiaucourt, Jaulney and Xammes. The 4th Corps had captured Pennes, Nonsard, Beney and St. Benoit. The 5th Corps had taken the Combres Heights and the villages of St. Remy, Hattonchatel, and Vigneulles. St. Mihiel had been occupied by the French. The St. Miriel offensive was over.

THE TANKS.

In this offensive the 1st Army had two battalions of Renault tanks under command of Col. G. S. Patton. These tanks were assigned to the divisions on the south front which had to make the greatest effort. Due to the mud and the rapid advance of the infantry, the tanks were not able to keep up the first day. However at Nonsard, two tanks did excellent work in knocking out some machine gun nests, which were holding up the advance of the infantry. One of these machine guns was in the church steeple. One platoon of tanks with their battalion commander, Major Brett (Six tanks in all) were moving well in advance of the infantry when they came out of a ravine near Jonville and surprised a battalion of German infantry marching in column of squads on the road. The tanks ran down the road through the battalion firing all guns. Needless to say, this battalion was pretty much scattered.

THE AIR SERVICE.

For once we had control of the air. The French were very generous in loaning attack planes while the British sent their bombing squadron to report to our 1st Army for use during the offensive. Beginning early in the morning, bombs were dropped on every known German airdrome. All day above these airdomes hovered attack planes waiting to catch the Boche as they rose from the ground. The aeroplanes were also used to harass the Germans in their effort to escape from the tip of the salient.

A German report stated, At 12:30 P. M. about forty deep flying hostile battle planes made an attack with machine guns and hand grenades on chateau garden and cross roads at St. Benoit, but the attack was unsuccessful on account of the wind and rain just at that time."

In all there were 46 squadrons and 20 balloon companies which took part in this offensive.

THE ENGINEERS.

During this offensive a heavy burden fell upon the Engineers. They repaired roads destroyed by the heavy shells of both the belligerents. They built roads through the muddy wastes of No Man's Land, where there were no roads. They built bridges across trenches and swollen streams. It was by their ceaseless labors that the guns and supplies for the troops were able to get up.

THE CAVALRY.

A provisional squadron of the 2nd Cavalry was sent forward through the 1st Division during the afternoon of Sept. 12th, to exploit towards Vigneulles and cut the St. Mihiel-Metz Railroad. This squadron moved down a road through the thick woods in front of the 1st Division, in column, without having even a point to its front. They had not gone far before they were fired on by a machine gun at a cross road. The cavalry turned around and passed back through the infantry, having accomplished nothing. When the infantry reached that point later on they were fired on by the machine guns. They sent a few men through the woods and captured three machine guns with no losses.

ADVANTAGES GAINED.

We had captured 14,439 prisoners, 443 guns, and much material and supplies. The salient was wiped off the map, greatly shortening the Allied lines, the Paris-Nancy railroad resumed uninterrupted operation. The

Germans had lost the Spada defile through the Heights of the Meuse and a well-protected Brigadehead. 150 square miles of French territory had been liberated. We had gained a position which menaced Metz and the Briey iron mines. The Toul-Verdun railroad was again opened. But the greatest advantage was from the standpoint of morale. The offensive showed the French and the English as well as the Germans that the Americans were a real fighting machine and that their General Staff could handle a large offensive. It gave the American soldier himself that impetus of victory which carried him through the Meuse-Argonne.

GERMAN COMMENTS ON THE OFFENSIVE.

On Sept. 25th, the Intelligence Officer of the German High Command reporting on the offensive said in part as follow: "The Americans made a clever use of their machine guns. They are stubborn in defense and rely greatly on this weapon of which they had large numbers." "The Artillery preparation, which preceded the attack was well carried out. The objectives were efficiently bombarded. The American gunners were able to change their targets in the minimum of time and with great accuracy. Whenever the infantry were stopped by a nest of machine guns, they immediately fell back, and the artillery promptly shelled the nest of machine guns." "Numerous tanks were ready but only a few actually used; the masses of infantry alone insured the victory."

FURTHER COMMENTS.

This offensive was not perfect in its details. No! But it went off with the precision of much practiced maneuvers. Unless it was the capture of the Turkish Army in Palestine by General Allenby, no other large offensive went off so exactly according to plan.

CRITICISMS.

I have nothing to criticize in the conduct of the organizations and men during the attack. Their work was excellent. The real defect was in the transport. The roads were blocked for miles with ammunition and supplies for the assaulting divisions. Units did not always know where the command posts of their next higher or lower units were.

A German Staff made shortly after the attack and published for the information of the armies, contained a criticism of our army headquarters. The report gave high praise to the dash and fearlessness of the American soldier but added that an Army Headquarters that showed itself so unable to reap the advantages so clearly afforded by its striking initial success, was not to be feared.

General Pershing has also been greatly criticized by a number of officers for not striking while the iron was hot and cutting through the Michel Stellund line in the confusion of the first two days. However, it is shown by several writers that he had specific orders to stop on reaching that line. I am afraid that some of us forget that there is team work between armies the same as between other units. In this respect some of us are like the private who did not stop when his company reached their first day's objective. "Hey. Where are you going?" called a sergeant. "Stop here and dig in." "Dig in. Hell! Why?" he replied. "This is our objective—where we stop." "My objective is Berlin," and the private went on.

It matters not whether Field Marshal Foch thought we could or not break through the Michel Stellund. He planned the Meuse-Argonne offensive in conjunction with his attacks farther west and it was up to us to stop the St. Mihiel offensive on reaching the limited objectives given; to subordinate ourselves to team play. However, I do think since the objective was limited that the thrust on the western front should have begun at the same time as the one on the southern front and that it should have been stronger than it was. Had this been done, it is reasonable to think that the trap might have been sprung on the afternoon of Sept. 12th instead of next morning. This would have meant the surrender of the two divisions at the tip of the salient or at the least it would have turned an orderly evacuation into a route with greatly increased captures of men and material.

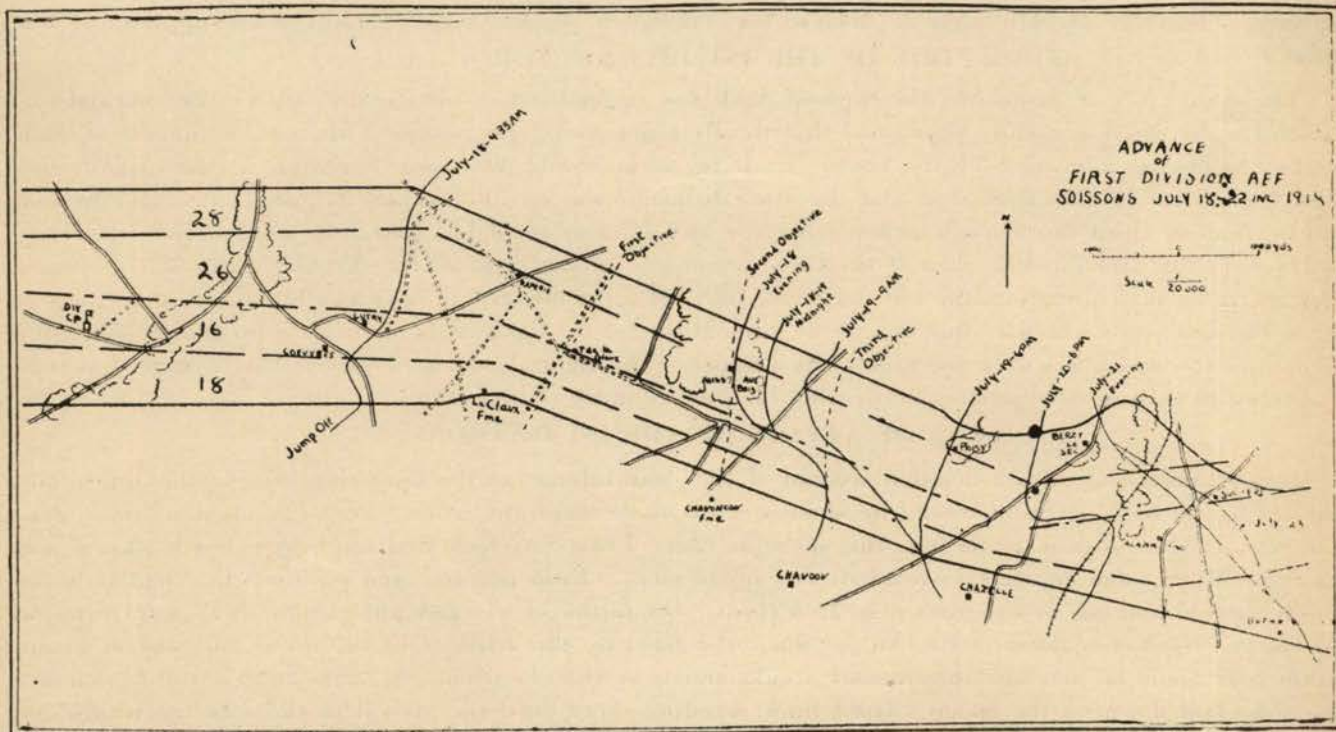
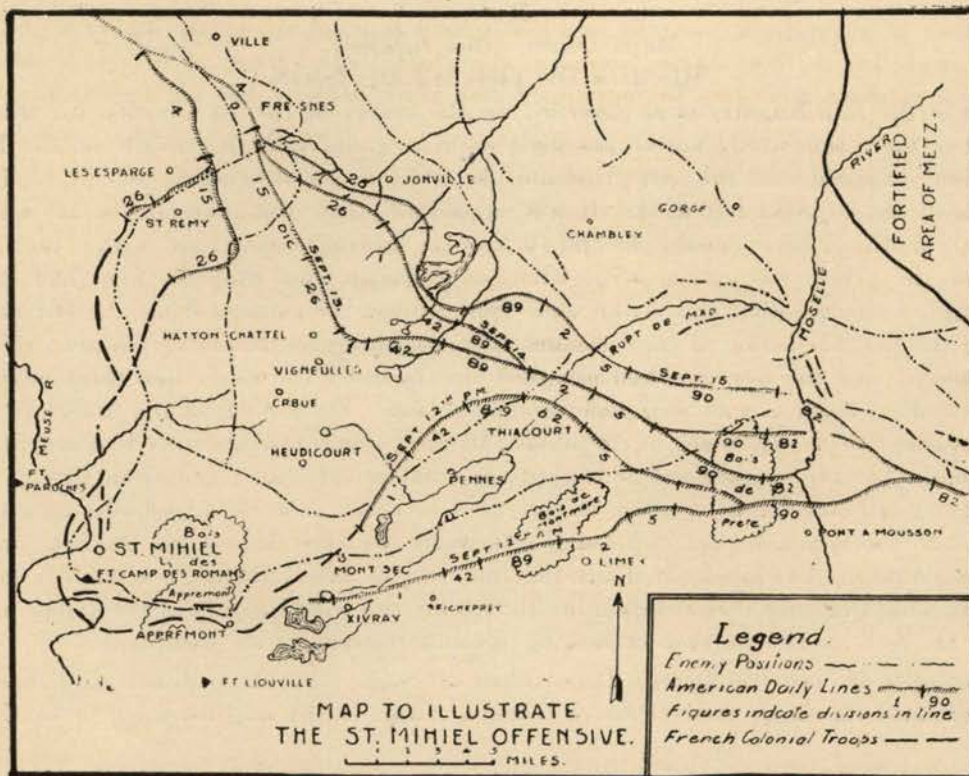
LESSONS TO BE LEARNED.

Traffic must be regulated. Each division zone should contain two roads generally perpendicular to its front. These roads should be made one-way roads, the traffic going towards the front on one and towards

the rear on the other. Military Police should be stationed at important points to see that traffic rules are complied with. Every effort must be made by all organizations to keep the higher and the lower units informed of the position of their C. P.

The importance of team work must be constantly kept in mind among the higher as well as the lower units. Plans are made for the coordinated action of the whole. The success of the whole might be endangered as much by a member exceeding his appointed task as by one who does not accomplish the task assigned him.

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THE 18TH INFANTRY (U. S.) IN THE ST. MIHIEL OFFENSIVE

By

Major Oliver Allen, Infantry.

MISSION OF THE 1ST DIVISION.

As the actions of the 18th Infantry were governed on the orders of the 1st Division for this operation a proper view point of the action would not be procured without going into the details of the Division plan first. The mission assigned to the 1st Division, in addition to the taking of all of its objectives, was the protection of the exposed left flank. It was important that the Division seize all of its objectives on time, so that there would be no delay in making connection with the 26th Division at Vigneulles, and thus close the salient with whatever Germans and supplies that had not been evacuated. To accomplish this mission, and at the same time protect the exposed flank, the Division Commander had to consider the possible action of the Germans before deciding on the formation to carry out this plan. It must be remembered that the Germans had occupied this territory for more than three years, and it had been highly organized for defense with wire and strong positions. On the left of the American positions was the principle observatory of the Germans in the sector, Mt Sec., which rose abruptly to a height of about 450 feet, with steep sides. The observatory was 2000 yards in front of our lines, and from its top the Germans were enabled to observe all movements of troops by day, and to make accurate adjustment of artillery fire on vulnerable points. In the "pinching out" process the German positions in front of Mt. Sec., and Mt. Sec. itself, were to be passed on the left flank. If it was the intention of the Germans to remain in control of this area the open flank would be under observation of the enemy and would permit of the gathering of troops in the woods east of Mt. Sec. for the purpose of making a counter attack on an open flank.

Information secured by the Intelligence Department on Sept. 1st from prisoners and deserters captured in this area, indicated that large movements of German troops in the neighborhood of Conflans were being made.

However, on account of the increasing shortage of men, Ludendorff had practically decided to evacuate this salient about Sept. 12th, 1918.

Even in the event it was the intention of the Germans to withdraw from the salient stiff resistance could be expected so that our advance might be delayed long enough to permit of the removal of all supplies and material.

FORMATION OF THE 1ST DIVISION FOR ATTACK.

The importance of protecting the exposed flank was emphasized in the division order. The normal formation for the division usually prescribed that the Brigades would be in line with both regiments of each brigade occupying a portion of the front. Each regiment would have one battalion in the assault line, one battalion in regimental reserve, and the other battalion was used to form the brigade reserve and division reserve, interior third line battalions being brigade and exterior third line battalion being division reserve. However, in this attack, while each of the three regiments on the right of the division sector were directed to attack in normal formation, the left regiment, 18th Inf., was directed to have two battalions in the assault line. The left front line battalion was to be responsible for the flank of the division up to and including the third objective, which was to be the limit of its advance. The right assault battalion of that regiment was then to advance to the fourth objective and provide for protection up to that point.

PLAN OF ATTACK OF THE 1ST DIVISION.

Before proceeding with a detailed account of the 18th Infantry in this operation, some of the instructions outlined in the Division order should be mentioned, as these naturally affect the work of that unit. Zero hour was set for 5 o'clock of the morning of Sept. 12th. From 1 o'clock that morning a bombardment was placed on Mt. Sec and on every known battery emplacement. Even machine gun positions that had been definitely located had one or two guns placed on them. Quantities of gas and phosphorus shells were fired on Mt. Sec and the woods north of it. No gas was to be fired by the artillery in the divisional zone of action within four hours of the time the infantry would arrive at that location. At zero hour a rolling barrage was to be laid down on the enemy's front lines, standing there until the arrival of the infantry within 200 meters. The barrage was then to advance at the rate of 100 meters in four minutes, followed closely by the

infantry, and was to be placed 200 meters in front of each of the objectives in accordance with the time schedule arranged. Forty nine small tanks were assigned to the Division for this operation. These were the French Renault type, but operated by Americans. Two platoons of the 1st Gas Regiment were assigned, and from the vicinity of the front lines this unit was to throw smoke shells in front of the Rupt de Mad with 4 inch mortars, covering the crossing of that stream by the infantry. The 8th Observation Squadron operated with the Division, and orders to that unit called for an infantry plane to follow the advance and report on the location of the front line when called for. Planes were assigned to the artillery for reconnaissance and for control of artillery fire. One plane was specially detailed to follow the advance of the tanks and signal to the artillery any targets holding up their advance.

In mentioning the latest methods of fighting, such as the use of tanks and chemical agents, it must not be understood that this was the first operation of the Division in which these methods were employed. In the Soissons offensive both tanks and smoke were used. It is mentioned here so that the reader may appreciate that in the first all American operation the latest methods of modern warfare were employed.

ARRIVAL OF THE 18TH INFANTRY.

On Sept. 8th the 18th Infantry marched into the Foret de Reine where they were to bivouac. The weather was cold and rainy, and sleeping under shelter tents without fires for heat, and no fresh meat for the ration, would have lowered the morale of troops not accustomed to such methods of existing. During this period some replacements were received and these were given as much instruction as possible. Gas masks were all inspected and the chemicals renewed. In addition to the 100 rounds of ammunition carried in the belt each man was issued an extra bandolier of ammunition, and two clips of automatic rifle ammunition. The regiment was not equipped with the Browning Automatic Rifle at this time, but used the French "chauchat" gun. This required a special clip and ammunition. Two hand grenades were issued to each man, and in the case of the men armed with the grenade discharge in place of the extra ammunition these men were required to carry a sack with rifle grenades. In order to accustom the men to this additional weight they were required on all practice marches and exercises to carry this equipment. Frequent inspections were made to see that this equipment was complete. Knowing that the area in which the next attack was to be made contained wooded areas, special attention was paid to marches through these kind of places, using the compass, particularly in extended order formation. Compasses of some kind had been procured and issued to all leaders down to and including platoons.

ORGANIZATION OF THE 18TH INFANTRY.

The organization of the 18th Infantry at this time consisted of three rifle battalions of four companies each. Each company had four platoons for 50 men each. There was one machine gun company for the regiment, a supply company and a headquarters company which contained the pioneer platoon, the signal platoon and the howitzer platoon. Whenever it became necessary to have a machine gun company attached to each battalion in the attack, two companies from the 2nd Machine Gun Battalion were attached to the regiment.

ZONE OF ACTION.

The division field order for the attack was issued Sept. 10th. This gave all officers an opportunity of learning all the details of the operation, and for making a preliminary reconnaissance. The exact date and hour of the attack was not issued until the morning of the 11th of September. The area in which the division was to operate was familiar to some of the officers, as it had been occupied by them in their former tour in the Ansauville sector. The original line of defense, from Seicheprey to Xivray-Marvosion was now in No-Man's Land. Since the occupation of the 1st Division in the area a new defensive position had been built along the Beaumont-Rambucourt road. When the Division moved into the rear zone of this area the front was held lightly by detachments of the 356th Inf. These units were relieved by similar units of the 1st Division on the night of Sept. 6-7.

In front of the Rambucourt-Beaumont Road was several bands of barbed wire, and during the days of preparation, Engineers from the 1st Division had cut passages through this wire, and marked the entrances thereto with strips of white tape. The plan was to have guides from the 1st Engineers meet the different organizations on the Rambucourt Road and take them through these marked lanes on the night of the advance to the jump-off positions. The distance from Rambucourt

to the advanced position was about 2500 yards, over an area that was covered with shell holes and demolished trenches. Through the center of this zone ran a small stream, the Rupt de Mad, which was unfordable in places. To insure the crossing of this stream the Engineers were to furnish a detail with each column of troops, carrying duck-boards, which were to be used to cross the stream wherever they were needed. Another detail from the 1st Engineers was to follow the assault lines, carrying Banalore tubes and large wire cutters, to assist in crossing the German wired positions.

FORMATION OF THE 18TH INFANTRY FOR ATTACK.

The 18th Infantry was assigned the left zone of action of the Division, being the exposed flank. Two battalions were assigned to the assault, and one battalion to the Division Reserve. One company from the 2nd battalion was assigned as Regimental Reserve. One company from the 1st battalion was detached and given a mission of accompanying the tanks and to render them assistance when in trouble. The normal formation for attack was to be employed. This consisted in having two rifle companies in the assault line, using two platoons in the first line, each line having two waves, the first wave being in skirmish formation and the second following at 50 yards, being in squad column. The 2nd line followed the first at 100 yards, being in two waves of squad column. This constituted the company support. The interval between squad column was 30 yards. The Machine Gun company followed the supports at 150 yards, using an open formation similar to the rifle companies. The guns and ammunition were carried by hand. The battalion commander usually preceded the machine gun company, his groups being in squad columns on each side. Following the machine gun company about 200 yards was the battalion reserve, one company, in section columns.

The 1st and 2nd battalions were designated by the Regimental commander as the assault units, and Company H was designated Regimental Reserve. Co. A was detached to accompany the tanks.

ADVANCE TO THE JUMP-OFF POSITION.

On the evening of Sept. 11th the movement of the regiment to its assigned place began. From its bivouac area in the Foret de Reine to Rambucourt was a distance of 5 kilometers, with only one road. The excessive rains made the route a "sea of mud", and it was soon blocked with tanks, artillery and transportation of every sort. The infantry had to take to the ditches and by the time they reached their positions much of the extra equipment had disappeared. The Engineer guides were picked up at Rambucourt and the platoons began following the marked lanes. By the time two or three men had passed through the gapes the white tape had disappeared. It was almost impossible to maintain connection. To add to the troubles about nine o'clock it began to pour, and the night was so dark it was impossible to see more than a few feet in front. The total distance marched by the regiment in assembling in its forward position was 7½ kilometers, and although the start was made at 7 o'clock it was well after mid-night before all elements were in their proper positions. It will be noted that the Rupt de Mad crosses the regimental area north nad south. Some of the elements of of the 1st Battalion crossed the stream and in the confusion and dark were facing west. During the preliminary bombardment these units were returned to their proper places.

REGIMENTAL BOUNDARY.

The right boundary assigned the regiment was a line drawn north through Richecourt, right edge of Etang le Bailly to Etang de Pannes to the Madine Creek. The left boundary extended from, Raulecourt Xivray-Marvosin, western edge of Bois de Burly, and then along the eastern edge of Etang de Lambepinot, joining the right boundary at the Madine Creek.

MISSION ASSIGNED THE TANKS.

Of the 49 tanks to operate with the Division, five were to operate in the immediate front of the 18th Infantry, and to move out with the assault wave at 5 o'clock. The remainder were to assemble at Xivray-Marvosin and at zero hour were to follow the left bank of the Rupt de Mad to Richecourt, assist in the capture of that village, and then to move into the sectors of the regiments on the right. At H hour the barrage was to stand on the front line trenches of the Germans from Richecourt to Lahayville. At Richecourt this barrage went north, forming a box. Under the protection of this box barrage the tanks assigned the mission of cleaning out Richecourt, were to move out.

ADVANCE TO THE 1ST OBJECTIVE.

During the assembly of the units at the jump-off position the Germans did not fire a shell. Promptly at 5 o'clock the barrage came down, and the wet and tired infantrymen were only too glad to begin their advance. As soon as the artillery fire came down on the German front line positions, all kinds of signal rockets were fired by them and a scattering fire from their artillery was received. The first objective was the front lines of the Germans, about a thousand yard advance. The village of Richecourt had been in No-Man's Land so long that it had been practically wiped out. It was impossible to tell where the town began. As a result one platoon of the extreme right of the 1st battalion came under the edge of the box garrage and a few casualties occurred. Prompt action in moving by the flank prevented this from being more serious. In the advance to the first position not a single rifle shot was fired by either battalion. The rate of advance was 100 meters in 4 minutes, and the schedule called for the regiment to be on its first objective at 5:30 A. M. The barrage halted here for twenty minutes. The Rupt de Mad had been crossed by the men either wading or jumping across. They were already drenched so a little more wetting would not hurt. The stream was found to be about three or four feet wide generally, and not more than four feet deep. The German wire was crossed by the men stepping on or crawling over it, and in some places using the gaps made by the tanks. The detachment of Engineers with the duck-boards and the wire cutters had been hopelessly lost.

ADVANCE TO THE 2ND OBJECTIVE.

At 5:50 o'clock the advance to the second objective was started, the infantry following closely the rolling barrage. Only a few Germans were in the trenches passed over. These were made prisoners. No fire was received from the Germans and the second objective was reached on schedule at 6:30 A. M. The barrage was to remain 200 meters in front of this objective to allow the organizations to get in touch with one another. It was anticipated that the regiments of the right brigade would meet with considerable resistance in the area between Richecourt and Lahayville, and this delay of 20 minutes would give the tanks an opportunity to assist in the capture and consolidation following this advance. As previously stated, however, no resistance was met.

ADVANCE TO THE 3RD OBJECTIVE.

The advance to the third objective started at 6:50 A. M., with the artillery barrage moving forward. As soon as the infantry began to advance from this position heavy machine gun fire was received from the Joli Bois and the Quart de Reserves; also artillery fire from the Bois de Gargantua, causing casualties. Only two tanks were in advance of the 18th Infantry, and these moved into the Joli Bois. At the same time the Machine Gun Company opened fire, using overhead fire, into the Quart de Reserve and the Joli Bois. The battalion commander directed that the fire of the 37 millimeter gun be placed on these nests. Fire was opened by the infantry and the advance was made in little spurts. This was not an organized advance as we see in demonstrations. The noise of the artillery and machine gun firing precluded the possibility of giving any verbal orders. The movements became individual. As soon as a man found that he was able to move forward he would do so, other men, seeing men in their front would endeavor to get up on the line with them, and in this manner the line advanced until they were able to close in on the Germans and kill them. The 1st battalion took up a position in a German trench just south of the Joli Bois, and as they were now out of the line of fire from the Quart de Reserve the different units were reorganized. The 16th Infantry on the right was held up by the fire from the Quart de Reserve, but the Machine Gun Company of the 18th Infantry continued its firing into these woods, and aided the right unit in capturing these woods. The 2nd battalion of the 18th Infantry had not met with such resistance, and had occupied a position on the northern edge of the Bois de Burly. Orders were received from the battalion commander of the 1st battalion, to continue the advance and occupy a position on the northern edge of Joli Bois, connect up with the 2nd battalion, and to send a platoon from the right company around the northern edge of Etang de Bruilly to connect with the 16th Infantry. The line was established at 10:30 A. M. The barrage was to remain in front of this objective until 11:00 A. M., covering the consolidation of the line. This was the final objective for the 2nd Battalion. The supports and reserve of this battalion were to face to the west, forming a new front, and were to be prepared to resist any counter attacks from the direction of Le Tombois. Patrols were sent a short distance into

the Bois de Gargantua to prevent any surprise from the Germans, but the division order stated that no exploitation would be attempted in these woods until Nonsard had been taken.

ADVANCE TO 4TH OBJECTIVE.

The advance to the fourth objective started at 11:00 A. M., and for the 1st battalion of the 18th Infantry it meant extending the line now held from the southern end of Etang de Lembpinot, along its eastern edge, to the northern edge of Etang de Pannes, and then to the Madine Creek. This line was to be occupied, consolidated and connected up with the 2nd battalion 18th Infantry and the 16th Infantry. This movement was completed by 12:20 noon. As this objective was the final one for the division that day, and included Nonsard, strong patrols were sent out from our front lines, to insure that no Germans were left in the Bois de Gargantua. The effect of our artillery fire in this area was very apparent. The Germans had depended upon their light artillery and machine guns for delaying our advance. These guns had been removed at the last minute. However, direct hits in three instances had prevented the carrying out of this purpose. Two guns were left on the road, with the horses harnessed ready to move, but a shell had landed on the caisson and killed the crew. In another case the men riding the horses attached to the gun had been killed while endeavoring to move the gun. Their dead bodies were on the horses when found. While these woods were quite thick, several good roads run through them in various directions. The Germans had anticipated that the advance of the Americans would be along these roads, and had placed machine guns along the gutters, giving them a direct field of fire down the roads. Three of these gun positions had been hit by artillery shells, and in one case a crew of three men were found dead at the gun. While the platoon leader of a machine gun platoon was reconnoitering for suitable positions for his guns, he came suddenly upon a German gun crew, preparing to open fire with a 77 Austrian gun. The lieutenant was accompanied by his sergeant, and pulling their pistols they rushed in and captured the entire crew of one lieutenant, one sergeant and four soldiers.

It was quite evident that the Germans had intended to evacuate the salient. Large fires were seen in the north and west. The reports from the Division indicated that the attack was progressing so well, and with such slight resistance that the Fourth Corps directed that a resumption of the advance to the first phase of the second day's objective be commenced.

In conformity with this plan a squadron of cavalry was ordered to advance along the Nonsard-Hendicourt and Nonsard-Vigneulles Roads with a view of catching up with the Germans. The squadron returned with a few prisoners, and reported that the resistance was too strong for them to be able to get through the woods.

CLOSING OF THE SALIENT.

The advance to the Fourth Corp objective was started at 5:45 P. M. on the 12th of September. This was not preceded by any artillery fire. The 18th Infantry marched through the Bois de Gargantua in column of squads, in two columns, the 1st battalion being on the right and the 2nd battalion on the left. And after crossing the Madine Creek a defensive position was selected and organized for counter attacks. The 16th Infantry later extended this line to the road running Nonsard to Vigneulles, northwest of Nonsard. The 28th and 26th regiments of infantry continued the advance through the Bois de Nonsard and the Bois de Vigneulles, the final objective being the road running from Vigneulles to St. Benoit. About ten o'clock that night patrols of the 28th Infantry reached Vigneulles, and the advance elements of those regiments reached the road about 11:00 o'clock. About nine o'clock that night the 1st battalion of the 18th Infantry was moved to the western edge of the Bois de la Oziere, where they bivouaced for the night, posting strong outguards. Later in the night the 2nd battalion of the 18th Infantry was sent to occupy the Bois de Pannes and outpost line was established. Patrols connected the two battalions. On noon of the following day, September 13th, orders were received to send a company with machine guns to Heudicourt on reconnaissance. Co. D with one platoon of the Regimental Machine Gun Company was sent on this mission. The company moved out with an advance guard for protection towards that villiage. French maps showing the general layout of the villiage had been furnished, and a plan for entering and searching the place had been planned. When the unit arrived at the edge of the villiage it was found to be occupied French troops, most of whom were in bed in billets. This completed the work of the 18th Infantry in this operation.

LOSSES.

The losses of the 1st Division were 13 officers, 531 men, and it was credited with capturing 5 officers 1190 men, 39 field guns and howitzers, 50 machine guns, and quantities of material in the way of locomotives, forage, horses, ammunition and supplies.

LOSSES IN THE 18TH INFANTRY.

The total casualties in the 18th Infantry were 8 killed, 58 wounded and 19 missing in action. The regiment entered the action with the feeling that it was to be their hardest battle. It turned out to be the easiest operation they were in during the entire war.

COMMENTS.

It is difficult to criticise a successful operation, and it is especially hard to do when the enemy does not carry out the actions which the estimate of the situation indicated he would. In this estimate it must have been decided that the only plan open to the enemy would be to make a vigorous defense. If this was not the plan of the enemy as thought out by higher commanders it is hard to believe that a force of 550,000 men would have to be used to drive back a much smaller force of about 75,000.

Orders for this attack indicated that it was to be a surprise so as to prevent the Germans from seizing the opportunity of evacuating the salient. Yet for four hours prior to the attack a bombardment was placed on all the enemy defenses and back areas, giving him advance notice of the attack. As stated previously the German plan was to evacuate the salient about September 12th, falling back on a secondary position which had been previously prepared. This four hour bombardment gave them a four hour start in the race to this rear position.

During the four hour bombardment more than 1,000,000 rounds of ammunition were fired, setting the record for artillery fire for that time.

The infantryman in future wars will undoubtedly have to get in close proximity to the enemy by making long marches at night. Added to this distance will be the ground covered in the attack proper. As a result of the heavy load he has to carry by the time he is within fighting distance of the enemy he is too fatigued to put the proper punch in the fight. Some method of bringing forward this surplus ammunition and equipment, should be devised so as to lighten the load of the fighting man when entering an engagement.

No assembly area was designated for the tanks in this operation, and as a result we see some of them far in advance of the infantry, without any support. In this operation some of the tanks went as far as Jonville, about nine kilometers beyond the final objective. Just as soon as they met resistance they were forced to withdraw.

The detailing of infantry to go with the tanks for the purpose of assisting them when in trouble, is not practicable. These men could have been used to much better advantage in the assault line. The company assigned this mission disappeared when the tanks did, most of them being back at the kitchens at the end of the day. Tanks should be followed closely by the assaulting troops. The advance of the tanks must be guided on the general advance. If a tank gets in trouble and cannot move, the assaulting troops should pass on, and any assistance rendered it should come from the rear organizations.

LESSONS.

This operation demonstrates the importance of every unit protecting its own flank. The division in this case depended upon a regiment for this protection; the regiment in turn detailed the mission to two battalions, and each battalion in addition had to take care of its own flank. How effective the plan might have proven in event the enemy threatened an envelopment of our left, cannot be stated, but I believe that the plan was a logical one.

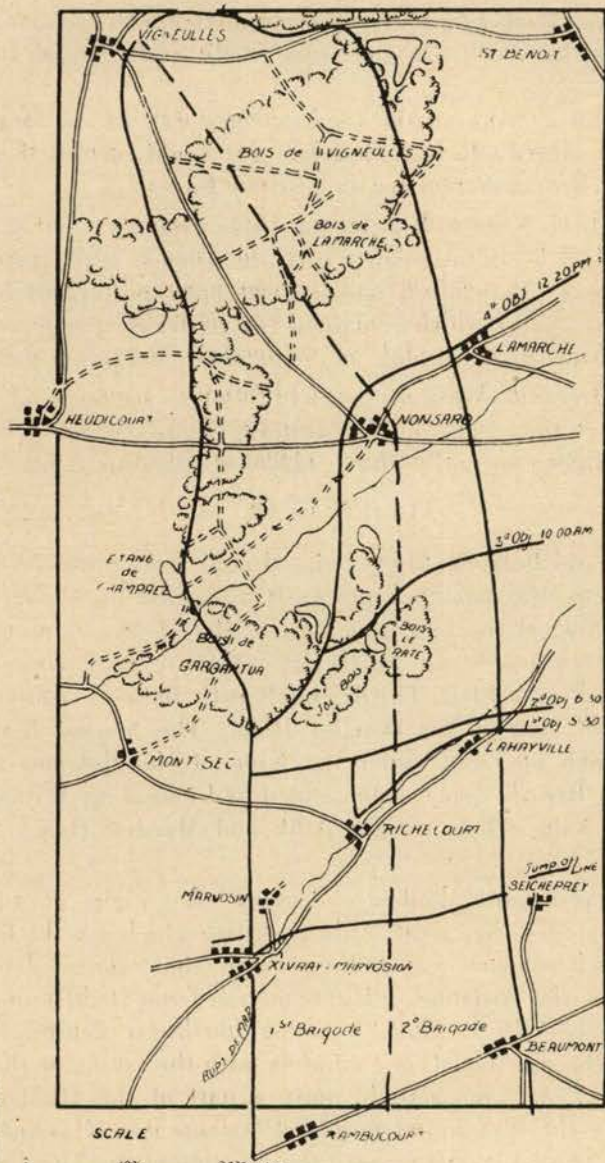
I would like to offer a few comments on the formation used by the 1st Division in the attack. While the normal formation called for four regiments in line, one battalion being in the assault, one battalion in regiment reserve, and the other battalion being in either brigade or division reserve, this did not prevent the exception being made in cases where necessity demanded a change. The formation was a flexible one. In this particular operation of the 18th Infantry the formation was changed to meet the existing condition.

One disadvantage to this formation was that the regimental commander did not get an opportunity to rest, but this is equally true of battalion commanders in any operation on a large scale. The formation on the other hand has many advantages. Each unit has its own particular share of the battle to handle and the responsibility is not divided between different commanders and troops. In the regimental zone of action the control of men moving to the rear can be more readily handled. Then the knowledge that other men of the regiment are in reserve to be used when needed, adds, greatly to the morale of the fighting units in front. Certainly greater team work within the regimental zone can be developed.

The last lesson is the use by the Germans of machine guns and artillery in rear guard work. These were used in this operation to the fullest extent by the Germans. They were located where the best field of fire was possible, and in most cases no attempt was made to save the guns.

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ZONE OF ACTION
 1st DIVISION of ST MIHIEL



THE BRITISH OFFENSIVE TOWARD MAUBEUGE

SEPT. 27—NOV. 11, 1918

By

Capt. R. W. Corrigan, Infantry.

THE REVERSAL OF POSITIONS

Before the final British thrust across their old battlefields from the valley of the Somme to the head waters of the Sambre, two developments of the greatest importance to the common cause had occurred. In the midst of defeat, the Allies had at last come to unity of command on the western front; and the new Generalissimo had successfully performed what is described by Napoleon as "one of the most delicate operations in war," namely, the transition from sporadic and often ineffectual defensive to a general and firm offensive. For their part in both, Marshal Foch has given due credit to the British forces and to their commander.

Another factor of equally vital bearing on the final outcome was the appearance of more than 2,000,000 fresh replacements from the only source which at that late day could furnish them, together with the activities on the western front of 1,338,169 combatant troops of these forces.

The leaders of the Central Powers were well aware of these changes; and a withdrawal of their right flank from the plain of the Lys had been anticipated early in August, 1918, since they knew "that the next measures must be purely defensive." Ludendorff had, indeed, been quite ready for peace in the same month,—before he should lose the former gains which remained for bartering purposes. An actual bid for peace on all fronts had issued from Austria in the middle of September, and been promptly rejected.

Further, the strength of the German Army proper had fallen to a total of 217 divisions, of which 186, including only 14 fresh reserve divisions, were on the western front. A Swiss historian describes these as having "2,000 rifles in some divisions (normally about 12,000 of all arms), some only 1,000 effectives."

ALLIED PLAN.

The Germans line in France and Belgium west of the Moselle having been reduced practically to a single great salient almost regular in form, Marshal Foch promptly visualized the reduction of it. Instructions were given for a series of blows beginning at the base just west of the Meuse, running rapidly around the entire perimeter, and ending on the western base at the North Sea. We are here concerned with that portion of this offensive which was executed by the First, Third, and Fourth British Armies commencing on September 27, 1918, under command of Field Marshal Sir Douglas Haig. The Second British Army, commanded by General Sir Herbert Plumer, which operated under the King of the Belgians from September 28th until the Armistice, and the new Fifth British Army, commanded by General Sir William Birdwood, which operated as a connecting group between King Albert's right flank and Marshal Haig's left can hardly be touched in a brief narrative.

Haig's direction of attack was toward Maubeuge,—across the plain forming the gateway between Flanders and interior France,—across the great railway system which was the life-line of the whole German belt of invaded territory and which connected at Aulnoye with the Sambre-Meuse line to Germany,—and squarely up against the barrier of the Ardennes. His front ran from slightly north and west of St. Quentin in a northerly direction to the Sensee River, where it swung northwest behind Lens, and again ran north to contact with the Belgians. He was faced immediately with the taking of the Siegfried Stellung (known to the British as the "Hindenburg Line;" but actually only a part of the Hindenburg system). Having recently broken into the junction of the Wotan and Siegfried systems near Havrincourt, he was in position to start with a firmly fixed pivot. This village was near the junction of the Third and Fourth Armies. He planned to achieve both the advantage of surprise and that of maneuver by laying down a barrage along the front of the First, Third, and Fourth Armies beginning on the night of September 26—27, to attack on the morning of the 27th with the First and Third, and, the barrage continuing, to attack with the Fourth Army in the south on September 29th.

The first part of the plan depended upon the ability of the troops to cross the Canal du Nord at Moeuvres,

swing north and south to make sure of other crossings, and outflank the difficult positions on the north of the line. For this twenty-nine infantry divisions were available.

The second part depended to some extent upon the success of the first; and was the more difficult because it faced the untouched Siegfried defenses. For this there were fifteen infantry divisions available, including the 27th and 30th United States Divisions which constituted the 2nd Corps under Major General G. W. Read. An exploitation of success in this sector was planned with a cavalry brigade, a battalion of armed cars, and eight whippet tanks. This force was to go over Bellicourt Tunnel and cut the railway line near Bohain.

GERMAN PLAN.

The military activities at this time of Quartiermeister General Erich von Ludendorff are hard to distinguish from his political labors. Since the Hermann-Hunding-Brunhild-Kreimhild line was weaker than that held at the beginning of the Allied offensive, it was evidently his wish to hold on where he was. Two events modified this at the very outset. The first was the necessary diversion of his best reserves to the pivot in the Argonne, where he dared not give way to the pressure being exerted. The second was the defection of Bulgaria on September 27th, requiring further reserves to stop the gap in the east and hold Austria in line. In any case, he hoped to hold as long as possible, and as far in enemy territory as possible, until he could secure a peace that suited him.

To this end he devoted in the sector opposite the British forces most of the troops of the army groups commanded by the Crown Prince Rupprecht of Bavaria and General von Boehn. In front of the three armies under Haig, these comprised at first some sixty-three depleted divisions, more than a third of them unrested, forming part of the Sixth Army under von Quast, all of the Seventeenth under Otto von Below, all of the Second under vonder Marwitz, and part of the Eighteenth under von Hutier.

ATTACKS ON CAMBRAI AND THE HINDENBURG LINE

A large shipment of new gas shell from home reached Haig's armies just prior to the opening of the battle. This was at once worked into the original plan, and used for an intermittent bombardment of battery groups, command posts, and points of importance behind the enemy line from 10:00 P. M. on September 26th until time for the scheduled barrage to open. At 5:20 A. M. on the 27th an intensive barrage opened along the lines of all three armies just before the troops of the First and Third jumped off along their thirteen mile front. An idea of the number of guns engaged may be gained from the statement that 1,044 field pieces and 593 heavy guns (including 4 siege batteries) were assigned to the sector of the Fourth Army alone. In the three day's practically continuous fire along the whole of the British line the guns threw over nearly 65,000 tons of ammunition.

Accepting as typical the barrage orders of the Fourth Army, the British in general employed a rolling barrage with 100-yard lifts. On reaching each objective, it would proceed thus for an additional 300 yards, pause along the line so marked, usually at a reduced rate of fire, as a protective cover for the length of time allowed the infantry to reform, and then continue to the next objective.

Machine guns, which formed a separate Corps in the British Army, were massed in batteries with distinct tasks of continuous fire for each objective and harassing tasks after securing the last. Forward batteries operated on lines of greater freedom, and in closer touch with the assault. At this time there was one machine-gun or automatic rifle for every twenty infantrymen in the forces commanded by Field Marshal Haig.

Closely following their artillery barrage on the morning of September 27th, eight divisions in the front line of the First and Third Armies, commanded respectively by Generals Horne and Byng, stormed the first zone of von der Marwitz's Second Army. Five divisions which started north of the bend in the Canal du Nord penetrated to the west bank of the canal in cooperation with 65 tanks, and cleared it of the enemy. As soon as the line was reached in the infantry, the engineers threw bridges across the canal in the divisional sectors, aiding progress toward the more remote objectives. The 52nd Division in the center forced the canal near the Cambrai road, and was to have established a bridgehead; but it was unable to furnish this assistance, and troops crossing later had to force their own passage. Meanwhile the two Canadian Divisions north of Moeuvres effected a crossing, and, spreading to the north as far as the village of Oisy-le-Verger, bit deeply into the

position of Otto von Below's Seventeenth Army. The three divisions south of the bend in the canal had before them only the water obstacle of a small stream in addition to the enemy's forward defenses. They penetrated to their objectives; but were strongly counter-attacked from the neighborhood of Beaucamp. The counter-attack was repulsed.

To complete the success of the day, six divisions forming a second line followed and passed through those leading off. They filled out the line establishing it as a saient nearly four miles deep and pointing on a broad front toward Cambrai.

On the 28th the advance was continued to points still closer to Cambrai on the north, the west, and the south, including the village of Aubencheul-au-Bac on the Sensee Canal and a point east of the St. Quentin or Scheldt Canal opposite Marcoing. Stubborn resistance and frequent counter attacks of the enemy failed to stop it; and he lost 10,000 prisoners and 200 guns to the British.

Part of the preparations for the Hindenburg Line attack of General Rawlinson's Fourth Army on September 29th have already been described. On a front of twelve miles north from Holnon the attackers were faced by the intricate defenses of the Hindenburg line, which varied in depth from 1,000 yards to 7,000 and was largely based on the St. Quentin Canal. This was used chiefly for cover of the garrison during bombardment, and was admirably suited to the purpose. Between Bellicourt and Vendhuile, near the north end of the army front, the canal ran for 6,000 yards through a tunnel which offered perfect shelter, and which was connected with pill-boxes on top by a series of shafts. North of Vendhuile the canal was sometimes 60 feet deep, and everywhere unfordable.

Both of the United States Divisions faced the Bellicourt tunnel. They formed a Corps without artillery or signal troops, which were supplied by the British; and on September 25th they went into line to relieve three British Divisions on an 8,000 yard front from south of Bellicourt to a point slightly north of Gillemont Farm. On the northern end of this line, the 27th Division was to jump off on September 29th from a line of departure reaching from Quennemont Farm to Gillemont Farm, and the barrage preparations had been so made. Just here, however, was a hitch in the proceedings.

Local offensives in the days preceeding the big drive had yielded success in every particular but this; and the 27th Division took over a line about a kilometer behind its designated position for the offensive. Orders were issued for the Division to attack this position at 5:30 A. M. on September 27th in conjunction with the attack of the Third Army in the north; and a company of tanks was put in to assist in working forward.

The attack was partially successful, for small parties pushed into the line of the two farms; and some of them held on. The Division as a whole, however, had no more luck than its predecessors in the sector; communication with the forward elements was lost, and the line remained where it had been.

To the difficulty of changing the barrage maps for the 29th was now added the certainty of firing into American troops and wounded if they were changed; and nothing was left but to attach extra tanks to the command, start it forward an hour before zero, and try to get it up to its line of departure in contact with the barrage by zero hour. Orders for the 29th were issued accordingly.

In spite of the very thorough artillery preparation for the Fourth Army attack, the effect was not fully known because rain and fog had hampered aerial photography. Its wire cutting was known to have been good; but this was not to be expected to be complete. The British depended chiefly on their tanks to reduce wire obstacles.

There were three brigade of tanks in the Army area, in addition to the 301st U. S. Tank Battalion which had been sent in with Major General Head's Second U. S. Corps. They were echeloned in depth, with a brigade in reserve. The noise made by the assembly of those details to the assault was expected to be so great, however, that low-flying planes were concentrated to cover it. Tanks in the assault were ordered to stay with the units to which attached until their objectives were secured, then to assemble at certain points for orders.

In addition to the raiding force of cavalry, armored cars, and light tanks expected to go over the Bellicourt Tunnel and take advantage of the good roads east of the enemy's position to cut his communications, three cavalry divisions were in rear of the Fourth Army. They remained under the orders of British G. H. Q.

At 4:50 A. M. on September 29th, the 27th Division, supported by 39 tanks, opened the attack of the

Fourth Army. Fog increased by smog covered the movement, but made progress exceedingly hard for the tanks. Seven were promptly ditched. Only one got through with the Division, which, as in the attack two days before, succeeded in getting small elements through to its objectives of Bony and Gouy, but was held up by stubborn resistance in front of Quennemont and Gillemont Farms. North of the latter it took the Knoll; but a counter attack regained part of it. On the south, in contact with the 30th U. S. Division, the 27th took and held a portion of the tunnel defenses.

In the meantime, the five assault divisions scheduled to attack at the original zero hour had proceeded with the plan at 5:30 A. M. They broke through the defenses immediately in front of them all along the line; and from Bellicourt south they all reached the line of the canal. The 46th Division distinguished itself in the capture of Bellenglise, crossing the canal north of it on rafts and footbridges, by swimming and paddling with life belts, thereby coming up in rear of it. 4,000 prisoners and 70 guns rewarded these exertions. The 30th U. S. Division reached its objectives of Bellenglise and Nauroy; but it did not pause long enough to mop up the tunnel stronghold. With the northern end of the tunnel still free, it is doubtful whether this could have been done. At any rate the enemy forces under cover there were able to come out in good time to cause confusion among units in rear of the assault.

None of the three divisions designated to execute a passage of lines and go through to the general line Beaurevoir-Waincourt-Le Tronquoy could get beyond the new front established by the six which opened the attack. The raid to the railway at Bohain also failed to break through.

None the less, the drive had carried the line in an arc around St. Quentin, and had created a pocket between the Third and Fourth Armies which the enemy was forced to evacuate next day.

On September 30th the enemy drew back behind the Saint Quentin Canal along the whole front of the Fourth and Third Armies. The attack of the Fourth Army had destroyed the usefulness of the German defensive line by its penetration before the Second Army of von der Marwitz, who was relieved a few days later.

Ludendorff found it necessary to put von Carlowitz in command of the Second Army, at the same time relieving von Boehn as group commander and assigning the Second Army to Crown Prince Rupprecht, the Eighteenth to Crown Prince Wilhelm.

By October 3rd Saint Quentin had fallen to the First French Army south of Haig, while the progress of King Albert against the right flank of the Bavarian Crown Prince had taken him beyond Armentieres and Lens. Both of these came into the hands of British forces under the King of the Belgians.

By October 5th, Haig had taken the last line of the Siegfried Zone, designated by the British as the Beaurevoir-Fonsomme Line, had closed in on Cambrai, and from there to the junction with the French had practically straightened his front. He gives his total of prisoners and guns taken from September 27th to this date as 36,000 of all ranks and 380 guns.

At the same time the pressure of the French and the Americans west of the Meuse continued to drive the enemy toward the Brunhild-Kriemhild positions, and to call for additional troops from wherever he could draw them. The German forces therefore began to withdraw on the whole front to the continuous but imperfectly organized Hermann-Hunding-Brunhild line in the hope of holding once more.

SECOND BATTLE OF LE CATEAU

Having reformed his line from Cambrai to north and east of St. Quentin, Marshal Haig was ready to continue his drive. North of Cambrai, the Canadian Corps of the First Army had already pushed around the city to a point opposite Ramillies between the Scheldt and Sensee Canals. On October 8th, Haig directed a forward movement of the Third and Fourth Armies which should cut Cambrai off from the south and east. This would at the same time aid the First French Army in a drive to outflank Guise from the north.

The plan for artillery and tanks was similar to that for the attack of September 27th-29th, although obviously simpler for the artillery. Again cavalry was directed to go through the center of the Fourth Army after the assault, this time to the railway junction south of Bertry and to Le Cateau. Again the effort was made to increase the effect of the blows by making them successively. This time, however, the forces were

to attack on the same morning; and the zero hour was at 4:30 A. M. for the Third Army and 5:10 A. M. for the Fourth.

Thirteen divisions were in line for the attack in the direction of Mormal Forest, with three behind the line near Cambrai to turn in that direction behind the blow of the others.

It rained on the morning of October 8th. The advantage of it was with the attackers, whose spirits were much higher than those of the enemy. There were few natural obstacles in the immediate front, and no fortifications like the ones which had recently been taken.

Heavy fighting took place on the left of the attack; and the three divisions operating against the vicinity of Niergnies and Seranvillers were counter-attacked by the enemy with tanks. They were able to hold on, while the 57th Division swinging in behind them made satisfactory progress in the southern outskirts of Cambrai.

In the center and on the right an advance of three to four miles was made all along the line by the infantry and tanks. The Second U. S. Corps, this time under the personal command of General Read, took its objectives and swung out in accordance with orders to the further objectives of Brancourt and Premont while the cavalry went through.

During the night of October 8th—9th the Canadians took Ramillies on the extreme left flank, and crossed the Scheldt Canal from the north. Their patrols working through Cambrai met others of the 57th Division working north; and the city was found clear of Germans. The events of the day had shown a waning morale on the part of the enemy and airmen reported his roads blocked with troops and transports as far as Le Cateau.

Whereas previously the enemy had taken pride in the fact that he had maintained his front and continued the "parallel battle", he admitted that this attack had broken through.

The gains continued on the 9th, when all speed was made to catch up with the enemy in his withdrawal to the Hermann—Hunding Line at the Selle River. Rear guards were speedily driven in. All of the cavalry found employment, and of many varieties. Thus, the infantry being delayed near the village of Clary by machine gun fire from Gattigny Wood, the Fort Garry Horse of the Canadian Cavalry Brigade charged the wood and cleared it. Again, the Third Cavalry Division held part of the line of about two miles to the southwest from a point near Le Cateau. More in line with its ordinary employment, the cavalry seized the St. Quentin—Busigny—Cambrai Railway, and prevented its destruction. The 30th U. S. Division showed itself proficient in British tactics by speedily taking the first objectives of the day and having one of its brigades "leap frog" the other to more distant objectives at Busigny and a point south of it.

Resistance increased on October 10th, as three British Armies everywhere closed in on the line where the enemy had rallied for another stand. Cavalry units attempting to cross the Selle were prevented by organized resistance; and the advance halted along a line from contact with the French east of Bohian to St. Souplet, along the Selle River past Le Cateau and Bethencourt, thence to the Scheldt Canal near Esdrun.

The summary of Haig's gains in the period since October 8th shows 12,000 prisoners, 250 guns, and the important St. Quentin-Cambrai railway line which made a big difference in the problem of supply over mined roads.

The only connected account giving the German point of view which is available mentions attacks by the British along the Selle front on October 11th and 12th. While these were repulsed, they seem to have caused a reflex action in the north, where von Below bade farewell to the last of the Wotan position and pulled back to the eastern edge of Douai before Horne's First Army.

This continued Marshal Haig's line north from the Scheldt Canal along the Sensee Canal to the western suburbs of Douni and northwest from there to the La Bassee Canal.

BATTLE OF THE SELLE RIVER

No distinct pauses occurred between the various actions which are reported as a series of battles in the final push of the war on this front. Every day saw a recurrent activity of all arms at practically every

point along the great battle line, as every battle required shifts of forces in its wake and on its flanks to maintain continuity of that line. These things were practically a matter of habit after four years of position warfare. The local events in the days preceding October 17th may therefore be taken for granted while a moment is devoted to Marshal Haig's next plans.

An advance of his main forces on the left of the French First Army from the line described as of October 10th, would have two advantages. It would, in the first place, bring his guns very soon within range of the Aulnoye railway junction, where traffic from both directions behind the German front switched to the north along the Namur-Liege-Cologne artery. It would also operate to isolate Valenciennes and lead to its reduction after the fashion recently followed with Cambrai and St. Quentin, as well as many other important cities lately regained by the Allies on both sides of the British. After the fall of Valenciennes, there was no major obstacle in the way of an attack toward Mons in accordance with the further plan of Marshal Foch.

While it was evident that the enemy was again to make a stand in front of the British, and the Hermann Line had come to the knowledge of the intelligence organization, air photographs revealed that the position was little more than sketched in. The terrain was well adapted to defense, however, for the British forces were practically at the foot-hills of the Ardennes, faced with a series of deeply cut parallel rivers between spurs which generally commanded their courses; and while the canalized Sambre River ran across their right front, the center was blocked by the dense Forest de Mormal.

With the usual artillery preparation, the Fourth Army was set in motion on October 17th at 5:20 A. M. Its attack was delivered on a front of about ten miles south of Le Cateau, with the mission of reaching the Sambre-et-Oise Canal and the west edge of Mormal Forest. The French attacked in the south at the same time.

The Second U. S. Corps, by this time weak in numbers, attacked in the center of the Army, with the task of crossing the head waters of the Selle south of Saint Souplet. Resistance was very strong in front of all units, which on this and the following day made slow progress. The Americans in particular found themselves under enfilade fire from the eastern edge of St. Souplet, and were held up to the extent of losing contact with the barrage. They finally reached their objective for the day, were driven from it by a counter attack, and then retook it in the afternoon. Meanwhile, British and American tanks had crossed the river north of St. Souplet by means of "cribs" carried to the point of passage and there let down into the bed.

In the night of the 18th, following the progress of the Fourth Army during that day, the enemy was forced out of Wassigny, and drew back of the Sambre Canal.

On the 19th of October it was decided to relieve the Americans, who were much worn, and their relief was completed on the 21st. The British credit them with nearly 12,000 casualties in the period beginning September 27th, while War Department records, probably compiled from later figures, show nearly 18,000. The 27th Division had been in the front line a total of fourteen and one-half days, the 30th Division fifteen and one half.

By the 20th it was time for a blow to be delivered on the left of Haig's three principal armies. At 2:00 A. M. that day seven divisions of the Third Army and the right division of the First attacked the Selle River line against strong opposition. Wire had been strung along most of the front north of Le Cateau, and frequent counter-attacks showed the intention of the Germans to make the most of their position. Infantry and tanks nevertheless crossed the river and reached the heights beyond it, while patrols went to the river Harpies. North of Haspres other troops of the First Army advanced along both sides of the Scheldt Canal, occupied Denain, and reached positions commanding the valley of Ecaillon.

At 1:20 A. M. on the 23rd, the Third and Fourth Armies resumed the offensive from a point about five miles east of St. Souplet to another near the southern edge of Mormal Forest. Their attack was supplemented on the 24th by the First Army, which added five miles northward to the front of the fight. Artillery support was not so strong as usual, for continued rain and mist had prevented the location of German battery positions. In spite of the increased effect of enemy fire and in the face of machine gun concentration, the attack gained about six miles toward the forest.

The development was continued by gradual stages to the 27th of October, when the line had reached the

western outskirts of Valenciennes, the west edge of Le Quesnoy, the west edge of the Mormal Forest, and the bank of the Sambre Canal south to the French line.

These difficult operations had yielded 20,000 prisoners and 475 guns; and had indicated that the enemy's morale was indeed becoming low, since many units had fled or surrendered.

In course of the events described, the left flank of the Allied attack had made notable gains. Ostend had fallen to the Belgians, Lille had been occupied by General Birdwood's Fifth Army, and General Horne's First Army had moved into Douai on the 17th and 18th. By October 20th, King Albert's left flank was resting on the Dutch border.

Furthermore, by the time Haig had closed up on Mormal Forest, Ludendorff had directed the preparations for a move to the Antwerp—Meuse Line, "which existed only on paper, was neither complete nor proof against tanks, and behind which was only the threatened zone of supplies." He had also been allowed to resign, by Imperial request; and General Groener had taken his place as Hindenburg's head and front. In very few more days Germany would have no allies.

BATTLE OF THE SAMBRE

Marshal Haig felt the reduction of Valenciennes to be now practically assured. The line of the Allies was shortening as the enemy everywhere withdrew; and as the French on his right spread northward, it was perfectly feasible for him to shift his main blow farther to the north and include Mons. In spite of the advanced season of the year and the bad condition of the roads he was able to get his artillery up; and his air force continued active in spite of difficult weather. All arms were eager to clinch the victory on the line centering at Maubeuge, which had been the ideal goal for many former drives.

At 5:15 A. M. on November 1st the XVII corps of the Third Army and the XXII and Canadian Corps of the First Army opened the attack on a six mile front south of Valenciennes. In two days of hard fighting they crossed the Rhonelle and established the line well to the east of it, Valenciennes falling to the 4th Canadian Division.

This preliminary attack had caused the armies of Quast, Below, Carlowitz, and Hutier to draw back all along the front between the Lys and the Oise, and their line was re-established from Conde through the fortified town of Le Quesnoy, along the edge of Mormal Forest, and behind the north-and-south segment of the Sambre-et-Oise Canal.

This canal is described as being some seventy feet from bank to bank and thirty-five to forty feet at water level. At the locks it was about seventeen feet wide. It was six to eight feet deep; and the bridges had been destroyed or prepared for destruction.

The British attacked this last position where a deterrmine stand was made, at 5:45 A. M. on November 4th. Seperate zero hours were used by the different Corps up to 6:15 A. M. Twenty-three divisions moved out under a rolling barrage, and at first found strong opposition. On the right of the assault, the 1st Division took Catillon and passed troops across the canal there and at a lock about two miles to the south. In two hours a considerable force had crossed, and by 4:00 P. M. the Division had advanced for about two miles beyond the canal. On their left Landrecies was taken, and the Third Army went far into the forest of Mormal. This had been looked upon as a barrier which would be found bristling with difficulties; but before dawn of November 5th, one division had passed through it to the east, while another had advanced to within a mile of the railway line in the center.

Le Quesnoy was also the front of the Third Army; and it was faced by the New Zealand Division. By 8:00 A. M. the Division had surrounded this fortress; but no attempt to assault it was made at this time. Instead, the troops swung well around it and continued east of it. By 4:00 P. M. they had closed in to a point where the garrison was forced to surrender. 1,000 prisoners were taken at this place.

The First Army had serious resistance only on its right, along side of the Third. It pushed forward through the marshes along the Scheldt Canal, and crossed the Aunelle River.

On November 5th resistance died down everywhere; and the armies advanced to the line of the Honnelle River, close to Bavai, through the whole of Mormal Forest, and to Prisches on the Rivierette. This day aviators bombed and machine-gunned raods in the enemy's back area with great effect, causing the abandonment of valuable material including thirty guns.

The total captures during the battle are reported as 19,000 prisoners and 450 guns.

Infantry and cavalry pressed the retreating Germans in the following days, being hindered far more by rain than by the enemy. On November 10th it was found possible to add cyclists to the force pushed forward to maintain contact. A temporary ckeek developed at the junction of First and Third Armies on the 6th; but it was quickly overcome, and the Honnelle crossed throughout its length. On the 8th, after repeated explosions observed behind the German lines, the First Army occupied Conde, while the Fifth Army came up on the left flank and moved into Tournai.

Resistance had completely fallen away. The Third Canadian Division of the First Army closed up on Mons on November 10th, and stormed it on November 11th, killing or taking prisoner all of its garrison. The British front rested on the line of departure of 1914.

At 11:00 A. M. on November 11th the Armistice went into effect. Germany had ceased to be a military power.

For the completeness of Germany's defeat on all fronts, let the words of a German be considered. When the Armistice had been in effect for some two months, Maximilian Harden expresses himself as follows:

"In August (1918), while the homeland retained its unshakable belief in victory, a military defeat was an unavoidable certainty to Marshal Hindenburg and General Ludendorff. That army is defeated which through three long months is forced hastily to retreat, to withdraw from its strongest positions; which loses half a million men into captivity; whose speedy capitulation its commander-in-chief—the most tenacious in all the history of war,—himself forcefully urges."

DEVELOPMENTS IN GERMANY

The fact that Germany had at last been forced to the point of appealing for an armistice and for peace has been omitted from the foregoing recital. That and the circumstances surrounding it may now be briefly discussed.

It has been said that Ludendorff advised peace before the last offensive of the war was started, that about ten weeks later he ceased to exercise command, and that Germany was the last of the Central Alliance to submit to the yoke. These things are all related.

It had become a common thing by the late summer of 1918 for Crown Councils at which all the heads of the government were present to meet at German G. H. Q. at Spa. Desiring to lead the way out of what now promised to be an unsuccessful war before the associated governments could see the light and quit it, Ludendorff and Hindenburg presented the matter of immediate peace at such a council on August 14th. Nothing was done about it; which Ludendorff could not understand (and by the way, his "Own Story" shows that he had great difficulty in understanding the shamelessness of the nations which made peace before the German plans matured).

By the end of September Bulgaria had been beaten to her knees; and the final attack of the Allies had shown such progress as to convince all concerned that something must be done. At a hastily assembled council on September 29th, the declaration of defeat was taken seriously, the decision was reached to approach President Wilson on the subject, and an apparent change of government calculated to impress him was entered upon.

Von Hertling was succeeded as Imperial Chancellor by Prince Maximilian of Baden, who was comparatively safe from the Imperial standpoint, yet was sufficiently well advertised as a Liberal to look well at a distance. Prince Max was given the privilege of picking a "cabinet", without, however, being expected to go too far in exercising it; and the stage was thought to be set for a suitable peace on the basis of a constitutional government in Germany.

The explanation of these unwanted maneuvers to the people was left to G. H. Q. Major Baron von dem Busche was accordingly sent to address the Reichstag on October 2nd, bearing the message that the war was lost and an armistice must be had; but that defense might be prolonged in case of its refusal, provided "more stringent measurers" were adopted at home.

This was news to the Reichstag and to the rest of Germany. Not a soul had dreamed of defeat. Not a

rumor of defeat had reached the populace until now. Corrections in battle maps showing the German front had not been published since August 14th; and it was more than a shock to find out how the line had been receding.

The new cabinet therefore met and proceeded with its appointed task of securing peace amid the rumblings of disorder in the land. With the last props knocked from under German policy, all were adventuring on a sea of doubt. To quote from the Swiss narrative cited in reference: no one dared look at this peace offer as a weapon in the war, designed to assure a satisfactory outcome. Rather, an unalterable fact was glimpsed in it,—demanding compliance at no matter what terms were named by the enemy”.

The exchange of correspondence between Berlin and Washington failed to work out as planned. President Wilson showed no willingness to be convinced of a change in leadership in Germany, and no desire to rush into an armistice which was not dictated by the Allied Commander-in-chief. This was equivalent to demanding an unconditional surrender.

Hindenburg therefore decided to face about in the tide of events; and in an order telegraphed to the front he announced that the terms offered to “us soldiers” were not acceptable, and that the army would fight on. This telegram got out and was given wide publicity.

Even for the German people, that was too much. Considering that their victory had been dissipated in some unaccountable way by supposedly invincible commanders, they now saw themselves faced with the continuation of what was evidently a profitless war. The Kaiser’s throne shook. The negotiations for peace were continued with all speed and with what offers of compromise the situation seemed to demand, while Ludendorff was chosen as a sop to Cereberus, in the hope that his expulsion might wipe out the effect of the telegram to the army. A decree was published granting popular rights, and describing the Kaiser’s office as “one of service to the people.”

The situation, in spite of every effort, grew worse with all speed. On October 31st Turkey signed an armistice, and on November 3rd Austria did the same. Germany was alone in the field, and German troops were being pushed harder and farther every day.

On November 5th the British broke one main line of communications at Aulnoye; and on November 6th the Americans blocked the other at Sedan.

By November 5th, the revolution was a fact which no one could deny. On November 9th, the Kaiser had sought refuge at German G. H. Q.; and while he was debating the question of abdication, Prince Max in Berlin announced both his abdication and the declination of the Crown Prince to succeed him. They fled.

Prince Maximilian announced himself Regent and Friedrich Ebert, who was a plebeian Socialist, Imperial Chancellor.

After all the shifts and turns, it remained for what was left of the German government to go direct to Marshal Foch for terms of surrender, and to accept them as offered.

ANALYSIS AND CRITICISM

In spite of the magnitude of the operations directed by Field Marshal Haig, and of the important results obtained by them, it is obviously impossible to consider them alone. They were a part of a concerted and tremendous action, the bearing of which on the British offensive has been to some extent indicated.

This greater plan within the British scheme moved will also affect the analysis of the operations; but as far as possible it will be left aside.

There are nine principles of war enunciated by the United States War Department. These are the Principles of:

- | | |
|----------------------|-----------------|
| (a) The Objective | (f) Surprise |
| (b) The Offensive. | (g) Security |
| (c) Mass | (h) Simplicity |
| (d) Economy of Force | (i) Cooperation |
| (e) Movement | |

It may be supposed, under (a) that, objectives having been assigned by Marshal Foch for the operations from September 27th to November 11th, 1918, and the enemy being fixed in a continuous line reaching out of the British area on both sides, there was no choice left to the British commander. This is only partially true. In the Battle of the Hindenburg Line, while it was unlikely that a complete break through the German lines was possible, yet there was the possibility of pushing a rapidly-moving force in to the important secondary objective of the junction at Busigny. This was prepared for. Again, having to reach the line Mons-Maubeuge in the Battle of the Sambre, Marshal Haig visualized a preliminary objective in the German stronghold of Valenciennes, and directed his first efforts to that.

(b) It is clear that, immediately he had gained the offensive, Marshal Haig retained it until the close of the war.

(c) Comparison of the battles of September 27th, and September 29th shows the northern attack on the 27th, where the lesser resistance was expected and the greater advance might be hoped for, to have had twice as many troops in rear of the line there as were so disposed for the southern attack. In this way the greatest exploitation of any gain could be expected. On the other hand, for the southern attack there was a great massing of artillery and prolonged fire against the great artificial obstacle. Since a gain in this sector would open the way to an enemy rail supply line well to the rear, there was also a concentration of cavalry, whippet tanks, and armored cars to make the most of it.

(d) The front of the First, Third, and Fourth Armies was about one-half of that occupied by British troops. Including the Fifth Army in the calculation, and disregarding the Second as part of the command of the King of the Belgians, the other three held only about two-thirds of the front. Before the evidently thin line of the Fifth Army was the city of Lille, very important territory during the war. In the plan of operation Lille played practically no part at all; and no effort was wasted on it. If the main blow on the front of greatest concentration succeeded, Lille must automatically fall, as it did.

(e) It is obvious that artillery fire covered all movement of the assaulting troops in the engagements described with the exception of the attack of one division on September 29th. The contrast afforded by that incident shows the principle very plainly. The use of tanks to assist movement was general. The conversion of maneuver on an open front into "leap-frogging" or passage of lines on a front without flanks is well demonstrated by the attack of September 27th.

(f) Surprise was largely sacrificed to the end of the protective barrage. An attempt to regain it was made both by the passage of lines mentioned under (e) and by the system of successive blows at different zero hours. In the case of the Hindenburg Line attack, which followed the blow on the left after two days, the latter system does not appear to have been effective.

(g) The ready adaptability of cavalry to the purpose of security is exemplified in the battle of Le Cateau. The attack having developed on divergent lines, a cavalry division found the gap and filled it until relieved by infantry. Security on the whole front for the campaign was assured by close cooperation with the French in the south, and by employment of an army as a connecting group in the north.

(h) The whole autumn campaign of the Allies has been described above as the reduction of an immense salient. While pressure was applied right and left at the base to pinch it off, it was also struck at the apex to prevent orderly and unhurried withdrawal. As an integral part of this plan, the British drive straight through and beyond the center of communications (Aulnoye) in their front was equally simple and direct. Nothing in the campaign was allowed to complicate or obscure the issue.

(i) Cooperation among all arms has been rather taken for granted than emphasized in this account; but it was generally self-evident. Some remarks on its presence or absence may be pertinent. The failure of the 27th Division on September 27th might almost have been foreseen. It was a solitary operation on a front where the enemy must have been expecting a general attack. The coincidence of the engagement in front of Cambrai farther north did not operate as a material assistance, because the two were not in contact. An unusual instance of cooperation occurred on September 29th in the same sector when aeroplanes were used to cover the noise of tanks, thus preserving their usefulness against the loss of surprise. Cooperation in maneuver is exemplified, among other cases, in the enveloping of Le Quesnoy in the Battle of the Sambre. The inevitable cost of an assault was thereby saved; and the fortress was just as quickly reduced.

LESSONS.

1. Marshal Haig in his "Final Despatch" describes how his infantry reverted to training in open warfare and practice with the rifle before that training was put to the test in this drive. His summary of the value of infantry follows:

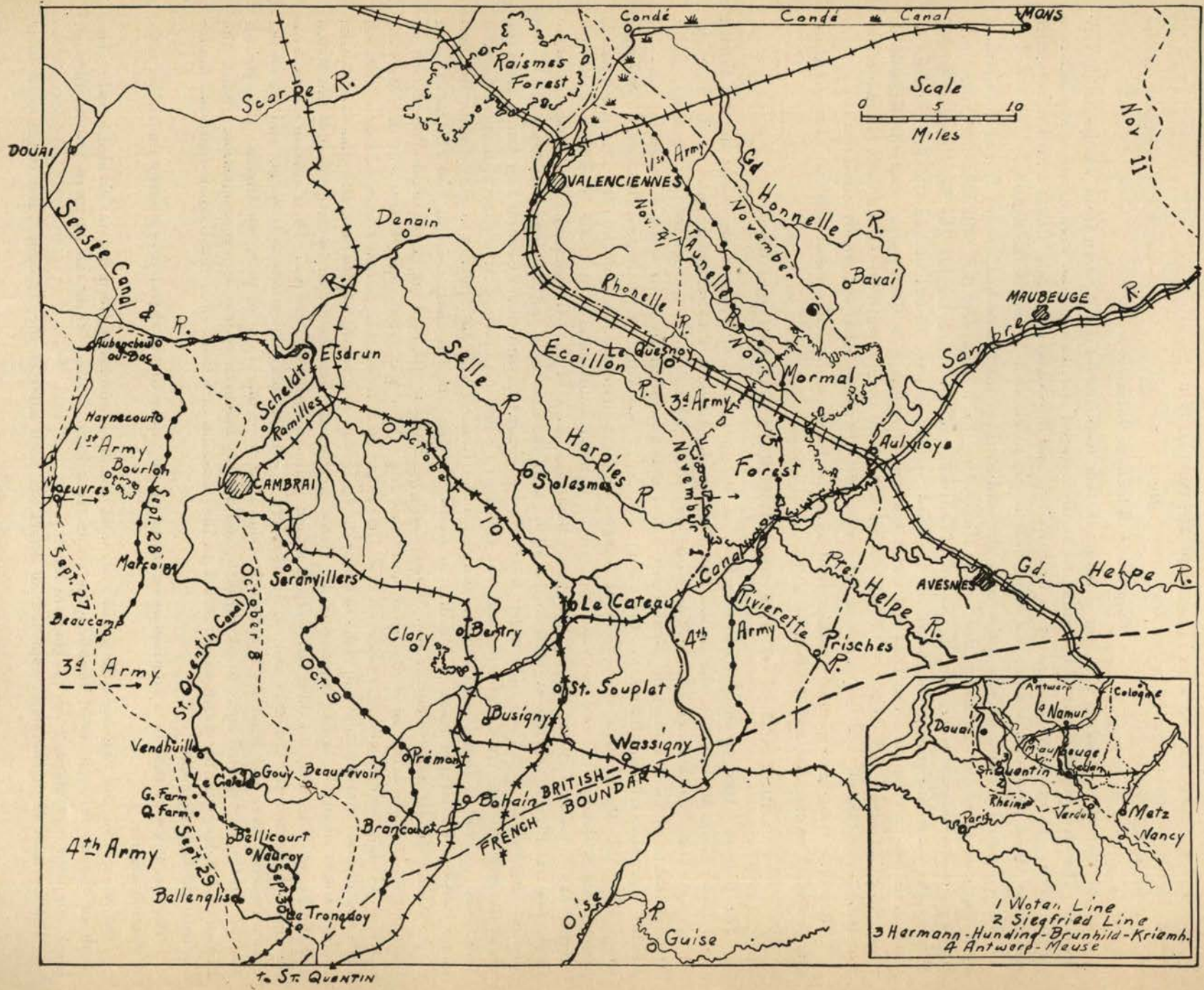
"Mechanical devices aid but cannot replace the infantryman. Only by his rifle and bayonet can decisive victory be won."

2. Adopting another conclusion from the same source, it can be seen that while tanks are a valuable weapon, they require close artillery support to reach their objectives against enemy artillery fire; and they depend on infantry to hold a position when won.

3. The spirit of the offensive must not be allowed to rush an attacking force over an obstacle without pausing to clean it up. Not all fortifications are Bellicourt Tunnels; but the harder the job of "mopping up," the more necessary.

4. Public opinion at home is a mighty force; and confidence in victory is as important there as it is in the armed forces. It is not well, however, to hold bad news for too long, lest it grow worse. It is doubly dangerous to give out false news, for the effect when the truth is learned cannot be foreseen.

References:—Sir Douglas Haig's Despatches; Report of Gen. Pershing; Ludendorff's Own Story; A History of the Great War, by Sir A. Conan Doyle; Hermann Stegemann's Geschichte des Krieges; Story of the 4th Army, by Maj. Gen. Sir Montgomery; Out of My Life, by Von Hindenburg; The First World War, 1914—1918, by Lt. Col. Repington; History of the Great War, by Buchan; The War with Germany, by Col. Ayres;



1 Wotan Line
 2 Siegfried Line
 3 Hermann-Brunhild-Kriemh.
 4 Antwerp-Meuse

THE FRENCH CHAMPAIGN OFFENSIVE

Sept. 26—Nov. 11, 1918

By

Capt. F. O. Wickham, Infantry

By the 25th of September, 1918, the situation of the Germans on the Western front was becoming very serious. The civil population was beginning to be discouraged and their actions were having a bad influence on the Army. Things were going badly in Bulgaria too, and this country had now almost ceased to be a menace to the Allies. Turkey, likewise, was being beaten and would soon be out of the fighting.

The continual pressure of the Allies since the 2nd battle of the Marne had steadily forced the Germans back until now they were, in most places, on the Hindenburg line. However, they still held the Ypres hills, the Wytshaete-Messines ridge, the St. Gobian Massif, most of the Aisne heights, the high ground around Rheims, the water line in front of Douai, the Siegfried System, and the Brunhilde and Hunding Systems defending the country between the Oise and the Aisne and extending into Champagne, with the Kriemhilde zone extending across the Argonne. These positions were all exceptionally strong but now, because of the lowered German morale and the tactics of the tanks, their defensive value was greatly diminished.

The battle front now formed a huge salient with the point on the Laon massif and the sides stretching from there to Switzerland and the Sea.

DISPOSITION OF THE ALLIED FORCES WAS AS FOLLOWS:

The Belgian Army, commanded by the King of Belgium, north of Ypres to the coast; the 3rd French Army under General Humbert; the British 2nd Army under General Plumer, from Ypres to the Lys; the British 5th Army, commanded by Sir Wm. Birdwood, from the Lys to Lens; the British 1st Army, under General Horne, opposite Douai; the British 3rd Army, under General Byng in front of Cambrai; the 4th British Army, General Rawlinson, to St. Quentin; the 1st French Army, under General Debeney, St. Quentin; to the Oise; the 10th French Army, General Mangin, on the Ailette and Aisne heights; the 5th French Army, under General Berthelot, (who was later relieved by General Guillaumat), in front of Rheims; the 4th French Army, under General Gouraud, in the Champagne west of the Argonne; the 1st American Army under General Pershing in the Argonne to the Meuse with the nucleus of the 2nd American Army east of the Meuse. Opposed to them from right to left was: The German 4th Army under General Von Armin, from the sea to the Lys; the 6th Army under General Von Quast to a point just north of Arras; the 17th under General Von Below in front of Douai and Cambrai; the 2nd under General Von der Marwitz to St. Quentin; the 18th under General Von Hutier from St. Quentin to across the Oise; the 7th under General Von Eberhardt north of the Aisne; the 1st under General Von Mudra north of Rheims; the 3rd under General Von Einem in Champagne; the 5th Army, under General Von Carlowitz, (who was later relieved by Von der Marwitz, north of Verdun, while covering Longuyon and Metz was a special detachment under General Fuchs. General Foch now decided that the time had come to strike the final blow that would end the war. His plan was to strike simultaneously along the entire front from the Meuse to the sea. The American 1st Army west of the Meuse and the French 4th Army on their left were to attack in the direction of Mezieres. Their mission was to drive the enemy back into the Ardennes and cut his southern system of communications to Germany and his lateral system between Metz and Hirson. The French Armies in the center were to move on Hirson. The British were to attack the Siegfried zone, break through, and cut his northern system of communication. While the British and Belgians in the north would attack in the direction of Ghent, clear the Belgian coast and hinder a retreat through Belgium.

The strategy was that of a continuous offensive on the entire line to threaten or destroy the enemy lines of communication.

On account of the Ardennes the main system of communication with Germany was divided in two. The southern system, through Metz, supplied the front from Laon south. While the northern system, through Liege, supplied everything from St. Quentin north.

The German High command expected an attack on both sides of the Argonne. But, because of their

diminished strength and the physical exhaustion of their troops, there was little else to do except rely upon their strongly prepared defensive positions, and sue for peace.

The terrain in front of the 5th and 10th Armies was very difficult for direct attack. They had before them the St. Gobian forest, the greatest part of the Chemin des Dames, and part of the Brunhilde and Hund-ing zones of the Hindenburg line. While the 1st Army had before it, St. Quentin and the Oise. On the southern end of the French sector, the 4th Army was facing the low rolling, chalky plain of Champagne. The butte of Brimont, Berru mountain and Moronvilliers massif being the high points on the front. These are very important military features on account of the excellent observation they afford far out over the plain.

The Germans had held most of the positions in this Sector since the Champagne battle of 1915, and had been constantly strengthening them.

In accordance with the plan of General Foch, the 1st attack was launched on the morning of the 26th of September. In conjunction with the 1st American Army, on its left, the 4th French Army attacked on a 20 mile front between Auberive-sur-Suippe and Vienne-le-Chateau.

An intense artillery preparation began at 2:30 A. M. and at 5:30 A. M. the Infantry attacked, The first rush took Navarin Farm, buttes of Tahure, Souain, and Mesnil. While the strong points in the villages of Tahure, Cernay-en-Dormois, Servon, and Ripont were taken only after very severe fighting.

The next day the British attacked toward Cambrai. The French 4th Army continued the attack and took Mont Cuvelet. This position commanded the valley of the Aisne as far as Vouzieres.

On the 28th the 5th and 10th Armies attacked between the Ailette and the Vesle. This attack began slowly and by the next day had gained a depth of about 3 miles. On the 29th Germany lost an ally. Bulgaria signed an armistice.

By the 29th the 4th Army was 2 miles north of Somone-Py. Here they were compelled to pause. The American attack in the Argonne had advanced more slowly, as a result of which, there was a sharp salient in the line where the two armies joined. Their left had also been held up by artillery fire from Moronvilliers heights. The right of the line was straightened by the French attacking east while the Americans attacked west, forcing the Germans to retire from the pocket.

On the 30th the 5th Army, which included some Italian troops, attacked on the north side of the Vesle and after very heavy fighting took the villages of Ravillon, Romain, and Montigny. This advance caused the Germans to withdraw from the plateau between the Aisne and Rheims. On this date Germany lost another ally. Turkey signed an armistice.

On the 1st of October, the left wing of the 1st Army was again pushed forward and took Gauchy while the advance guard entered St. Quentin.

On October 2nd the 2nd U. S. Division was sent to reenforce the left of the 4th Army, where after two desperate attempts they captured Mont Blanc and later captured St. Etienne. They were relieved by the 36th U. S. Division on the 9th. This was the first experience of the 36th Division under fire, however, they fought well.

The capture of Mont Blanc caused a general retirement between Rheims and the Argonne and by the 6th the Germans were in position north of the Suippe and the Aisne. On this date the right of the 4th Army crossed the Aisne at several points while the 5th Army crossed the Aisne Canal north of Brimout. This made a salient in the German line in front of Rheims which was in danger of pinched off causing the Germans to fall back on a crescent shaped line, Berry—au—Bac—St. Etienne. The next day these two armies straightened out this line the 5th Army taking Berry—au—Bac.

The 1st Army was now 4 miles east of the canal at St. Quentin and by the evening of the eighth had made another advance of 3 or 4 miles and the Siegfried zone was gone. By this time the right of the 4th Army had advanced 2 miles north of the Aisne, and by the 11th had taken Challerange. On the 12th they captured Vouzieres.

On the 15th and 12th the 4th and 5th Armies again attacked and carried their line to the Aisne. The advance of the 5th Army on Berry-au-Bac had created another salient with its angle on the front of the 10th Army between Laon and Soissons. On the 12th this army straightened out that salient. The line now ran

Vouzieres—5 miles north of Berry—au—Bac—past Craonne to Chivy—three miles from Laon, within a mile or two of La Fere—up to the Oise where it connected with the 1st Army.

Another big advance was started on the 13th between La Fere and Rethel. The Germans were now showing signs of withdrawing from Laon. The St. Gobian massif had been evacuated, and on the morning of the 13th the 10th Army entered Laon. The 1st and 7th German armies were now falling back on the Hunding line between the Serre and the Aisne. By the 15th the 5th and 10th armies were in touch with that position. On the left the line of the 1st Army now ran from the junction of the Serre and Oise along the west bank of the Oise to Hauteville, thence northwest to Menneveret linking up with the British 4th Army at Vaux Andigny. By the 19th the left flank of this Army had crossed the Canal De Oise while the center and right were across the river between Ribemont and Mont d'Origny the line extending southeast to Pouilly.

From October 19th to November 1st the front was changed very little. Very heavy fighting was going on between Guise and Sissonne where the three French armies on the left were endeavoring to straighten the line. This was not accomplished until the 30th. During this same period the French right was meeting with very heavy resistance between Sissonne and Rethel and east of Attigny.

On the 26th Ludendorff resigned. November 1st saw the beginning of the last phase of the campaign. The 4th Army attacked northeast of Vouziere. This attack was made against the flank of the Germans opposed to the American army in the upper extension of the Argonne. The next day they reached the south bank of the the Ardennes Canal.

On the 4th 1st Army advanced along the upper Oise into the forest of Nouvion, capturing Guise and compelling the Germans to evacuate the Hunding line. While the 5th Army broke the Hunding line between Sissonne and Condelez—Herpy. The 4th Army crossed the Ardennes Canal, broke through, and turned the German flank between Attigny and Rethel.

On this date mutiny broke out in the German Navy. By November 5th the two wings of the German army were entirely separated. The Hunding and Brunnehilde zones were gone and the army was in full retreat everywhere. The French armies were approaching Mezieres and Hirson with but little before them. In Germany the storm of revolution was coming to a head and on the 6th the Armistice delegation left Berlin for the front. On this day too, the 1st Army passed through the Nowvoin forest and capture Vervins, while the 4th Army took Rethel. The enemy's resistance was now practically broken and the French advance became more rapid.

On the 9th the 1st Army entered Hirson and on the 10th reached the Belgian frontier at Stenay while the 4th Army took Mezieres. On this day the Kaiser crossed the Dutch frontier. The armies were all in position to continue the advance into Germany when at 11:00 A. M. November 11, fighting ceased on the following telegraphic order from General Foch.

"Hostilities will cease on the whole front as from 11th November, at 11:00 o'clock. The allied troops will not, until a further order, go beyond the line reached on that date and at that hour."

ANALYSIS AND CRITICISM.

I have no adverse criticism to make of either side. The plan of General Foch was excellent and was well executed. With the exception, perhaps, of the action on the right. Where he had given the French 4th and the American 1st Armies too hard a task. Had their advance been rapid enough to reach Mezieres or Metz before the German center and right had been pushed back, disaster, for the Germans would have been the result. They would have been hemmed in on three sides. By the Allies north and south and the Ardennes on the east, and would have been compelled to evacuate their northern armies as well as their enormous stores of supplies through a narrow strip of Belgium; a task which was practically impossible.

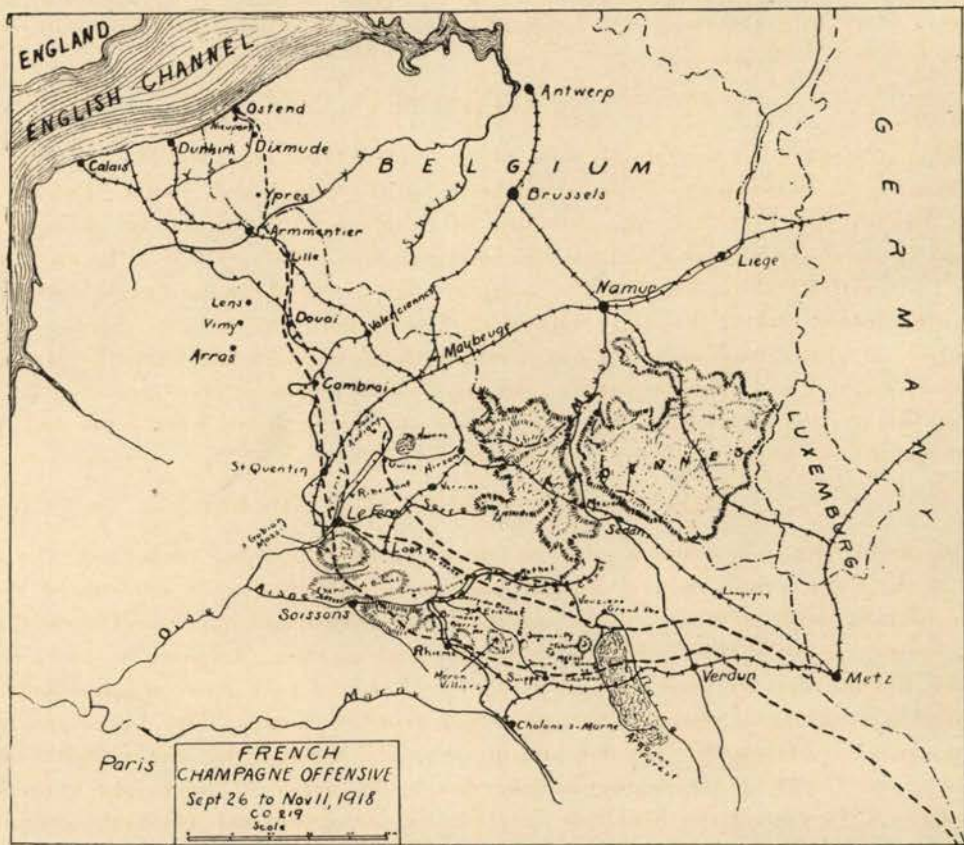
The Germans placed a great deal of faith in the Hindenburg line. They should have done so. They had been fighting for over 4 years. Their forces were being depleted in great numbers, daily, and they had no reserve to call on. Germany's allies were dropping out one by one, whereas the United States had just got going. Internal troubles in Germany was seriously effecting the morale of the army. However they put up a very stubborn resistance as long as they were in their specially prepared defensive positions.

LESSONS LEARNED.

In this campaign the tactics of out flanking strong points is very clearly emphasized. The French driving forward on the flanks of strongly fortified positions, thus creating sharp narrow salients which could then be taken on the flanks and pinched off. As in the case of the heights around Rheims and Laon.

The value of morale is also very clearly shown. The French and British had been fighting equally as long and as hard as the Germans. However the coming of the American army in large numbers put new life in them, and their continued success since the battle of the Marne had raised the morale to the highest degree. Nothing could stop them. On the other hand every thing tended to lower the German morale and when it finally did crack they were through.

References:—The Great Events of the Great War, Vol. 6, by Horne and Austin; Topography and Strategy in the Great War, by Johnson; The Great War, by Allen; A History of the Great War, Vol. 4, by, Buchan; Literary Digest History of the World War, Vol. 8; Nelson's History of the War, Vols. 23—24; The Story of the Great War, Vol. 8, by Collier; History of the World War, by Simonds; Out of My Life, Vol. 2, by Von Hindenburg; A Guide to the Military History of the World War, by Frothingham; Battlefields of the World War, by Johnson.



THE OPERATIONS OF THE 1ST CORPS (U. S.) IN THE 1ST PHASE OF THE MEUSE-ARGONNE

By

Capt. Lawrence B. Keiser, Infantry

HISTORICAL NARRATIVE

DEVELOPMENT IN THE GENERAL SITUATION DURING AUGUST AND EARLY SEPTEMBER, 1918.

The powerful German offensive of early 1918 had penetrated the Allied western front for great gains, necessitating a conference of the Allied Commanders-in-Chief on July 24th during which plans were entered into for the reduction of all embarrassing salients and the freeing of certain regions in the north. On August 6th the reduction of the Marne salient had been completed. On August 8th the French and British attacked the Amiens salient. This attack was a success from the beginning and, in the following days, the enemy showed signs which led to the logical belief that great results could be gathered if the Allies could continue their assault. By August 30th this early belief of Germany's weakening was made secure in the Allied commander's minds and all were of the opinion of pushing on with all strength. The only difference in opinion seemed to be in what manner the ever increasing American Army should be employed, but this difference was finally settled by Marshal Foch and General Pershing.

ALLIED PLAN.

The general strategic plan was an offensive on the entire front from the Meuse to the sea with one spearhead thrust being made between the Meuse and Rheims in the direction of Sedan-Mezieres and another in the north by the British and French in the direction of Cambrai-St. Quentin. In a conference of September 2nd, the Meuse-Argonne front was assigned the American forces, our attack to be supported by the French IV Army on the west, attacking between the western edge of the Argonne Forest and Rheims. The assignment of this stupendous task at this time naturally affected and limited our objectives in the pending St. Mihiel offensive. It also caused us to ask for delay in the date set for the attack by Marshal Foch on account of the great preparations and concentration of our troops that would be necessary in order to launch a successful attack on this front. In remarkably quick time our preparations were made and it was finally agreed upon to start the attack on the morning of September 26th.

THE TERRAIN ON THE 1ST CORPS FRONT.

That part of the Meuse-Argonne battlefield, entrusted on September 26th to the 1st Corps (U. S.), contained some of the most serious natural defensive obstacles that had ever confronted troops in an attack. The Argonne plateau, with its heavy, dense forest of underbrush and trees, was traversed practically throughout its entire boundaries by a labyrinth of deep ravines and chasms. Its eastern face, consisting mostly of rugged, broken heights that towered some three to five hundred feet above the lowlands of the Aire valley, made it indeed a formidable obstacle to any attack from the east. The open and exposed Aire river lowlands to the east were frequently flooded and marshy; and through this valley traversed the one main road that was open to our Corps for its communications during the attack. Towns, like Varennes, situated on commanding ground on the east of the lowlands were located at strategical positions covering the termini of roads leading from the valley into the Argonne plateau. These transverse ridges of the Argonne on the left and these on the right of the Aire lowlands made, without doubt, a most excellent natural defensive position and forbade any rapid advance down the Aire valley.

PRIOR HISTORY OF THE SECTOR AND ITS ARTIFICIAL DEFENSES

Since September 12, 1914, after the first battle of the Marne, the German lines in this region had remained almost as we now find them on September 26th, 1918. As a natural result of this the German positions in the Argonne were unusually deep, strongly defended with elaborate systems of trench lines, and covered by wire running almost continuously throughout its entire length. Confronting the Allied lines was a No-Mans-Land as desolate as any other similar stretch on the entire front.

The Germans had constructed in this region several well defined defensive systems or lines, the Hindenburg line (Volker Stellung and Hagan Stellung), then the strong Kriemhilde Stellung that was the backbone

of the defense, and lastly the more or less unfinished Freya Stellung. In the Argonne region these defensive lines were closer together than on the remainder of the western front, due to the close proximity of the important line of supply and communications of the German armies which was about 50 kilometers in rear of and ran about parallel to the front at this point.

THE HOSTILE SITUATION

On the night of September 25th-26th the Germans had five divisions in line from the Meuse to the Aisne on the west edge of the Argonne. In reserve they had fifteen divisions that would be able to be thrown into the line at varying intervals of from one to four days. On the front of the 1st Corps were, from left to right the 9th Landwehr Division (partially in French sector to our left), the 2nd Landwehr Division and the 1st Guard Division, only one of these, the 1st Guard Division, being first class. This division was commanded by Prince Eitel Fredrick, the Kaiser's second son who was now holding the rank of Major General. The 1st Guards had arrived from the Russian front in late 1917, had participated in the attack of the Chemin des Dames, the advance to the Marne and had crossed the Marne on July 15th, 1918, in the attack on Epernay. They had been brought to the Argonne sector for rest. The 2nd Landwehr was composed of men over 35 years of age and had been stationed in the Argonne region for over a year. The 2nd and 9th Landwehr Divisions were rated only as fourth class divisions. The morale of all was considered below normal.

The German plans in this sector were entirely of a defensive nature. The construction of their defenses indicating that they meant to make this part of the front one of the most impregnable positions on the line.

1ST CORPS (U. S.) BATTLE ORDER

With great secrecy and by use of French units in the outpost line as a screen until dark of September 25th, the 1st Corps (U. S.) took its place on the left of the 1st American Army. In order from right to left were the 35th, 28th and 77th Divisions with the 92nd Division (colored) in Corps reserve, one regiment of this division, the 368th Infantry, being brigaded on our left flank with the 11th Cuirassiers of the 38th French Army Corps and acted as a combat liaison detachment between the French and American Armies. The 82nd Division in Army Reserve, the 5th French Cavalry Division, Army Reserve (later under orders of the 1st Corps) and a provisional squadron of the 2nd U. S. Cavalry (assigned to the 35th Division) were all so in rear of the advance lines of the Corps. In addition to the regular divisional troops, three French artillery units, a light tank battalion (manned by Americans), three aero squadrons, a balloon company and a regiment of Pioneer Infantry were attached to, or supported, the front line divisions of the Corps.

PRIOR EXPERIENCES OF DIVISIONS COMPRISING THE 1ST CORPS

The 77th Division (National Army) was composed mostly of men from New York City. It had left the States in March, 1918, had trained at the British front, occupied a quiet sector on the Lorraine front and, on going into the lines on the Vesle in August, it had made an excellent record in fighting its way to the Aisne.

The 28th Division consisted of Pennsylvania National Guard units. Arriving in France in May, 1918, it had received short periods of training with the French and the British. It had fought valiantly on the Marne and later had been placed on the left of the 77th Division in the advance to the Aisne. Like the 77th it might be said to be a battle tried division that had shown its merit.

The 35th Division was composed of National Guard units from Kansas and Missouri. It had served in several quiet sectors and in Army Reserve during the St. Mihiel offensive, so its capabilities were as yet unknown.

The 92nd Division (colored) had served a short period during the latter part of August, 1918, in the quiet St. Die sector.

THE DETAILED ALLIED PLANS AND THE PART PLAYED BY THE 1st CORPS (U. S.)

By a study of the battle front at this time we see that the German Army in northern France were dependent upon two great railway systems, one in the north through Cambrai-Valenciennes and Liege, and the other a great, important line in the south through Metz-Sedan and Mezieres. Between these two systems intervened the dense mountainous region of the Ardennes. The Allied plan contemplated a drive from the flanks toward both these lines of communications, cutting off the German center and driving them back into the impassable Ardennes.

In furtherance of this plan on the Argonne front the American 5th Corps was to be the head of the surprise thrust, with 1st Corps and the 3rd Corps on its left and right respectively, to aid its advance by capturing and out flanking the strong resistance expected from the heights contained in their sectors.

We have seen by a study of the terrain in the 1st Corps sector how the Argonne plateau with the commanding heights of its eastern face overlooks the rolling country east of the Aire and beyond. To prevent this observation and flanking fire from being brought upon the flank of the 5th Corps from these points, the 1st Corps was to proceed as follows:—

On the left of the sector the 77th Division was to attack throughout the width of the Argonne forest and force its way through this difficult terrain, exerting a strong pressure against the enemy in its front.

On the right of the 77th Division was the 28th Division with its left on the east edge of the forest at La Pierce Croisee and its right at Boureuilles astride the Aire. This division had the difficult task of keeping contact in the forest with the 77th, advancing up the valley in contact with the 35th and, at the same time, delivering flanking attacks against the eastern ridges of the Argonne Forest.

To the 35th Division, in the right of the 28th, was given the task of crushing the ridges on the right bank of the Aire, thus preventing flank fire from these positions being directed against the left flank of the 5th Corps. It was also to keep up with the advance of the 28th Division down the Aire valley.

ATTACK ORDER OF THE 1ST CORPS FOR THE INITIAL ATTACK

On September 22nd at 4:00 P. M., Headquarters 1st Army Corps issued Field Order No. 57 in which the attacking front of the Corps was designated from Vauquois (inclusive) to La Harazee (inclusive).

Direction of attack: Champigneulle-Verrieres.

Corps limit: Right (east) :- Vauquois (incl) — Very (incl) — Eclisfontaine (incl) — Sommerance (incl) — Saint Georges (incl) — Imecourt (incl).

Left (west) :- La Harazee (incl) — Binarville (excl) — Lancon (excl) — Grand Ham (excl) — Grand Pre (incl).

The objectives assigned to the Corps, extended as follows: Corps objectives—The heights southeast of Charpentry, thence along a line running south of Montblainville, southwest into the Argonne forest. American Army Objectives:—A line through Hill Montrebeau—Exermont—L'Esperance, then southwest to the forest.

The Combined Army 1st Phase Line:—Running from east of Fleville then slightly south of Chatel Chery, thence southwest to the forest.

Combined Army 1st Objective:—A line one kilometer south of the line connecting Champigneulle—Imecourt to junction of the Aire and Aisne rivers.

All divisions to be prepared to advance from the Corps objective at H plus four and one half hours; the advance beyond the Corps objective to be covered by later orders.

Upon reaching the combined Army 1st objective the line will be organized in depth for defense.

Boundaries of divisions as follows:—

Right (east) boundary of 35th Division:—Same as right boundary of Corps.

Left (west) of 35th Division:—Boureuilles (excl) — Varennes (excl) — Montblainville (excl) — Apremont (excl) — Fleville (incl) — St. Juvin (excl).

Right boundary of 29th Division:—Coincident with left boundary of 35th Division.

Left boundary of 28th Division:—A line parallel to left boundary of 35th Division and about three and one half kilometers to the west of it.

Right boundary of 77th Division:—Coincident with the left boundary of the 28th Division.

Left boundary of 77th Division:—Same as left boundary of the Corps.

The 35th Division will assist the 91st Division, 5th Corps in the reduction of Bois de Money and Le Petit Bois.

The parallel of departure:—500 meters from the enemy front line trenches. A rolling barrage, progressing at the rate of 100 meters in four minutes will be delivered at H hour and will continue to the hostile intermediate position.

The 92nd Division will be assembled in the woods northwest of Clermont ready to move forward on one hour's notice. Three battalions will be used to construct passages across No-Mans-Land.

The Chief-of-Corps Artillery will coordinate the action of Corps and Divisional Artillery in neutralizing hostile artillery fire and observation along the eastern edge of the Foret D'Argonne.

Division commanders will move the artillery forward by echelon as the attack progresses.

Two 75's will be placed under the command of each leading infantry battalion commander for use as forward guns.

Division commanders will deploy their troops in sufficient depth so as to give fresh impulse to the attack when necessary.

Penetration will be effected by utilizing lanes of least resistance to cause the fall of strong points by outflanking.

Division commanders will at all times maintain strong combat liaison with the divisions on either flank.

Plan of Artillery:—On the 1st, 3rd and 5th Corps' fronts twenty-five percent of the Army artillery was to commence harrassing and prohibitive fire at 11:30 P. M., September 25th. At this same time the 2nd C. A. C. was also to begin its bombardment of important points in the enemy's rear area. At 2:30 A. M., the 26th, the artillery of each Corps was to begin its bombardment consisting of a gas neutralization fire for fifteen minutes, this fire of the 1st Corps artillery being directed upon the Foret D'Argonne. Following this neutralization fire a destructive fire against groups of hostile batteries and important points was to continue until 5:30 A. M., at which time certain guns commenced the rolling barrage while the remainder were to maintain harrassing and prohibitive fire on enemy positions until our infantry advanced close to these points. In addition to this this fire distributed throughout the Corps sector the 1st Gas Regiment installed on the Corps front 21 8 inch Stokes mortars and, at zero hour, commenced the firing of thermits, smoke and deceptive gas bombs upon the strong points near the enemy first lines.

The plans for the Air Service and Tanks were mostly general instructions referring chiefly to the units to which they were to be attached, and the more or less general duties and instructions that they were to follow during the process of the advance.

THE 1ST DAY'S ATTACK, SEPTEMBER 26TH.

The artillery preparation as ordered commenced at 11:30 P. M., September 25th, the larger caliber guns firing on the German lines of communication in the distant rear. At 2:30 A. M., the 26th, the smaller guns, without prior registration, entered on their missions, and, at zero hour, various three-minute machine gun barrages, by Divisional machine gun battalions, were put down in front of the advancing infantry. On the right of the Corps the 35th Division attacked in column of brigades, regiments of attacking brigade (69th) abreast, with one battalion of the 70th brigade attached to mop up Vanquois Hill. All regiments of the division advanced in columns of battalions with one company of machine guns attached to each battalion. The attack, to include the Corps objective, was to be made by the leading battalions. One rifle company, with one machine gun platoon attached, was to advance on each flank of the division and was to function as a combat liaison group.

On the left of the 35th, the 28th Division attacked with brigades abreast. The 56th Brigade on the left had two battalions of the 112th Infantry in the assault with one battalion in support, a machine gun company on the left flank, and one battalion of the 111th Infantry in brigade reserve. The remainder of the 111th was in division reserve. The 55th Brigade attacked with its left regiment, the 109th Infantry, in column of bat-

talions. The 110th Infantry, on the 109th's right, had two battalions in the assault line with one of its battalions in support. Machine gun battalions were apparently kept intact during the initial assault and companies were not assigned to infantry battalions as was the practice in the other divisions. These battalions were in position at the initial attack and supported the advance by barrage fire.

On the left, the 77th Division covering a very wide front, attacked with all infantry regiments in line, each regiment in column of battalions, the reserve battalions of each regiment being assigned to either brigade or divisional reserve.

The initial assault was in general immediately successful throughout the entire corps front. The 35th Division, had, however early in its attack ran into difficulties after it had passed around Vanquois Hill. They had assisted the 29th at Varennes and had by the aid of the tanks, taken Cheppy; but there seemed to be a great amount of confusion and lack of control that caused gaps between the divisions on their flanks. By night the Division had advanced and established the right of their line north of Very, the left wing pressing forward to a line southwest of Charpentry. Both flanks were out of contact with adjoining divisions and the units of the division itself were apparently intermingled and out of contact with each other.

The 28th Division, the center of the Corps front, was finding its task difficult in attacking the eastern ridges of the forest and at the same time advancing up the Aire valley under flank fire from the forest and the heights east of the Aire. Varennes was captured, the tanks aiding materially in its fall, but the left flank was still held up by Perrieres Hill when night came.

On the left the 77th encountered little enemy resistance but were initiated very soon into the problem of advancing over the difficult terrain. The dense wire entanglements and heavy underbrush caused the advancing companies to move forward by small columns, these columns being frequently out of sight and communication with each other. The officer strength of these companies of this division was considerably below normal, the division having received no officer replacements since its action on the Vesle. In some companies there were only two officers to organizations having an enlisted strength of over 225 men. This shortage of officers naturally thrust a greater amount of responsibility upon those few who were with the companies and the necessity of advancing by means of columns through the woods made their task extremely difficult in keeping contact and control of the various groups made from their units. Their advance on this day netted them a little over two kilometers, the line for that night being established on the ridge north of Four de Paris, the Barricade Pavillion—Cardes Meurissons Road; running thence from a point slightly south of St. Hubert's Pavillion westward and parallel to the Biesme river. The left flank of the 77th remained exposed, the combat liaison group of the 368th Infantry, 92nd Division, having failed to move forward. It was soon withdrawn leaving this important duty to the 77th. Courts martial of 34 officers were held as a result of this action. All were acquitted.

On the right flank of the Corps, the 91st Division on the right had, on several instances, manoeuvred in the 35th Division sector and were in advance of the latter division when the day's advance stopped. On the left of the Corps the 1st French Division had kept pace with our troops advancing on the right of the forest.

The advance of the first day had brought forth numerous difficulties throughout the ranks of the Corps. The most serious of all was the congested condition of the axial road leading through Varennes. Traffic here was regulated with difficulty and it was impossible for many artillery units to get through in time to support their infantry regiments at the times requested. Communication and contact between units were broken and not regained.

THE 2ND DAY, SEPTEMBER 27TH.

At 1:00 A. M., September 27th, 1st Corps Headquarters issued orders for a continuance of the attack at 5:30 A. M., designating the objective as the Combined Army 1st Objective, WHICH MUST BE REACHED. All divisions were to advance to the Combined Army 1st Phase Line without reference to troops on right or left. In the order reference was particularly made in regard to a bold advance of the leading battalions, a better organized method of conducting mopping up groups and the necessity for maintaining efficient combat liaison. The 5th French Cavalry division was ordered to Varennes and to await further orders there.

For the attack of September 27th the 35th Division formed with the 70th Brigade in the lead, due to units of this brigade having passed ahead of the 69th the first day. Two battalions of each regiment were in the assault with one battalion in support. The artillery support at 5:30 A. M. failed to materialize and, after a short wait past the zero hour, the advance started but stopped right away on account of severe fire from direction of Charpentry and Baulny. Late in the afternoon, aided by tanks, the attack was resumed and finally reached a position close to Baulny where the advance elements dug in.

In the center the right flank of the 28th Division advanced scarcely 500 meters beyond Montblainville, the left flank (111th Infantry in the forest) advanced slowly in conjunction with the 77th Division.

The 77th Division in the Argonne was now meeting resistance and, although it advanced after a half hour's artillery bombardment, the advance was scarcely more than a kilometer. Machine gun fire on the right flank, together with machine gun and artillery fire on the left flank, made the advance slow against these echeloned machine gun positions.

On the left of the Corps the French were going ahead although no contact had been made nor were they able to be seen by the leading elements on the left flank of the 77th. On the Corps right flank the 91st Division was still ahead and out of contact with the 35th.

The results of the second day had indicated that the enemy had stiffened his resistance and from prisoners taken it was learned that some of his support divisions were now in close support of the lines.

THE 3RD DAY, SEPTEMBER 28TH.

Orders from the Corps, issued the night of the 27th-28th of September directed a continuance of the attack at 5:30 A. M., along the entire Corps front, objectives and instructions as in previous day's order.

Before the 35th Division's attack started, a counter-attack on the left flank was repulsed. The 35th then advanced through Chaudron Farm and the Bois de Montrebeau, the advance elements reaching a line confronting Gesnes Creek and Exermont where the 35th encountered a line of the 91st Division that had swerved into the 35th sector the day before. At this place two provisional brigades were formed of the intermingled units of the 35th Division.

The 28th Division during the night moved the 56th Brigade (less two battalions of the 111th Infantry still holding the left of the line) to the right rear near the Aire, then faced them to the west on the left of the 55th Brigade, thus placing the 56th Brigade confronting the promontory Le Chene Tondu. In the morning's attack the 55th Brigade took Apremont and by night were in rear of Chatel-Chehery but the 56th Brigade was stopped at Le Chene Tondu. The two battalions of the 111th Infantry were still advancing through the Argonne forest.

On the 77th's front little resistance was encountered at the start, but in the middle of the afternoon a strong enemy line was met near the Depot de Machines. The line was stopped here and dug in on a line about 300 yards south of this point.

The end of the third day showed conclusively that the various divisions had struck the line where the Germans were going to put up a stiff resistance to any further advance. His machine gun, artillery and mortar fire had increased in severity and his delivery of counter attacks had proven that, although the reported morale was weak, his brave stand and influx of reserves were certain to cause a great delay in our plans.

On the right flank the Corps had gained contact with the 91st Division but the French on the left, although reported as far advanced as our flank in the forest, were not yet in contact with the 77th.

THE 4TH DAY, SEPTEMBER 29TH.

At 11:00 P. M., on the 28th of September, Corps Headquarters again announced a resumption of the attack at the usual hour, 5:30 A. M. In this order the divisional artillery was ordered to support the advance and special instructions were given ordering two forward guns (75's) to accompany each leading battalion.

The 35th renewed the attack on the morning of the 29th of September. After delayed starts by several

of the units or mixed groups, a thin line of men pushed into Exermont but sweeping fire from the front and flanks caused these elements to believe they were about to be cut off. They withdrew, gathering with them others who had apparently received word of the instructions to retire. They halted and formed a line along the heights of Baulny ridge, between Serieux and Chaudron farms about three kilometers to the rear.

The 28th meanwhile had advanced its right and had firmly secured Apremont but its left was still contesting bitterly for possession of Le Chene Tondu. Leaving this latter point only partially conquered a flank movement toward Taille L'Abée was made but without any appreciable result.

The 77th on its right flank gained ground on heights near Abri de Crochet but the center and left made scarcely any progress, the center being strongly opposed throughout the day.

Conditions on the Corps front during the day of September 29th were far from satisfying. The confusion, intermingling of units and lack of control had increased with the excessive strain of battle. On the right of the sector we had been forced to relinquish ground recently gained and it was becoming evident that replacements for the exhausted troops should be sent as soon as practicable.

1st Army Headquarters during the day had effected several changes in the composition of the 1st Corps. The 92nd Division (less one regiment with the 1st Corps) was placed under the Commanding General 38th French Army Corps. The 1st Division was relieved from the 3rd Corps and assigned to the 1st Corps.

THE 5TH DAY, SEPTEMBER 30TH.

1st Corps, during the night September 29—30th, announced the Capture of Bouconville and Binarville on the left of our sector by the French troops and Eclisfontaine by the 91st Division. It also ordered that the corps would organize for defense the general line Cote 231-Serieux farm-Chaudron farm-L'Esperance-Apremont-Pont a l'Aune-Lew Cuatre Chenes-Moulin l'homme Mort as a line of resistance, with instructions for the establishment of an outpost zone two kilometers in advance of this line. Especial attention was to be given to echelonment in depth.

In the 35th Division on September 30th the 139th Infantry was in the front line on the right, the 140th Infantry in reserve (in liaison with the 91st Division), the 110th Engineers in the centre in the front line with the 137th Infantry on the left and the 138th in reserve. No movement was made during the day, the time being utilized for reorganization of units and organizing the position for defense.

On the 30th in the 28th Division sector no advance was ordered or made but in the 77th Division sector on the left of the line a slight gain was the only advance recorded in this day's Corps operation. On this date 1st Corps Headquarters designated the 327th Infantry, 82nd Division (that had been ordered to report to the Commanding General, 28th Division on September 29th), as Corps Reserve, the 2nd battalion of this regiment occupying the front line of a regiment of the 35th Division on the ridge north of Baulny and the 1st battalion a similar mission south of Charpentry, the 3rd battalion remaining near Varennes.

THE 6TH DAY, OCTOBER 1ST

Corps orders issued the afternoon of September 30th ordered the 1st Division, then in Corps Reserve, to relieve the 35th Division by 3:00 A. M. of the night of September 30th-October 1st. On account of lack of information regarding the location of any 35th Division units the 1st Division formed four columns, with the head of these columns resting on the Eclisfontaine road. Placing security groups in front of each column, this Division was ordered into the gap and directed to gain contact with the enemy. These columns, in order from right to left, were the 28th, 26th, 18th and 16th Infantry regiments. Passing through what few remaining units of the 35th Division were in the sector, the 1st Division soon gained contact and finally dug in under fire on the line Serieux-Chaudron farms, pushing strong contact patrols forward of this line toward Montrebeau woods.

October 1st was in general a day of immobility throughout the 1st Corps. No advance was made. The 35th Division had withdrawn to Cheppy and the 1st and 2nd battalions of the 327th Infantry, 82nd Division, were now withdrawn to Varennes. The enemy artillery and machine gun fire, however, continued with remarkable severity, our casualties being quite high.

THE 7TH DAY, OCTOBER 2ND, 1918.

The morning of October 2nd witnessed an advance of the 77th Division against the strongly fortified position that connected Binarville and Bois de Naza. It met with little success except in one point where a composite unit of six companies made a break through but, unfortunately, were cut off and surrounded by a superior force thus being unable to communicate with the rest of our troops in the forest. It was through no blunder of leadership that these companies had fallen into this predicament nor was it due to any lack of courage or valor that they were unable to return or be rescued.

THE FINAL DAY OF THE 1ST PHASE

The remaining period of the 1st Phase of the Meuse Argonne battle found little changes in the 1st Corps lines. Two units were, however, assigned the Corps as reserve by 1st Army orders. The first of these was the return of units of the 92nd Division that had been attached to the 38th French Army Corps and the other was the assignment of the 82nd Division. The enemy order of battle had also changed the most recent information disclosing that the enemy line along the Corps front was now held by units of the 76th Reserve, 2nd Landwehr, 5th Guard and 52nd Divisions. The end of this phase of the attack showed our lines on an average of almost seven miles from the original jump off position, the line running through Serieux-Chaudron farms northern limits of Apremont, thence southwest and west through the Argonne forest. The enemy line, although not broken, had been thoroughly shaken and his haphazard method of throwing in fragments of reserve units indicated an approaching state of demoralization and apparent lack of reserves.

ANALYSIS AND CRITICISMS OF THE STRATEGY AND TACTIC EMPLOYED

A brief analysis of the plan of operations given to the 1st Corps shows the strategical plan was to reduce the Argonne forest stronghold by a flanking operation on its eastern side in conjunction with a similar movement by the French Army on the west. Strong pressure was to be exerted on the front of the forest itself, thus holding strong bodies of the enemy troops there until the flanking bodies could gain contact north of the woods.

This entire operation was based upon surprise and the expectation that enemy reserves could not be thrown in, in sufficient numbers to halt the attack before the forest had to be abandoned. The plan of strategy seems to be about the most logical and sound one that was available at this time. A review of the operation, however, gives rise to the supposition that perhaps a stronger or even the most important thrust could have been delivered frontally against the forest, the minor attacks or pressure being directed against the enemy lines on the rest of the front. This plan, though, would have caused an enormous artillery preparation being directed against the defenses of the Argonne in order that the advance would progress satisfactorily, and by this long preparation the effects of surprise would have been lost. The recent successes of the Allies and the gains of the Germans in the spring of 1918 were due entirely to only a short artillery bombardment followed by a vigorous and strong infantry attack. The results of these operations had conclusively proved the value of surprise attacks and, as surprise was evidently essential for our assault, the plan of attack was accordingly based on well established tactical principles.

Up to the end of the 1st Phase of the Meuse Argonne battle the desired results mentioned above had not been accomplished. The forest was yet unconquered and the designated objectives still remained some distances within the enemy lines. The underlying reason that the plans had not succeeded as well as hoped for seems to fall upon three main features:—

- (a). Underestimation of the enemy's morale.
- (b). The enemy's perfect echeloned machine gun defense, supported by light artillery fire.
- (c). Our employment of inexperienced troops in the initial assault.

The first two miscalculations need no further comment as our troops were soon acquainted with a resistance which, in the main, they had not expected. The third reason, however, needs some explanation. It is seen that in reserve of the 1st Army were three experienced divisions (the 1st, 3rd and 32nd) that had seen

considerable hard fighting. In the attack of the 1st Corps were two divisions of experience, the 28th and 77th, whereas the 35th Division had little experience, of any nature except in a quiet sector. The fighting to be expected in this Corps sector was acknowledged by military experts to be the most serious on the front of the American attack and the introduction of an inexperienced division on such an important task appears unreasonable when an experienced division was available.

The principle of the assignment of an unlimited objective was carried out after the initial attack of the first day, and in this assignment it is believed that an error was made in respect to the operations of the 1st Corps. At the end of September 26th conditions in all the divisions were not of the best. Confusion, lack of control, and intermingling of units seemed prevalent. In the later advances this giving of an unlimited objective failed to allow proper reorganization of units and, in reality, increased the already existing confusion. It is believed that a limited objective permitting of a reasonable advance would have served better than the unlimited assignment, even though the limited objective attack could not have been assisted by an artillery preparation.

The tactical training of the smaller units was apparently unsatisfactory and not thorough in regard to the reduction of small centres of resistance as encountered in the German system of echeloned machine gun defense. The commanders of leading units as a rule reenforced their assault lines by supporting units instead of by a manœuver to the flanks or the execution of a passage of lines. Their system of adding to the strength of the assault lines merely increased the casualties, intermingling of units and lack of control. This fault appeared especially prevalent in the 35th Division where, even during the first day, the support units were kept too close to the leading ones and accordingly became merged with them in a very short time. Another feature of the lack of tactical training was in the principle of the elasticity of boundaries and formations that had been assigned for the advance. Most of the units thought entirely of their own boundaries and the resistance in their direct front. The complaint of receiving heavy fire from a point outside of their assigned sector was common but little effort was made to relieve it by executing a flanking attack against resistance in another unit's sector.

It is believed, however, that a great amount of this lack of cooperation with adjacent attacking units could have been avoided if the various unit commanders from battalion on down had had a general idea of the plan of attack and the manner of its accomplishment. This failure seems due to the late issuance of orders from a Headquarters far in the rear, the short time for transmission making it impossible to transmit to the leading unit commanders a complete plan of the attack and the parts to be played not only by that unit but by units on its flanks and in support. The general case was that the unit commanders had only a faint idea of what it was all about and therefore in many instances failed to properly grasp the various situations as they arose, thereby causing a lack of cooperation and mutual aid.

An important study for criticism is the method of advance of the units of the 77th Division through the Argonne forest. After the initial jump off it was quickly realized that it would be impossible to maintain any form of an attacking wave or line. Advances had to be made by small columns, the men in each column in single file. When resistance was met it became an advance of individual men, causing practically complete loss of control over the group by the group commander. This method of advance and attack was exceedingly slow and tiresome and great responsibilities were thrust upon the leaders of small units in continually reorganizing, advancing and attacking with their groups.

The detail of forward artillery observers with the leading infantry units was not maintained, the artillery actually executing a large proportion of their fire from the map and not from observation data. The failure to supply forward observers made it difficult for the infantry to obtain accurate artillery fire upon strong points in their front and also served to arouse a spirit of hostility and an uncooperative attitude between these two essential branches. The advancement of artillery forward to further support the attacking infantry was often times made after exceptionally long periods of time. The conditions of the roads and the enormous amount of traffic over the roads did interfere greatly, but the general opinion seemed to be that a good bit of aggressiveness was missing in the advancement of artillery to successive supporting positions.

In the areas there was great confusion and delays along the Corps axis of communications and supply.

Important traffic that was immediately essential to the advance was blocked by traffic of minor importance. Priority of advancement over the axial road was either improperly designated, regulated or controlled. All transportation was crowding to get through the same place at the same time from all directions.

The strength of attacking units seems to have been affected by the unnecessary sending of detachments to the rear, the mingling of front, support and reserve lines and an excessive amount of straggling or lagging behind. A thin protective line following in rear of each line of the assaulting units would have served to keep men from lagging behind in order to join units in the rear and also would have prevented some of the exceedingly strong prisoner guards from going so far to the rear. This system of establishing a thin protective line was made a practice of by some of our best divisions and its results proved its value.

One of the main criticisms to be made of the operations as a whole is the failure of almost all units to properly establish communication, liaison or contact with each other. In the 35th Division particularly almost everyone was out of contact with everybody else, this defect spreading as far back as Division Headquarters itself. A cavalry officer attached to the Division Headquarters for communications work states that at those headquarters there was no information relative to location of the various units and when ordered out to locate them it was difficult to find the commanders of the units or anyone who had any idea as to where they might be found. Orders to units were accordingly delivered late, and cooperation between units suffered. Also the combat liaison groups on the flanks functioned very poorly, if at all, due to their being mixed up in the general confusion of the advance. The actions of the regiment of the 92nd Division that acted as a combat liaison group for the Corps left flank were very poor and created the firm impression that our colored units were unsuited for duty as combat troops.

In concluding an analysis of the operations of the 1st Corps in the first eight days' action of our greatest battle there seems to stand out in my mind several important facts that bear directly upon our methods of instruction and training. In the first place the Meuse-Argonne battle developed quickly into the concerted fighting of groups, both large and small, depending upon the nature of the terrain, and the resistance encountered. Battalion commanders commanded the largest groups and the smaller of two, three or more men were commanded by any man who proved himself a leader of those men surrounding him. But our difficulty seemed to be that these group commanders had a very indefinite idea of what the present attack was to accomplish and what was the general manœuvre necessary. They therefore could not cooperate with each other and of course could not tell anyone else what was to be done or how. For illustration, in this operation the smaller unit commanders of the 77th Division believed most of the war was going on in the forest, and the 35th Division mostly believed that the 28th on their left was facing the wrong way, thus causing the 35th's lines to be enfiladed by enemy fire from the 28th's sector. The 28th also figured that the 77th was slowing up and leaving the taking of the eastern Argonne heights to them. It is my opinion that the difficulties and actions of the divisions, and in particular the 35th Division, were due primarily to the lack of knowledge of the general plans and missions by the junior officers and men. If they had been acquainted with the information that they would come under flanking fire from the Argonne heights and from machine gun fire on their front and flanks it is believed that they would have acted in a more logical and aggressive manner. Even inexperienced as they were it is certain that the greater majority of men of that caliber would not have become so confused had they been acquainted with the general situation. The question of reasoning and explaining during training is a vital matter in our army of today as it should have been during the war. Our army will always be composed of many nationalities. By nature some of these men are fearless and aggressive while others are weak and incapable of reason unless educated. Training in peace time cannot be automatic, with the idea that the individual so trained will function automatically under the nervous tensions developed in modern warfare.

In criticising the operations with reference to the enemy side we find that the German plan of defense was well conceived and executed by troops that knew at the time they were entering upon a losing fight. The building up of strong centers of resistance flanked by an echeloned machine gun defense proved a serious obstacle to attack. The German counter attacks in the main were weak and indicated that they were being made by weary and disorganized troops because as a rule it took only a fairly heavy machine gun or artillery fire to cause the ranks to disperse. However, the tactics employed by small groups equipped with light

machine guns in infiltrating through our lines or remaining concealed in position until our leading units had passed were excellent and frequently caused disorganization amongst our units and materially retarded our advance.

LESSONS.

Teamwork is the requisite for success; failure on the part of any cog in the machinery affects and disrupts the general plan. Success in battle is a coordinated action of all units however small.

An under estimation of your enemy's morale and system of defense coupled with an over estimation of our own capabilities will soon cause a halt in your original plan.

The more experienced and better trained units should be employed in delivering a surprise thrust when the way is opened, then relieve them by the inexperienced units who will have by this time learned the nature and methods of the attack and will enter in competition with the successes of the troops whom they have relieved.

An objective, limited, or unlimited, can only be properly determined upon after you have complete and accurate information of the capabilities of your own troops, the nature of the terrain in so far as it may affect the enemy's system of defense, and the strength of the opposing enemy forces.

Strong resistance encountered in the form of an echeloned machine gun defense cannot be overcome by frontal attacks nor by the reenforcing of the attacking line by support units. Enveloping and flanking movements in combination with frontal fire are essential. A passage of lines by supporting units must be accomplished to gain these results.

Artillery commanders must aggressively employ their units, move forward without delay when required and be in close communication by means of forward observers with the leading infantry units.

The actual tactical controllers of all infantry manœuvres are the infantry battalion commanders. They must be in close touch with every situation as it arises, cooperate immediately with the battalion commanders in support and, on their flanks, and then inform the higher commanders of the actions taken, Regimental and brigade commanders can outline the general plan of action but are too far removed from the battle to be consulted when quick decisions must be made.

The establishment of military police protective lines behind attacking units can be more thoroughly considered. The strength of assaulting units can be materially aided by returning stragglers, taking charge of prisoners and by preventing unnecessary detachments from going to the rear.

The system of attacking in a fixed line or formation is erroneous. Fighting and infiltration by means of small groups commanded by one individual is more practicable than an individual attempting to maintain control over an extended line.

Contact between all units is essential. A definite axis of communications must be followed by unit commanders in order that this contact may be assured. Without contact, information is based upon conjecture, this system generally ending in a failure of all units to accomplish their mission.

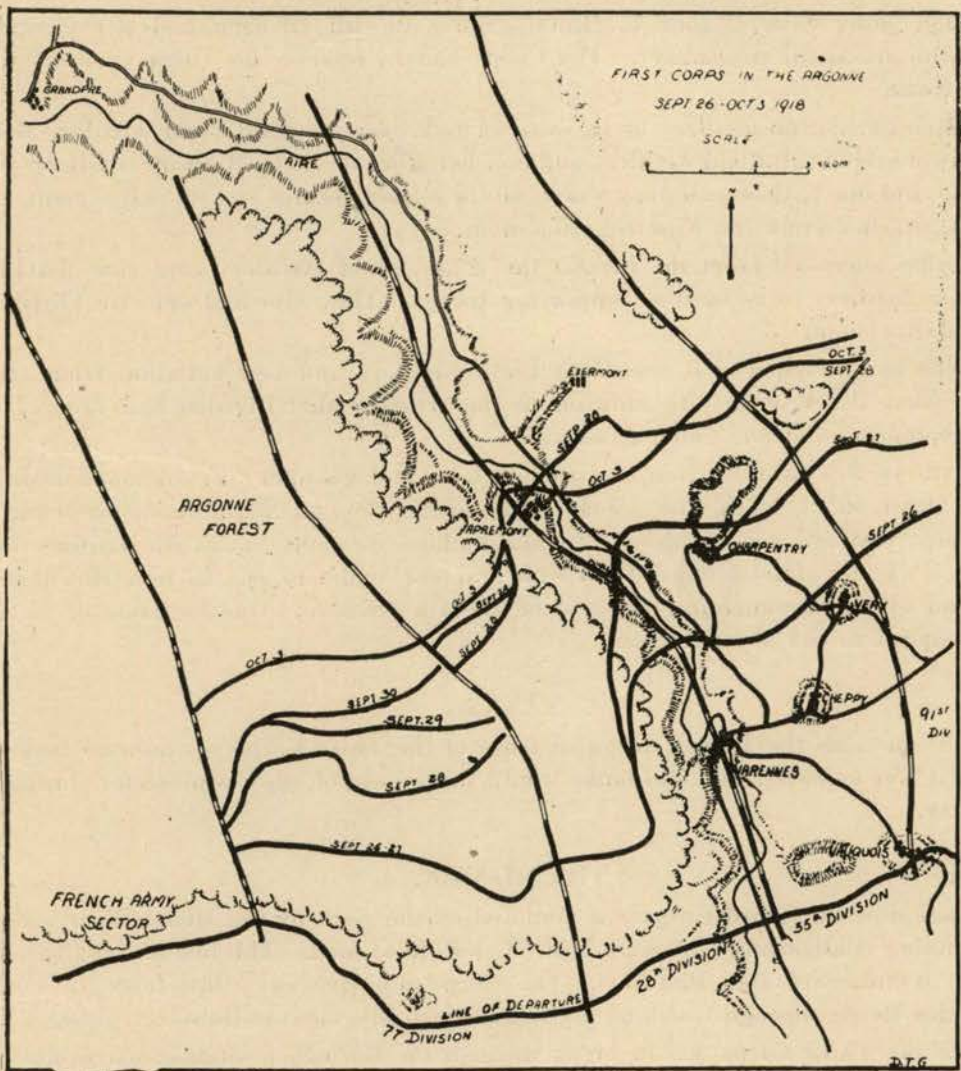
A lack of aggressiveness is unpardonable but this is mainly due to inaccurate or no knowledge of the general situation and plans. Instructions must be carefully and thoroughly given to all so that they can understand their part in the general plan.

Pay extreme care to the lines of communications. Regulate the transportation according to a pre-arranged priority. The aggressive spirit not only applies to assaulting units breaking through the enemy's line but applies equally as well to the rapid advancement of all supporting units.

All training must have as its goal the determination to instill in each man the power to reason and act by himself in a proper manner during combat. Discipline and battle training, as previously practiced before the war, had its goal set on making the soldier a machine who could, during battle, apply without hesitancy those principles he had learned on the drill field. The conditions of modern warfare have changed and will probably undergo some added changes upon any renewal of war. These changes will materially affect the method of infantry warfare and it is up to the soldier himself to be able to meet the new conditions

as they arise. To do this he must be a man of fair reasoning powers in order that he may adapt himself quickly to new situations.

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THE OPERATIONS OF THE 3RD CORPS (U. S.) IN THE 1ST PHASE OF THE MEUSE—ARGONNE.

By

Capt. Roland Wilkins, Infantry.

ORGANIZATION OF THE THIRD CORPS.

The Third Corps, under the command of General Bullard, was to be the right Corps in line and was the actual pivot of the movement. On September 26th, the day of the attack, the Third Corps was composed of the following divisions: the 33rd Division under General Bell, the 80th Division under General Cronkhite, and the 4th Division under General John L. Hines. Since the 4th Division had participated in a major engagement, it was to act as the pacemaker. The Corps had in reserve the Third Division under the command of General Buck.

As the 33rd Division had no artillery of its own, it took over the 52nd Field Artillery Brigade and two French units which were the 212th Field Artillery and one battalion of Light Railway Artillery. One air squadron (less one flight) and one balloon company was used for reconnaissance and the adjustment of artillery fire. One Company was attached from the First Gas Regiment.

The 80th Division borrowed from the French the 228th Field Artillery and one battalion from the 289th Light Railway Artillery to be used as supporting troops. They also had one Air Flight and Company F from the 1st Gas Regiment.

The 4th Division had attached to it, the 250th Field Artillery and one battalion from the 308th Light Railway Artillery from the French. In addition to the artillery, that Division had Troop I of the Second Cavalry, one Air Squadron, and one balloon company.

The Corps Artillery was entirely from the French Army and was under the command of General Gatchell. It consisted of the 289th, 407th, 413th, 81st, 456th Field Artillery and one battalion of the 308th Light Railway Artillery. The Corps had two air squadrons and one balloon company to aid the artillery in its firing.

One regiment of 75 mm guns of the 3rd Division and one regiment of 155 mm Howitzers were placed under the command of the Commanding General of the 4th Division. One battalion of 75 mm guns from the reserve was assigned to the 80th Division.

TANKS.

As tanks could not cross the Forges Brook in front of the Third Corps position, no tanks were assigned to this Corps, but it was expected that the tanks would cross west of the Corps sector during the attack to support the infantry.

THE MISSION.

The zone of action of the Third Corps was bounded on the right by the Meuse River and on the left by a general line running Malancourt-Septsarges-East of Natillois-Cunel. The line of departure was just south of Forges Brook, Bethincourt and Haucourt. The Corps objective was a line from the Forges Brook, up the west bank of the Meuse through Gercourt et Drillaucourt-Bois de Jure-Bois-de-Septsarges-Nantillois.

The mission of the Third Corps was to break through the German positions so it would outflank Montfaucon and assist the Fifth Corps on the left in its advance.

When the Fifth Corps would arrive on a line with the Third Corps objective, the two Corps were to advance to the Army objective, which was a line running up the west bank of the Meuse, north of Briulles-sur-Meuse, and north of the Bois-de-Foret, and organize this line for defense. The Corps was to reach the Army objective on the afternoon of September 26th, exploit this penetration of the German third line of defense during the night of September 27th, and be prepared to advance north to the combined army first objective when ordered by the Army Commander.

PREPARATION FOR THE BATTLE.

The American attack between the Meuse River and the Argonne Forest was to be in the nature of a surprise, and to make the Germans believe that the attack was coming elsewhere, successful ruses were carried out between the Meuse and Luneville in the direction of Metz. To cover the concentration of the American Army and not to arouse the suspicion of the German forces, the French troops continued to hold the front lines until the night before the attack. As the American divisions were relieved from the St. Mihiel sector, they started their movements in the direction of the new offensive. Marching by night and using the woods to screen their movements, they worked their way forward by successive stages until they were in the rear of the position they were to occupy at the commencement of the battle. On the night of September 25th, the French troops were withdrawn and the entire sector was taken over by the Americans.

THE AMERICAN ORDER OF BATTLE.

The Third Corps took over part of the line with the divisions placed from right to left as follows: the 33rd Division, the 80th Division, and the 4th Division. It was planned that the divisions would have one brigade in the line and one brigade in reserve. When the assault brigade had become exhausted or disorganized, the reserve brigade was to "leap-frog" it and carry on the assault.

Within the brigades the regiments were to be in line abreast of each other, each with one battalion in the assault line, one battalion in support, and the other battalion in the brigade reserve. Each infantry battalion was to have one battery of field artillery as accompanying gun.

THE GERMAN ORDER OF BATTLE.

On the morning of September 26th, the Germans held the line opposite the Third Corps with three divisions that were part of the Fifth Army of Von der Marwitz. On the left of our line was the 117th Division, and on the right, the 7th Reserve Division, and in reserve was the 5th Bavarian Reserve Division. As organized during the world war, a German war strength division was about one half the size of an American division. As the Germans had not expected an attack on this front, their lines were lightly held, and all the Divisions in the front lines were classified as second class troops.

THE FIRST DAY.

At eleven o'clock on the night of September 25th, the American artillery shelled the east bank of the Meuse and the back areas of the German lines. At two-thirty on the morning of September 26th, the entire French and American artillery opened up with the most terrific bombardment that had yet been experienced during the war. The total number of guns of all calibers used in this preparation was 3928 pieces. The amount of artillery was so great that there was one gun for every eight meters of front. For three hours the German positions were rent and torn by the intensity and volume of this preparatory barrage. At five-thirty, the barrage started rolling at the rate of one hundred meters every four minutes, and behind this protection the troops went forward to the assault. The Germans stunned by the effect of the bombardment and taken by surprise, offered very little resistance to the advance of the American troops in the early stages of the battle.

The 33rd Division, acting as a pivot for the whole movement, drove straight to its front and then executed the difficult manœuver of turning to the right in the face of the enemy and took up a position along the west bank of the Meuse as far as Dannevoux and proceeded to consolidate this line.

To accomplish this mission, the division had to cross the Forges Brook and the Marshy land on either side in the face of galling machine gun fire. The Forges Wood just across the brook gave cover for these guns, and it had to be cleaned out before the advance could continue. By noon of the 26th, the 33rd Division had overcome all these obstacles and was on the Corps objective ready to protect the flank of the American First Army in its advance north.

The 80th Division, in the center, was also expected to reach the Meuse River north of the position of the 33rd Division. It was planned that the 80th Division would reach this objective on the first day, and then, as the 33rd Division on the right and the 4th Division on the left drew together, the 80th Division would

be squeezed out and withdraw. The country through which the 80th Division had to go was covered with woods, and these were strongly held by machine guns. By noon of the first day, this Division had penetrated these woods and had come out in the open country beyond. During all this time the Division was under the fire from machine guns from the Jure woods on their right flank. The left of the 80th Division was expected to reach a line just south of the town of Brioules the first day, and the right was expected to connect up with the left of the 33rd Division on the Meuse River.

As the day went on and the 80th Division drew up towards Brioules, the resistance grew much stronger. Brioules was strongly held, and the determined resistance from this point and from the Bois de Sept-sarges held up the left of the 80th Division. Due to the congestion on the roads, the artillery had been unable to come up to assist in reducing the strong points that were being so stubbornly held. From the east bank of the Meuse, the Germans were firing into the Division positions with their artillery, and this combined with the machine gun fire, prevented a further advance of the Division that day. By nightfall of September 26th, the right of the 80th Division was in contact with the 33rd Division on the river and the left was in a position, in front of Brioules.

The 4th Division, on the left, was to maintain contact with the right division of the V Corps, and in conjunction with it, flank Montfaucon and cause the Germans to fall back from this most important stronghold. The Division was to continue to the north until it had reached the Meuse River north of Brioules and take up a position along the bank as far as Sassey. By 12:30 P. M., in spite of the heavy resistance it had encountered, the 4th Division had reached the Corps objective, and, as it had been directed to do, dug in and awaited the arrival of the right division of the Corps on its left. During this halt, the Germans had time to send up reinforcements and reorganize its units that had been so demoralized by the surprise of the attack and the intensity of the bombardment, so that when the Division resumed the attack at 5:30 P. M., they encountered a much greater resistance than at any other time during the day.

This Division also suffered from the lack of roads in its sector and from congestion of traffic to the rear. The artillery could not get forward to support the advance, and in spite of the heroic efforts of the Engineers, who worked day and night repairing roads, it was not until the night of the 27th of September that the Division artillery was in a position to support the attack.

By nightfall of September 26th, the 4th Division line lay approximately on the Corps objective.

THE SECOND DAY

When the attack was resumed on the morning of September 27th, the resistance was greatly increased, and as a result the progress was necessarily slowed up. On the 27th, the German Artillery increased its fire so that on this day, they used 65,000 shells as compared with 5,000 on the 26th.

The vigor of the attack on the first day had conclusively shown that a large and dangerous offensive was in progress in this sector, so the German High Command began rushing all available reinforcements into this area, in an effort to stem the tide that was beginning to overwhelm them. In place of second class divisions that had been in line the first day, the Germans were withdrawing the best troops they had from other parts of the line, and placing them in the path of the American advance, thereby weakening the positions along the rest of the Hindenburg line and making the advance of the Allies, by comparison, an easy task. Realizing that a serious break through at this point would endanger their whole line, as the loss of a few kilometers here meant the giving up of an even greater proportion in the north, they contested with terrific machine gun and artillery fire every foot of the ground.

The Third Corps was ordered to continue the attack at 5:30 on the morning of September 27th. Due to the congestion of the roads in the rear of the front lines, the artillery had not been able to get up to a position from which they could support the infantry, when it resumed the attack.

On this day, the 33rd Division was on its army objective along the west bank of the Meuse River and had dug in. In this position they were under constant and heavy fire from the Germans on the east bank of the river. Their mission now, was to hold this position until the other divisions reached their Army objectives.

While waiting in this position, the 33rd Division sent out patrols along the river in an endeavor to locate possible fords.

On the 27th, the 80th Division was able to push the right of its line forward along the bank of the river for a short distance. The left, which was in front of Brioules, was still held up by the heavy fire from the town. Due to the high ground east of the Meuse, the Germans were able to enfilade the ground south of Brioules and prevent the 80th Division from advancing. As the 80th did not have its artillery, without which it was not able to overcome this devastating fire, it was forced to dig in and take up its line for the night with the right resting on the Meuse River and the left just south of Brioules.

The 4th Division also suffered from having to continue the attack without artillery support to break up the strong points that were strung along its front. By hard fighting, the Division was able to penetrate into the Bois de Brioules, and by nightfall of the 27th, the front line extended from Hill 295 by the Bois de Septsarges, through the Bois de Breuilles and joined up with the left of the 80th.

THE THIRD DAY

On the 28th, the 33rd Division was still in position along the river and was being shelled by the guns across the Meuse.

On the morning of that day the Germans launched a counter-attack against the 80th Division from the direction of Brioules. This attack was promptly repulsed, and the 80th Division counter-attacked in turn. Throughout the day, this Division made attack after attack in the direction of Brioules in an effort to reduce this stronghold. Due to the heavy cross fire to which the 80th Division was subjected, these attacks were stopped before the town could be taken.

The right of the Division was able to advance along the river and in this advance captured an ordnance dump, with a vast amount of valuable material. The 80th Division pushed forward, the bend of the Meuse narrowed its front, so that the Division was withdrawn and its part of the line was taken over by the 33rd and 4th Divisions. During the time that the 80th Division was in this action, it had advanced its front line nine kilometers, capturing thirty-five officers and 815 men, and sixteen pieces of field artillery.

At 7:00 A. M., the 4th Division attacked through the Bois de Brioules, and in spite of the heavy machine gun fire, fought its way forward until it reached the northern edge of the woods. After overcoming the difficulties imposed by almost impassable roads and the congestion of the back areas, the division of artillery reached the division sector on the night of September 28th.

THE LAST FOUR DAYS

On the 29th of September, until October 3rd, no progress was made as the enemy resistance had developed to such a point that it was not possible to advance against it without suitable artillery preparation. The 4th Division and the 33rd Division spent the remainder of the time, until October 3rd, in stabilizing their position and organizing the troops for an early continuance of the advance. Strong patrols were pushed out to the front and the artillery harassed the German positions.

ANALYSIS AND CRITICISM

The German Army that fought the battle of the Meuse-Argonne lacked most of the qualities that characterized that Army during previous campaigns in the war. Lack of adequate reserves, the successive repulses it encountered, and the discontent of the people at home, spread throughout the Army by men returning from leave had lowered the morale and fighting spirit of the German soldier. The rapid demoralization of Germany's allies left her to fight the war alone against ever increasing troops. Heavy casualties and lack of replacements to fill the depleted ranks rapidly diminished the German Army.

The Allied Armies, on the other hand, were making successful attacks and receiving reinforcements rapidly from America. These American troops fought with great success along the entire front, and as the Allies realized the potential strength furnished by the soldiers from the United States, they gained confidence to com-

clude successfully the war. Marshal Foch's keen perception grasped the situation and realized that a combined attack at this time by the Allies along the whole western front had every possibility of success.

In analyzing the operations of the Third Corps in this sector, the outstanding feature is the difficult terrain over which their advance was to be made. Opposed by long stretches of barbed wire, a series of strongly fortified positions, steep wooded ridges and marshy ravines, all defended by machine guns, required a high degree of leadership and discipline. That these American troops, with only a short period of training led by officers whose training in most cases was equally brief, were able to overcome these obstacles, was an achievement greater than all the Allied Commanders could have hoped for.

In addition to the difficulties offered by the terrain to the offensive warfare was the lack of suitable roads to move forward their artillery and supplies. To confine the transportation of two entire Corps to two roads one of which was dominated by enemy fire, and the other badly in need of repairs, naturally led to an indescribable amount of confusion. Unquestionably, the infantry could have gone much further with a smaller percentage of losses if the artillery had been able to get up to clear the way for them. Without artillery to overcome strongly fortified machine gun positions, the infantry, by frontal and flanking attack, must suffer heavy casualties.

The concentration of the American troops in such great numbers carried on in the face of the enemy without his gaining knowledge of this, was an accomplishment worthy of great praise. As a result of the secrecy with which this movement was carried on, the German Armies were not reinforced and the Americans outnumbered the Germans four to one. For the German High Command to have held this important sector so lightly and to allow themselves to be surprised, as they were, resulted ultimately in the withdrawal of their entire line. Unquestionably, the success obtained by the Americans the first two days of this attack, before the German reinforcements could be brought up, was the deciding factor in bringing the war to an end.

Throughout this action, the value of machine guns handled by highly trained men was apparent. As the Germans retreated before the vigorous advance of the Americans the first day, they were only saved from a complete rout by the skilful use of their machine guns.

During this operation the American soldier's lack of combat experience had caused him to attempt things that a more experienced soldier would have avoided. For instance, his impetuosity and inexperience caused him to make frontal attacks against machine guns which caused heavy casualties, when a more experienced soldier would have waited for his artillery to clear the way for him. Although his training was not sufficient for the requirements of modern warfare, he proved that he could reach a higher degree of training in a shorter time than we had been led to believe was possible.

The mistake of assigning limited objectives was very apparent from the first rush by the Americans. While the American attack was forging ahead under the impulse of the initial "jump off", the assaulting waves, reaching their first objective, halted and dug in. Up to this time, the German resistance had been easily overcome and the advance had been rapid. The halt by the Americans allowed the Germans to reorganize their lines and bring up their reserves so that when the attack was resumed, it met with much stronger resistance.

LESSONS TO BE LEARNED

1. An army in the field is only as strong as the population behind it.
2. Lowered morale weakens an army's power of resistance.
3. Barbed wire entanglements and strongly fortified positions can be overcome by vigorous infantry advance, supported by artillery.
4. An army is dependent for its success in battle on having an adequate line of communications.
5. When roads are limited, ample preparation must be made to regulate traffic.
6. The advance of the infantry, when confronted by strongly fortified positions, must cease if the artillery cannot get forward to support it.
7. The infantry must be supported by artillery to overcome machine gun fire without heavy casualties.
8. The element of surprise is a vital factor in military operations.

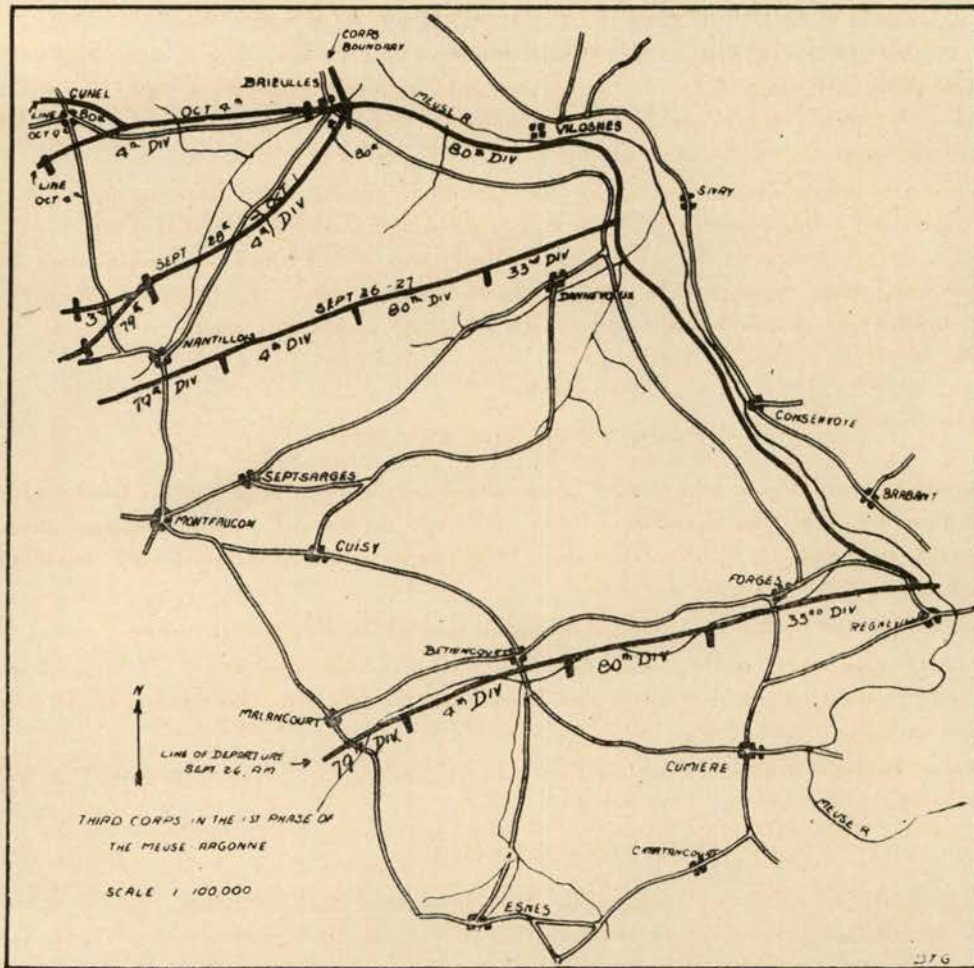
9. The use of inexperienced and partially trained troops leads to heavy casualties.

10. The heavy and disproportionate casualties which partially trained troops suffer is once again shown. Even with the time for training made possible by our Allies, we see again what our people should have long since learned, that it is too late to begin training for war after war has begun.

11. Any halt, when the attack is going on, allows the enemy time to recover and strengthen his resistance.

12. The use of limited objectives tends to hold up the advance when it might gain greater distance.

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OPERATIONS OF THE 5TH CORPS (U. S.) IN THE 1ST PHASE
OF THE MEUSE—ARGONNE

By

Major Efmond C. Waddill, Infantry.

GERMAN ESTIMATE OF THE SITUATION

It is very evident that the German High Command knew of our preparations for a large attack, but because of the fact that we had, just two weeks before, reduced the Saint Mihiel Salient, they believed that our attack would be directed against Metz. Orders captured September 26th show that he was preparing to meet an American attack east of the Meuse and had therefore massed large bodies of troops to protect the Briey iron basin and the Metz area. This is shown conclusively in an order of General Von der Marwitz of the 5th Army issued on September 15th which was in part as follows:

“According to information in our hands the enemy intends to attack the 5th Army east of the Meuse.”

The summary of Intelligence of the 1st Guard Division of September 23rd is in part as follows:

“During daytime only circulation far to the rear could be observed, but at night great activity ranged along our front. The noise of narrow gauge railways, motor trucks, the unloading of heavy material, loud cries could be heard through the night of September 22nd—23rd.”

As a result of this the resting battalions of the 3rd Guard Regiment were brought up to points south of the Very—Montfaucon line. On September 24th, the first Guard Division issued the following order:

“Very urgent. A strong attack in the direction of Metz is expected tomorrow, September 25th. The attack may extend to our front, consequently patrols should be sent out in the covering zone. Wherever possible these patrols should be equipped with sirens with which to alarm the troops in support. We must look for a surprise attack.

Signed: Eulenberg.”

GERMAN TROOPS IN LINE

That the Germans did not know where our main attack would be is indicated by the fact that the Meuse Argonne sector was held by only four divisions in line and one in reserve, mostly inferior divisions. From east to west they were as follows: 7th Reserve Division, 117th Reserve Division, 1st Guard Division, 2nd Landwehr Division, 9th Landwehr Division in reserve.

Opposing the 5th Corps were the First Guard Division and 117th Reserve Division.

The First Guard Division was considered one of the best in the German Army. It was recuperating after having suffered heavily in the Chemin de Dames and Marne battles and was commanded by Prince Eitel Frederick, the Kaiser's second son.

The 117th Reserve Division was made up of Poles and Alsatians and was regarded as a holding rather than an attacking division.

THE ZERO HOUR

On September 24th the Corps issued orders for day, September 26th, H hour, 5:30 A. M. On the night of September 25th—26, all troops moved forward into the very front lines and relieved the protecting screen of French troops preparatory to taking their positions for the “jump-off”.

The attack as anticipated by the enemy for September 25th did not come but some definite information as to the direction and force of our attack must have fallen into their hands during the early morning of September 25th, for during the succeeding hours he issued many orders to troops designed to prepare the sector for a much greater shock than he had previously foreseen. The gist of these were: The front lines should be abandoned and the Hagan-Stellung should become the first position of resistance and the artillery should be disposed in depth and so placed as to form the backbone of the defense of the Volker-Stellung. These dispositions were ordered so late that our attack struck the enemy in process of carrying them out. The roads were so congested that the enemy artillery were not in position to support their infantry until afternoon of September 27th.

BOMBARDMENT

At 11:30 P. M. September 25th, heavy long range guns of the army artillery opened fire on selected targets. This bombardment grew in intensity throughout the night. At 2:30 A. M. all guns of the Corps and Divisions, silent until then, went into action, on the Hindenburg Line, the support line, known as the Hagan Stellung and the strongly organized system of trenches defending the approaches to Montfaucon known as the Volka Stellung, the smaller guns paying particular attention to the front line positions. At 5:30 A. M. September 26th, the leading waves went over following an intense barrage of machine guns and artillery, moving at the rate of 100 yards in four minutes.

TROOP FORMATION

The 79th Division attacked in column of brigades with regiments abreast. The 157th Infantry Brigade was the assault echelon and attacked with the 313th and 314th Infantry in line, the 314th Infantry on the right.

The 37th Division attacked with brigades abreast 73rd Brigade less Headquarters and 2nd and 4th Battalions, 146th Infantry on the right. The 74th Brigade less 1st Battalion 148 Infantry on the left. The 146th Infantry less 1 Battalion, 1 Battalion of 148th Infantry and the 134 machine gun battalion, constituted the divisional reserve which was to follow the division axis of liaison.

In accordance with Corps orders, 91st Division was disposed as follow: 181 brigade was to attack with two regiments side by side and the 182 Brigade with one regiment in assault the other following at 500 meters.

Companies of the Brigade and machine gun battalion were assigned to battalions which thereafter became a part of the regiment. The Commanding General of the 58th Field Artillery Brigade was ordered to designate two regiments as accompanying batteries and support for infantry regiment, one battalion being designated to support each regiment.

The division reserve consisted of 1 machine gun battalion, 1 battalion of infantry with attached machine gun company from each brigade. Combat liaison group consisting of 1 company of infantry and 1 machine gun company were detailed to maintain liaison and to protect both flanks of the division.

79TH DIVISION. SEPTEMBER 26TH.

The 79th Division attacking in column of brigade, Regiments abreast. The assaulting echelons were unable to get through the mass of wire to its front and therefore lost the protection of its rolling barrage from the start which resulted in slow progress and many casualties from machine gun nests located in the Malancourt, Montfaucon, Cuisy Woods and the town of Malancourt on its right. With the aid of tanks Cuisy Woods was taken about 4 P. M. The 4th Division on the right had made rapid progress and at this time was about 4 kilometers ahead of the 79th. The corps ordered an attack about dusk, in compliance of which the 79th attacked with the aid of two tanks. Due to the condition of roads the artillery was not yet up and when the 313th infantry had advanced about 200 yards from Cuisy Woods they met with severe artillery, machine gun fire and hand grenades. On account of darkness they were unable to make effective use of their weapons so retired to the woods which they had just left.

The line now ran just south of a road running outhwest from Cuisy then across the Montfaucon-Malancourt road nearly to the northeast edge of Bois de Cuisy. A second line in advance of this ran from the northern edge of Bois de Cuisy nearly to the Montfaucon-Malancourt road.

37TH DIVISION.

From the Jumping off trench the 37th Division followed a rolling barrage and met comparatively little opposition from the enemy's infantry, but encountered much machine gun opposition, the divisions successfully passed through Bois de Montfaucon. The 73rd Brigade was held up by the inability of the 79th Division to advance, occupied the ridge beyond the northern edge of the woods while the 74th Brigade penetrated a point of the enemy second position directly south of Ivoirly.

Due to previous rains and the fact that this division had no forward roads in its zone of advance, only

animal drawn transportation could be used north of Avocourt. Artillery had great difficulty in advancing and the little that did get forward as a rule had only the ammunition remaining in the gun cassions. So for all practical purpose the division was without artillery support for twenty-four hours. The corps ordered ten tanks to report to the 37th Division at H 8 hours (1:30 P. M.), at the northeast corner of Bois de Montfaucon when they would come under the command of the division. Eight reported at 5:00 P. M. and two others sometime during the night, practically all without gasoline. Eight of these obtained gas from disabled tanks and assisted the 79th Division in cleaning up Bois de Cuisy and did not report to the division until the 27th.

91ST DIVISION.

At zero hour 363rd Infantry had 181st Brigade entered the valley of the Buanthe in a cloud of smoke and mist which completely concealed them from view of the Germans on Vauquois Hill, less than half a mile to the west and succeeded in crossing No Mans Land without casualties. The 364th Infantry and Headquarters, 182nd Brigade encountered some difficulty in finding the lanes through the wire so did not reach the Jump off until 6:30 A. M. The leading battalion crossed No Mans Land without difficulty but when the 2nd Battalion and brigade Headquarters reached the valley of the Buanthe the mist and smoke had risen and they were subjected to intense machine gun fire from the Eponville ridge. Some troops entered artillery fire from which they suffered many casualties. The 364th Infantry finally reached Bois de Cheppy and pushed forward on the left of the 363rd Infantry with six companies in the zone of the 35th Division. The 182nd Brigade encountered great difficulty from the small woods along the Cheppy-Montfaucon road where were numerous strong points. These however, were overcome with the assistance of the 348th Machine gun battalion and the village of Very was entered about noon. The 181st Brigade had great difficulty in overcoming machine gun nests in Bois de Cheppy. They reorganized on the southern edge of the ravine Lai Fuon and pushed through Bois de Very and Bois Chehemin. From here they could see the German positions about 2,000 yards to the front near Epinonville. This brigade attacked over the open ground without artillery support in the face of heavy fire from the Epinonville ridge. Some troops entered Epinonville, but the brigade was compelled to fall back to the ravine south of the town for the night. The 363rd Infantry advanced through Very to the high ground beyond where it dug in for the night. 364th Infantry on the left of the 363rd followed it, advancing beyond Very and dug in for the night southwest of that regiment.

The line of the 91st Division on the night of September 26th ran from the ravine south of Epinonville to the western slope of the ravine north of the town of Very then into the zone of the 35th Division.

SEPTEMBER 27TH.

At 5:30 R. M., September 27th, the 37th Division attacked and the left brigade penetrated the Volker Stellung by 9:00 A. M. The 73rd Brigade (right) which was facing northeast to gain contact with the left of the 79th Division repulsed a swift counter attack. By noon the town of Ivoiry and ridge east of it was captured by the 74th Brigade. But the fire from Bois de Beuge from which the enemy used high explosives of direct laying and phosgene gas forced them back to the Ivoiry-Montfaucon road.

At 7:00 A. M. the 313rd Infantry of the 79th Division in conjunction with the 73rd Brigade made a concerted attack on Montfaucon with the aid of tanks, smoke and the machine gun barrage. They met extremely strong resistance but in face of it the 313rd Infantry entered the town at 11:00 A. M. and the right of the 37th Division occupied the town at 1:30 P. M.

The 73rd Brigade at 5:45 P. M. succeeded in occupying the enemy's 2nd position and held the same against counter attacks with the aid of captured enemy artillery. At dark the Division halted approximately along the Ivoiry-Montfaucon road.

The 79th Division spent the afternoon mopping up the town of Montfaucon and the ravines east thereof. On the night of the 27th its line ran from 1 kilometer north of Montfaucon with its eastern extremity resting on the Septsarges-Nantillos road, 1 kilometer south of hill 295.

The 91st Division on the night of September 26—27 reorganized and issued orders for attack on the following morning which were in substance as follows: Both brigades were to attack towards the Eclisfon-

taine-Epinonville line with both Brigades abreast and all four regiments in column of battalions from right to left as follows: 362 Infantry, 361 Infantry, 364 Infantry, 363 Infantry. Three separate assaults were made on Epinonville without success and that night the brigade dug in at the foot of the ridge south of Epinonville. The town had been entered on the 26th and three times on the 27th. The 361st Infantry passed through the town and was checked when it attempted to debauch from the town by heavy fire from the woods beyond. The attack of the 181st brigade was in the face of fierce machine gun artillery fire throughout the day regulated by low flying planes.

About noon the advance of the 37th Division was checked and it fell back under intense shelling between Epinonville and Ivoiry to a position behind the right flank of the 91st Division.

The 364th Infantry maintained contact with the 361st Infantry but the 363rd Infantry inclined so far to the west in an endeavor to gain contact with the 35th Division that some units crossed the Eclisfontaine-Charpentry road into the 35th Division Sector and came under fire of friendly artillery while advancing in the direction of Serieux Farm. They reached the ravine running southwest from Eclisfontaine about noon from which with great difficulty they pushed on into Les Bouleaux Bois. By night the line Epinonville-Eclisfontaine-Les Bouleaux Bois was being organized when orders were received that army artillery would lay down a barrage on the Eclisfontaine-Charpentry road which necessitated the 182nd Brigade to withdraw its troops south of that road out of the town of Eclisfontaine.

SEPTEMBER 28TH.

During the night of September 27—28 the brigades of the 79th Division executed a passage of lines by the 158th Brigade (315 and 316 Infantry Regiments) relieving the 157th Brigade. The attack was resumed at 7:00 A. M. and by afternoon the 316th Infantry had fought its way through Bois de Beuge then across the open lowlands to the wooded crest of hill 268 where the advanced troops dug in.

The 315th Infantry with the aid of tanks entered the town of Nantillos by 11:00 A. M. and took the town by desperate hand to hand fighting and pushed on into Bois de Ogons. Here the tanks were put out of action and the attack was held up by machine gun fire from the front and artillery fire from across the Meuse. A second attack was unsuccessful so the lines were withdrawn behind hill 274 where it dug in for the night.

On September 28th the 37th Division with both Brigades in line attacked at 7:00 A. M. from the Ivoiry-Montfaucon road in the direction of Cierges. By 11:00 A. M. both woods, Bois de Beuge and Bois de Emont were cleared, but a further advance from these positions was stopped by a terrific fire from a town of Cierges and the hills to the northeast. The Germans filled the woods in rear where supports and batteries were coming in positions with mustard and phosgene gas. A Second attack was launched at 6:00 P. M. but it too was stopped so the line was established for the night, which ran from right to left as follows: Hill 261, 1½ kilometers northeast of Cierges along the ridge to the southwest through 254 thence to ridge 247—Hill 265 and ridge 247, 600 meters south of Bois de Emont without guards on northern slope of ridge 261—254, northern edge of Bois Emont and Bois Cierges. This days fighting had caused brigades many casualties from gas in Bois Emont, Bois de Beuge and the valley of L'Angon.

The 91st Division continued to advance on September 28th with both brigades attacking, in column of regiments with two battalions in the assault. The 181st Brigade advancing from Epinonville seized les Epinettes Bois and Bois de Cierges. The 182nd Brigade advanced from a position held during the night met opposition from Serieux Farm and Bois Bouleaux to which the enemy had returned during the night. Both places were captured however, about noon. The brigade then pushed on and took Bois de Baulny, Tronsol Farm and slopes north of the latter. During the day the 363rd Infantry endeavoring to keep in contact with both the 35th Division and the advance of the 364th Infantry at night found itself facing due west in contact with 364th at Tronsol Farm but out of touch with the 35th Division. The division was thus exposed to attack from the west while on the right its flank was in the air as the left regiment of the 37th Division was still south of Bois Emont. This however was not a alarming as the 362nd Infantry was disposed in depths behind the 361st Infantry, thereby being in the position to protect the right flank.

SEPTEMBER 29TH.

Late in the evening of Sept. 28th the commanding General of the 5th Corps issued orders for the renewal of the attack at 7:00 A. M. the following morning. They were in part as follows: "Divisions will advance independently of each other pushing the attack with the utmost vigor regardless of cost".

79TH DIVISION.

After an all night artillery preparation by corps and army artillery the 79th Division attacked on Sept. 29th. The 315th Infantry and 316th Infantry penetrated the Bois de Ogons but were unable to hold the positions and fell back to the jump off line. The afternoon the 157th Brigade relieved the 158th Brigade and under heavy artillery fire they withdrew 1 kilometer to the edge of Bois de Beuge.

37TH DIVISION.

During the night of September 28—29 the enemy heavily shelled Bois Emont, Bois Cierges, and Bois de Beuge filling them with phosgene and mustard gas rendering them impassable for troop movements on the morning of September 29th. At 7:25 A. M. the 74th Brigade and 10 tanks moved forward to reduce machine gun nests which were enfilading the valley between Bois Emont and ridge 254. As the tanks appeared on the eastern edge of Bois Emont they came under direct artillery fire and withdrew losing 5 in this maneuver. When the tanks returned the infantry took refuge in the hollows southeast of Bois Emont where they remained.

A battalion of infantry of divisional reserve was then ordered forward between Bois Emont and Bois Cierges. The battalion commander was instantly killed and his message not having been communicated to the other officers of the battalion this attack halted and the men took cover in shell holes.

Increased artillery fire stopped the advance of both brigades with the greater part of the 74th Brigade in the position where they had spent the night.

Near noon an enemy counter attack started from the ridge north of Cierges which was repulsed by machine gun and rifle fire.

That afternoon the commanding general, 73rd Brigade reported that the 79th Division was retiring and that their position was becoming untenable. The division commander about 2:15 P. M. decided that the division was too exhausted to advance further and ordered that all lines be dug in and held. The lines held were approximately the same as that of the previous night.

At 5:00 P. M. the commanding general of the 91st Division requested the 37th Division to advance in order to protect his right flank. This could not be complied with due to the physical condition of the troops. However, the commanding general of the 74th Brigade sent a platoon of infantry in advance of his left flank to maintain liaison with the right of the 91st Division.

91ST DIVISION.

At 5:35 P. M. September 28th, the Chief of Staff, 5th Corps informed the 91st Division that the 35th Division was in Exermont.

In accordance with corps orders the 91st Division ordered each brigade supported by one regiment of light field artillery to attack in their own zones on September 29th, in column of regiments advancing toward the army objective.

The 362nd Infantry passed through the 361st at 7:00 A. M. advancing from Bois de Cierges toward Gesnes. When they reached a line abreast of Grange Aux Bois Farm they received heavy machine gun and artillery fire from that place and the hills northeast of Gesnes which forced them to withdraw to the position held during the night by the 361st Infantry. At 10:00 A. M. they again tried to advance but were equally unsuccessful.

The 363rd Infantry passed through the 364th Infantry when they reached the open ground north of Bois Baulny they also were checked by fire from Grange Aux Bois Farm.

The 181st Brigade was then ordered to take Granges Aux Bois Farm and protect the right flank of the

division. This was accomplished by a battalion of 361st Infantry supported by the 122nd Field Artillery and machine guns. One battalion of the same regiment covered the right flank of the division by facing toward Bois Emont.

The 91st Division which now held Tronsol Farm in the 35th Division Sector and Granges Aux Bois Farm in the 37th Division Sector, was ordered to continue the advance. At 3:30 P. M. the commanding general 181st Brigade reported that the 74th Brigade on his right had retired at 2:10 P. M. south and east at Bois Emont. The attack however was continued by the 362nd Infantry followed by a remaining battalion of the 361st Infantry under the protection of a rolling barrage. It was met by counter barrage and machine gun fire but in spite of heavy casualties it captured Gesnes and advanced the line to hill 255 north of the town which was the army objective.

In the afternoon conditions on the left appeared to be alarming. The 70th Brigade, 35th Division was retiring on Baulny and a concentration of enemy troops in the vicinity of Exermont was reported which were actually seen advancing from the woods southeast of that town. They were stopped by the 348th machine gun battalion and a counter attack launched by the 316th engineers from the vicinity of Tronsol Farm. In the meanwhile the 182nd Brigade had pushed its patrols across the Gesnes Creek to the south edge of Bois de la Morine near the left of the 362nd Infantry. The division was now in a critical condition. Instead of occupying a 2 kilometer front it had driven a salient 4 kilometers ahead of the right division and 6 kilometers ahead of the division on its left with both flanks exposed in close proximity of the enemy.

The commanding general 91st Division requested the 37th Division to move forward far enough to cover his right flank. Their reply was that such a move was impossible. The 35th Division on the left was retiring and was asking for protection of both of its flanks.

Under these circumstances the 91st Division during the night pulled its line back to the north borders of Boise de Balny and Bois de Cierges and held the two farms on its front as center of resistance.

SEPTEMBER 30TH. 91ST DIVISION.

The 5th fearing an attack from enemy reported arriving at Exermont ordered a line of resistance running through the center of Bois de Cierges southwest through Exmoriex Farm to hill 231 Les Bouleaux Bois. However, the front line was held as a line of surveillance with patrols guarding the country up to Gesnes which town was never again occupied by the enemy.

The 362nd Infantry held the line of resistance in the vicinity of Exmoreaux Farm while the 361st and 363rd Infantry occupied the line surveillance in front of their respective brigades.

On September 30th the 3rd Division moved up and relieved the 79th Division and the 32nd Division on the same day relieved the 37th Division.

The 79th and 37th Divisions had been exhausted by the four days of continuous fighting and had penetrated the enemy's lines to a depth of 7½ and 10 kilometers respectively.

From October 1st to 3rd inclusive the 3rd and 32nd Divisions spent the time improving their lines and preparing for an attack which took place on October 4th. On October 1st and 2nd the 91st Division was held in readiness awaiting corps orders to resume the attack. The time was spent principally in consolidating, improving the conditions, and evacuating their wounded.

On October 3rd the 32nd Division relieved the battalion of the 361st Infantry at Granges aux Bois Farm and later on during the day orders were received from the 5th Corps that the 91st Division less the 58th Artillery brigade would be relieved by midnight by the 32nd Division extending its lines to the left. The 91st Division was ordered to assemble its corps reserve in Bois de Very and Bois de Cheppy.

CASUALTIES.

Total casualties from killed, wounded and missing,

	Officers.	Enlisted men.
37th Division	131	3329
91st Division	150	4000
79th Division	No Data	

CRITICISM.

Did the 5th Corps make a correct estimate of the situation, was due consideration given to the enemy's positions, distribution, morale, training and supply? Was the morale, training and supply of our own troops based too high?

If due consideration had been given to the above would not the commanding general put his best divisions in line on September 26th for the initial mission of breaking the Hindenburg line? Here the key to the attack was Montfaucon, considered one of the strongest positions on the Western Front before which the 5th Corps attacked with 3 divisions in assault none of which had had any experience in battle, and the 32nd Division, a first class attacking division in corps reserve. Would it not have been better for the 32nd Division to have attacked on the left of the 79th thus having two first class divisions driving through on the flanks of Montfaucon, namely the 4th Division right, 32nd left with the inexperienced 79th Division making a frontal attack. Had this been done it is safe to say that the 5th Corps would have gained all objectives on schedule time.

The corps staff should have realized that to make a successful attack on a highly organized position like that over which it was to operate the attack must be a surprise and the troops would have to follow their barrage very closely. But they lost sight of the fact that to follow a barrage correctly is only gained by experience and not in theory. Hence was it not natural that the barrage in front of the 79th Division was lost where with seasoned troops it would have been followed into Montfaucon with few casualties.

By the nature of the terrain and the position of the 5th Corps its mission was simply an attack of deep penetration which lacked many elements of success. 1st, it endeavored to penetrate the strongest position on the enemy's front instead of his weakest. 2nd, The attack lacked the element of a total surprise. 3rd, Troops were not disposed in sufficient depth to make the penetration required by the position of the enemy's lines of defense. 4th, Roads to the front were insufficient to forward supplies and artillery to the assaulting echelon. 5th The continuous advance of the infantry required for deep penetration was lost sight of by all units. When the assaulting echelons met their first resistance they split themselves up in independent local attacks thus reducing the impulse of the main attack to a halt. When the enemy realized that he has halted the main attack, he gains courage, brings up his artillery and reserves and returns with swift counter attacks.

The 5th Corps violated one of the elementary principles of tactics by running the boundary line between the 37th and 79th Divisions through Montfaucon. It should have been included entirely within one division zone or the other.

Whether or not the commanding general of the 5th Corps was justified in changing his plans of attack from divisions attacking abreast within their respective zones toward a limited objective to that of attacking independently of each other regardless of cost is a matter of conjecture.

In many cases command posts of higher units were chosen with such poor judgment that the staff lacked proper facility to perform their duties.

As a rule liaison and communication between troops broke down. Great confusion was caused by exaggerated and incorrect reports and for periods it was impossible for the 5th Corps to know exactly what was going on at the front. This was shown in several instances where the corps ordered barrages behind its advanced units causing them to give up ground which they had won at great sacrifice.

Tanks and infantry lacked training in mutual support of each other.

The corps lacks sufficient roads to the front. Not even one to a division, and on those used the traffic control was so ineffective that troops were without supporting artillery and supplies for long periods.

Control and leadship of small units was inferior. In many cases rear echelons were allowed to close on and merge into the forward echelons thereby over crowding the lines of resistance which exposed more men to casualties than necessary. Maneuver units were used up in this manner which sacrificed the established principle of deployment in depth.

Eagerness of small groups in getting forward often landed them in vulnerable salients in which they suff-

ered heavy losses from machine gun fire and the attempts to rush machine gun nests by frontal attacks were paid in heavy casualties.

LESSONS.

1. A commander must estimate the attacking ability of the troops under his command. They might be classified as attacking and holding troops. For missions assigned requiring deep penetration he should use his best troops.

2. In attacks against an organized position the initial momentum of a surprise attack must be driven home before the enemy can stop to reorganize on ground of his own choosing. To do this it requires first class attacking troops.

3. Inexperienced troops will not follow a barrage with any degree of success without unnecessary losses.

4. In small commands the advance of troops held up by strong points depends on the advance of the units on its right and left; equally applies to larger units; in this case had the 37th Division made a deep penetration like that of the 4th Division they would have dragged the 79th Division along between them.

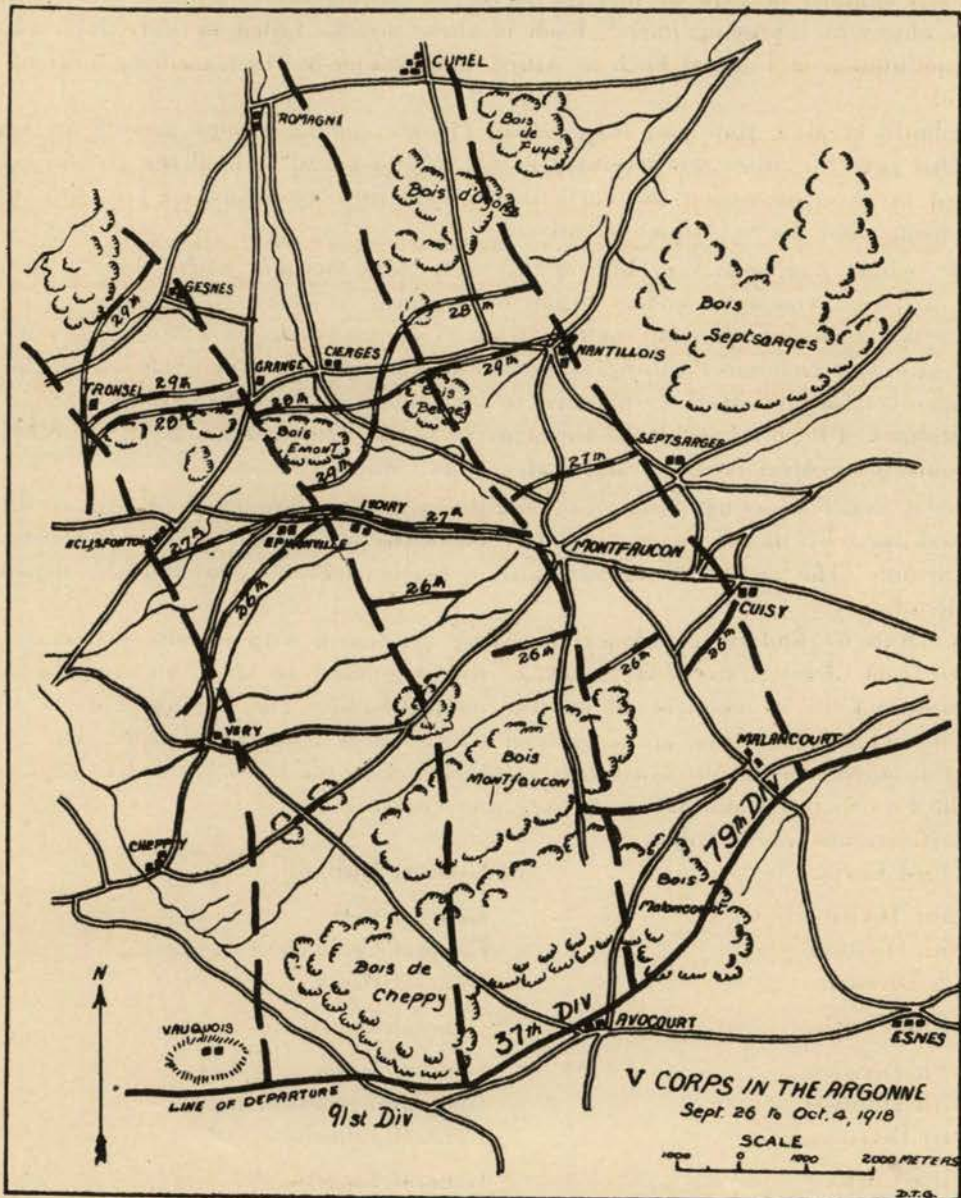
5. Success of battle depends on cooperation of auxiliary arms with the infantry.

6. Before a commander should commit his troops in battle he must consider a practical way of pushing forward the reserves, supporting artillery, ammunition and supplies. It is quite easy to get the infantry off at H hour, but its success will be very limited without the required support.

7. The necessity for mopping up of machine gun nests cannot be emphasized too much.

8. All commanders should be given thorough training in the consolidation of ground gained.

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OPERATIONS OF THE 5TH CORPS IN THE 2ND PHASE OF THE MEUSE—ARGONNE.

By

Captain Senius J. Raymond, Infantry

INTRODUCTION.

In our consideration of the operations of the 5th Corps in the 2nd Phase of the Meuse—Argonne Offensive (1st Division excepted) it will be well to spend a little time in the consideration of the events which led to the operations designated as the 1st Phase.

During the early summer of 1918 we find the Germans making their last and most determined attacks with the ultimate object of capturing Paris. Each of these attacks failed or were repulsed by the Allies. Then with the appointment of General Foch as Allied Commander in Chief, insuring unity of command came the turn in the tide.

During the months of May, June and July, nearly 240,000 combat troops arrived in France from the United States. This gave the allies the necessary power to attack and to hold the ground taken.

Then followed in close succession the early successes of the Americans, ie., Cantigny, Chateau Thierry on the Marne, Soissons, and the St. Mihiel offensive.

Allied morale, which had been very low in the early year, became much better. Instead of viewing the dark spectre of defeat, visions of victory began to appear.

On September 2nd, a definite decision for the Meuse Argonne Offensive was agreed to between Marshal Foch, General Petain and General Pershing. The sector allotted to the Americans was of the utmost importance as it was the pivot for the attack as planned to take place on the entire front.

Great precautions had been taken by the Germans to fortify this ground as it protected his two main lines of communication (Meziers-Sedan and Valenciennes-Mons railroads)

Four complete trench systems had been installed, the first two were built to protect the Metz Meziers railroad; which was used by the Germans to swiftly move Divisions from one part of the line to another as the case might warrant. The success of the Germans in northern France and Belgium depended almost entirely on this railroad.

On September 20th we find the 1st American Army organized, with seventy two miles of front in its sector. It reached from Clemery, north of Nancy, to the Argonne. In its front was the four formidable intrenched positions, and the strongest of all was the natural barrier, the Argonne Forest.

The front was divided into three areas, each of which was assigned to a Corps. The 3rd Corps (right) rested its right flank on the Meuse, the 5th Corps (center) and on the left was the 1st Corps. The left Corps connected with the French in the middle of the Argonne Forest.

The initial organization was as follows:

Third Corps.	General Bullard.
33rd Division,	General Bell.
80th Division,	General Cronkrite.
4th Division,	General Hines.
Fifth Corps.	General Cameron.
79th Division,	General Kuhn.
37th Division,	General Farnsworth.
91st Division,	General Johnston.
First Corps,	General Liggett.
35th Division,	General Traub.
28th Division,	General Muir.
77th Division,	General Alexander.

On September 25th the American order of battle, from right to left were the 33rd, 80th, 4th, 79th, 37th, 91st, 35th, 28th, and the 77th Divisions. The line established was from right to left as follows: Clemery-Fresnes-Ornes-Forges-La Harazee. In reserve were six divisions, one assigned to each of the Corps and three held in Army reserve.

The whole of the operation was continuous, but due to the length of time involved, was divided into three phases. The first from September 26th to October 4th, the second from October 4th to October 31st and the third from October 31st to November 11th.

The axis of the attack was the line Montfaucon-Romagne-Buzancy. The offensive proper commenced at 11:00 P. M., September 25th, with a furious bombardment. The Infantry jumped off at 5:30 A. M., September 26th in what was destined to become the greatest battle in American or other history.

Divisions met with varying successes but all made progress. On September 29th three of the Divisions had suffered severe losses. The 35th, 37th, and the 79th Divisions had to be relieved. Two of these are concerned in this monograph, in that they were in the 5th Corps as originally constituted. The 1st Division (Summerall) relieved the 35th Division, the 3rd Division (Buck) relieved the 79th and the 32nd Division (Haan) relieved the 37th Division.

No Attack was ordered for October 1st. The 1st phase was over. From October 1st to the 4th little progress was made. Both sides doing extensive patrolling, bringing up their artillery, supplies etc.

On the night of October 3rd the 91st Division was relieved by the 64th Brigade of the 32nd Division. Untried Divisions had covered themselves with glory. Some of the Divisions had been more fortunate than others, but all had gained ground.

THE SECOND PHASE.

By the night of October 3rd the 1st American Army was ready to continue the Advance. Little or no movement forward had taken place for four days. Several local attacks had taken place to improve local positions etc. The four days had been spent in building roads across the devastated areas, bringing up the artillery, supplies etc.

The American order of battle from right to left on October 4th was as follows: The 33rd, 4th, 80th, 3rd, 32nd, 1st, 28th, and the 77th Divisions.

The 3rd, 32nd, and the 1st Divisions constituted the assault divisions and the 42nd and the 91st the reserve divisions in the 5th Corps on this date.

In front of the American forces was the Kriemhilde-Stellung system of trenches. It was the last of the prepared positions and was exceptionally strong, both materially and natural. The Germans had made good use of the time from October 1st to 4th in siting the numerous machine guns for defense. The terrain was rugged, covered with woods and the German engineers well knew how to take advantage of the same. The Artillery concentration had been great and the entire area was drenched with gas.

During the three days preceding the attack patrolling had been vigorous. The patrols were met with heavy machine gun fire upon appearance from all points. All indications pointed to a most determined resistance by the Germans.

On the 5th Corps front we now find the 3rd, 32nd, and the 1st Divisions constituting the assault echelon. The Germans expected the attack and with the surprise element eliminated the advances were not as great as those made on the 1st day of the initial attack.

The 3rd Division, attacking from the Nantillois-Cierges road immediately met with intense machine gun resistance. They were held up by fire from that part of the Bois des Ogons that lies west of the Nantillois-Cunel road. The woods afforded good protection for the machine guns and the fire was very heavy.

The 32nd Division which had taken over the sectors of the 37th and 91st Divisions attacked toward the Bois de la Marine with all regiments abreast. This attack was preceded by a light barrage which proved insufficient. The enemy fire was intense and the division only advanced one kilometer. The division sector had now become very wide, covering a front of about five kilometers.

On the night of October 4—5 found the line running from south of Briuelles on the Meuse, north of the Bois des Fays, thence back and south of the Bois des Ogons, north to Cierges to Tronsol Farm, thence to the crest overlooking Exermont, thence southward including the Chene Tonder, thence to Binarville in the Argonne Forest.

On the morning of October 5th the 3rd Division, in conjunction with the 80th Division on its right seized the Bois des Ogons laying in their front. Bitter resistance had been encountered here, the majority of which came from the Madeline Farm. It was impossible to make further advances until that was reduced.

The 32nd Division, which had not been able to advance on the 4th, with the assistance of tanks, Gas and Air service, attacked at dawn of the 5th. A heavy artillery concentration had been laid down on those points which offered the most resistance the day before. Under a terrific machine gun and artillery fire they advanced, taking the Bois de la Marine and capturing the town of Gesnes. Over 200 prisoners were captured this date. Considerable trouble was encountered due to the fact that the front line could not be accurately located from the messages received from the combat units, which condition also prevailed in the Divisions on the right and left as found out by the Division Commander while on a visit to the P. C's of those Divisions. Enemy aircraft was very active, outnumbering our own. They fired on the troops with direct machine gun fire, also regulating the fire of the enemy artillery.

On October 6th the objective for the 3rd Division was the Madeline Farm. Artillery concentration had been placed on the building, including the fire of 6 inch rifles for two hours. In conjunction with the 80th Division on the right they attacked time after time only to have the attacks wither in the intense machine gun fire.

The 32nd Division did not attack on this date, but in compliance with instructions received from Corps established three centers of resistance. Contact was maintained with the enemy by means of patrols. Every target that presented itself drew enemy machine gun fire.

On October 7th the 3rd Division did not attempt to advance, but were subjected to heavy counter attacks. They were successfully repulsed. The 32nd Division garrisoned the centers of resistance as organized the day before. The 1st Division had requested them to connect up with them on Hill 269. A desperate attempt was made to do this, but due to an error on the part of the 1st Division in assuming that they were occupying Hill 269, contact was not established. Instead of Hill 269, occupied by the Germans and well manned with machine guns, they were established on a hill some 500 yards to the south of it.

On October 8th, the Divisions on the east bank of the Meuse were ordered to attack. The Divisions on the west bank were not ordered to attack, but spent the day in organizing the positions already gained, bringing up their artillery, etc., and preparing for the attack to follow on the 9th. During the night the 80th and the 3rd Division, who were now occupying wide fronts, contracted their sectors to more effectually cover the wooded area around Madeline Farm. The 32nd Division moved to the right and occupied the sector vacated by the 3rd Division. The 181st Brigade of the 91st Division moved into the lines between the 32nd and the 1st Divisions. Thus we have the 91st Division back in the lines. This brigade was attached to the 1st Division.

On October 9th every Division attacked again. It was found necessary at this time to swing the axis of attack east instead of north. That morning the 3rd and 32nd Divisions resolutely attacked in face of bitter resistance, taking Madeline Farm, Bois de Cunel, advancing the line to Cunel-Briculles Road on the outskirts of Romagne and Cunel. The attack was preceeded by a rolling barrage, and much of the fighting was of a hand to hand character. In some instances the infantry in following the barrage passed over machine gun nests only to have them reappear firing into their rear. These were mopped up by the succeeding units. Considerable difficulty was experienced by the Divisional and Corps staffs locating the front lines on maps, due to the fact that new roads had been built by the Germans across the area. The artillery and machine gun support was exceptionally well coordinated on this day.

On the 10th, the 3rd Division attempted to advance but gained little ground. The 32nd Division reformed its lines to conform to those of the 181st Brigade on its left. Divisions were unable to further exploit their fronts as they had now reached the barbed wire in front of Romagne and Cunel. During the night the 181st Brigade was relieved by the reserve brigade of the 32nd Division, and the 1st Division was relieved by the 42nd Division.

On October 12th, General C. P. Summerall, who had been commanding the 1st Division succeeded General Cameron as Corps Commander of the 5th Corps. At this time the 2nd American Army was organized. Lieutenant General Hunter Liggett assumed command of the 1st Army and Lieutenant General Bullard that of the 2nd Army.

On the night of October 12th, the 3rd Division relieved the left Brigade of the 4th Division. This gave the Division a front of six kilometers, necessitating the placing of all infantry regiments in line.

No attempt was made to attack on the 13th, but on that afternoon the Germans laid down a heavy bom-

bardment on the front of the 3rd Division, followed by a determined counter attack. This was repulsed with heavy losses to the Germans.

West of the Meuse, the entire 1st American Army was facing the 1st line of the Kriemhilde Stellung. This line consisted of one system trenches, very heavily wired, and was naturally supported by a high wooded crest. The machine gun defense and this place was formidable and most determined and well supported by artillery. Cunel and Romagne was still held by the Germans.

A regrouping of the Divisions now took place. The 38th and 7th Infantry of the 3rd Division which held the line in front of the Bois de Foret was to stand fast. The 5th Division was ordered forward, and was to attack thru the 30th and 4th Infantry, which were holding the line in front of Cunel. The 32nd and the 42nd Divisions now constituted the assault echelon of the 5th Corps.

At 8:30 A. M. October 14th, the 32nd and the 42nd Division attacked, protected by an intense artillery barrage on the last German line. The Germans immediately retaliated with artillery and machine gun fire which swept the advance lines. In the afternoon, by sheer stubbornness of their attack, the 32nd Division had captured Romagne, taking about 200 prisoners. The 42nd Division, with all regiments in the line encountered stiff resistance at Cote de Chatillon, stopping their advance. All further attempts were stopped here. By the evening of the 14th, it was evident that the attack insofar as a breakthrough was concerned was a failure. The gains for the day consisted of the towns of Romagne and Cunel, but the Germans still held the Kriemhilde Stellung.

The 42nd Division was again directed to attack on the 15th, the 84th Brigade had some small successes by forcing the Germans to evacuate La Tulerie Farm. The 83rd Brigade again failed to advance.

The only action on the 17th was by the 32nd Division in the center. The slight advances of the 42nd Division the day before had relieved the pressure, therefore it was decided to attack the Bois de Bantheville, which commanded the front. The artillery concentrated on it for twelve hours, after which it was attacked with all infantry regiments in line. After a fierce all day fight, night found the 32nd Division in possession of the woods, firmly established to resist counter attacks. This position now flanked the town of Bantheville.

On October 19th, the 89th Division relieved the 32nd Division without unusual incident. This Division had been in the attack for eighteen days, and was sadly in need of a rest.

The 20th of October was spent by the 89th and 42nd Divisions in consolidating their positions and preparing for further advances.

No material gains were made during the balance of the month of October. On the 26th the Germans were still holding the lines of the Kriemhilde Stellung in force from Clery le Petit—Cleary le Grand—Aincreville—Landers Saint George—Champignuelle to the Argonne Forest just north of Grandpre.

All attempts to break through from October 11th to October 31st had failed, and it was soon evident that another attempt must be made. The fighting had been the hardest that the American Army had to endure in the war. Every one was tired but determined to carry on and see the thing thru.

The enemy on the immediate Corps front were of the German 5th Army, commanded by General Von Clawitz. The indentifications made during the operation was as follows:

15th Bavarian Division.	3rd Guard Division.
52nd Division.	115th Division.
82nd Division.	223rd Division.
28th Division.	236th Division.
123rd Division.	41st Division.
13th Division.	

As many as four separate identifications were had from a single group of prisoners captured, which indicated that the Germans were holding the line in force, and that the attack of the Americans was so vigorous and persistent as to forbid the units due for relief an opportunity to leave the lines.

During the 2nd phase of the Meuse-Argonne offensive the following Divisions operated in the 5th Corps, either in line or as indicated below:

	In Line	In Reserve
91st Division.	October 7th—10th.	October 4th—7th.
32nd Division.	October 4th—20th.	October 20th—27th.
3rd Division.	October 4th—12th.	
42nd Division.	October 11th—November 1st.	October 4th—10th.
1st Division.	October 7th—11th.	October 22nd—November 1st.
89th Division.	October 20th—November 1st.	October 12th—20th.
2nd Division.		October 22nd—31st.

ANALYSIS AND CRITICISM

There is little criticism to be made of the enemy dispositions and actions. They were fighting a rear guard action covering a withdrawal of enormous proportions. That it is well done is attested to by the facts that after the 1st phase, with its surprise effect over, little material of note was captured. The machine gun dispositions and the determination displayed in defending their positions is a revelation considering the morale of an army definitely facing defeat after four bitter years of war.

Criticism of our own forces is reluctantly made considering the successes attained by the respective Divisions concerned in the action, and the relative inexperience of the writer.

The fighting was very bitter, over rugged and broken ground, well adapted for defense, and exceptionally well organized. The cream of the German Army was brought to this sector to delay the advance, as it would have been disastrous to lose the railroad until the armies in northern France had been withdrawn.

The fortitude and persistence of the soldier under extreme hardship was most commendable. The junior officers part in the action was glorious. That which he lacked in Military Art was more than made up for by his will to do and die.

Superiority of the air was claimed for our forces, but evidences of enemy planes, flying low, firing with impunity with direct fire at the troops in the line tend to contradict the contention.

The tanks rendered excellent service wherever used. Their mechanical life was not as long as is desired, therefore the maximum benefit was not derived from their use.

Contact and communications between the units within the divisions and between divisions was in many cases poor. In one instance the Commanding General, 32nd Division found it necessary to go forward and ascertain for himself the location of his front line units.

Reports as to the location of subordinate units were often erroneous. This was partly due to roads and other landmarks shown on the maps being obliterated or new ones built. In other cases due to faulty map reading.

Considerable trouble was had in bringing up the artillery, supplies, etc., which was no doubt due to the miserable condition of the roads. They had all been severely shelled.

LESSONS LEARNED

1. Control of the air must be secured and maintained. If same is not done the troops suffer unnecessarily.
2. The tanks are a valuable asset in operations over a well defended zone, armed with wire and machine gun nests as this area was, but they are in need of mechanical development.
3. All troops must be taught that contact and communications must be maintained. The high command cannot function successfully if this is not done. Loss of contact with neighboring units causes exposed flanks, with its attendant losses.
4. Each and every officer, non-commissioned officers, and as many soldiers as is possible should have a course in map reading, and should be able to accurately locate himself on the map from the ground features.

References:—The War With Germany; A Statistical Survey, by Ayers; Our 110 Days Fighting, by Page; Final Report of General Pershing; History of the World War, by Simonds; History of the A. E. F. by Thomas; 42nd Division History; 3rd Division History; 80th Division History; Report of Division Commander, 32nd Division.

TH7 FOURTH DIVISION (U.S.) IN THE FIRST PHASE
OF THE MEUSE—ARGONNE

By

Captain Owen Summers, Infantry.

AMERICAN ACTIVITIES AND PLANS

The Third Corps was composed of the 33rd, 80th, 4th and 3rd Divisions. It was commanded by Major General Robert L. Hines. The Divisions concentrating in the Corps sector had been marching only at night, owing to the fact that the General Staff had hoped to spring the attack as a surprise to the Germans.

The Chief of Staff of the 4th Division received a draft of the Corps orders for the attack at a conference at Corps Headquarters on September 19th. The detailed plan followed. The Corps orders called for the advance of about fourteen kilometers to the army objective, which was a line following the northern edge of the Bois-de-Foret and extending southeastward to Briuelles. The Corps objective, about 7 kilometers from the "jump-off" lines on Hill 304—was a line extending east and west about a kilometer north of Septsarges—and along the southern end of the Bois-de-Septsarges. The order called for the holding up of the advance of the divisions of the Corps on the line of Corps objective until the center or right division (the 79th Division) of the 5th Corps, should arrive on the line with the 3rd Corps objective, at which time the divisions would again move forward.

On the immediate right flank of the 4th Division, the advance was to be made by the 80th Division, and on the left flank was the 79th Division (5th Corps) participating for the first time in an engagement. The 3rd Division was to be the Corps Reserve.

When the divisional staff had made a careful study of the draft of the Corps order, the Brigade and Regimental Commanders were called and the plans of the attack was discussed. The front line was being held by troops of the 33rd Division and at the hour of the attack, the 4th Division would pass through the lines. Brigade, Regimental and Assault Battalion Commanders went forward with their staffs to make a personal reconnaissance. Engineer troops had been directed to prepare portable foot bridges to be carried and placed across Forges Brook to aid in the advance of the troops. No tanks were furnished the Division. No gas defense troops were assigned to the Division. In addition to the 4th Artillery Brigade, there was attached to the Division the 10th and 15th Field Artillery (3rd Brigade), the 250th R. A. C. and the 2nd Battalion of the 308th R. A. C. French Artillery. This made a total of 108 pieces of 75 mm. and 60 of 155 mm. calibre. They were organized into a barrage group, a light harassing group, and a heavy harassing group. H hour was given as 5:30 A. M. D. as September 26th. The troops were to be in position in the "jump-off" trenches at 3:00 A. M. The attack was to be preceded by a three hour bombardment. The troops were then to move out under a rolling barrage. The sector over which the Division was to attack was funnel shaped from a width of two and one half kilometers between Malancourt and Bethincourt, it increased gradually to a width of five kilometers between Briuelles and Cunel. The left boundary passed east of Malancourt, west of Cuisy and Septsarges, east of Nantillois, and Cunel. The right boundary extended from a point on the Forges Brook one kilometer west of Berthincourt, through Hills 262 and 280, thence north to the Meuse, just east of Briuelles. The Commanding General, 4th Division, designated the 7th Brigade to make the initial progression. The division would attack in column of brigades. Arm, light packs, raincoats, two days ration, an extra supply of water and extra ammunition were all that was to be carried. The remaining equipment was piled in dumps and guarded until the Division came out of the lines.

On the night of September 24th-25th, the entire division was in the vicinity of Montzeville. The marches had been short, in order to enable the artillery to camouflage their guns and the Infantrymen to get into bivouac before daylight as the German aerial activity was fast becoming a menace to the plan of secrecy.

STAFF WORK

It is well to think of the staff work that is necessary to carry out the orders as I have outlined them. The signal plan of communication, the intelligence plan, the question of supplies, replacements of men and material, the care of the wounded, the routes of approach, the concentration of a large body of troops in a small area, the handling of congested traffic, over roads already proven inadequate and the task of getting the

artillery over "No-Mans-Land"—each one of which required a great deal of thought before they were passed down to subordinates for execution.

SEPTEMBER 25TH.

Shortly before dark, on the evening of the 25th, the 7th Infantry Brigade moved out from its position in rear of the lines along the Montzeville—Esnes Road, until it arrived at Esnes, thence north and east until it entered the maze of trenches on Hill 304. The crunching of feet, the sound of wheels, and the occasional shriek of a shell was all that could now be heard. This was a golden silence after the noise on the road over which they had just traveled. The 39th Infantry with its 1st Battalion as the Assault Echelon was on the left of the Division Sector, supported by Company A, 11th Machine Gun Battalion, and two Platoons of Company B, 4th Engineers. The 2nd Battalion, 47th Infantry as the assault battalion, supported by Company D, 11th Machine Gun Battalion and two platoons of Company B, 4th Engineers was on the right of the Divisional Sector. Each regiment had a battalion in support, which was to leap frog the assault battalion at the intermediate objective, at which time the barrage was to halt. The 7th Infantry Brigade Reserve consisted of one battalion from each regiment in the brigade, Company C and B, 11th Machine Gun Battalion, and the 10th Machine Gun Battalion. The 8th Brigade had taken up its reserve position in the trenches north and west of Vigneville.

In addition to the divisional and attached artillery, there had been placed in the rear of the 4th Division, many large naval and railway guns,—until there was a gun for every eight meters of front. The artillery opened preparatory fire at eleven P. M.

SEPTEMBER 26TH.

All the army artillery opened fire at 2:30 A. M. It is impossible to imagine the terrific noise caused by this fire. The heavens were illuminated by the tongues of fire which leaped from the guns as they sent to the German lines the shells that spelled the doom of the German Forces in France. The German artillery sent back but few shell in return.

Promptly at 5:30 A. M., just as the dawn was breaking, the Infantry moved out of the tapped lined jump off trenches, following the rolling barrage at the rate of 100 meters every four minutes. They were supported by overhead machine gun fire, from the guns of the 10th Machine Gun Battalion and two companies of the 11th Machine Gun Battalion, whose fire was concentrated on the first German lines.

The infantry moved through the gaps in the wire, cut by the Engineers and out into No-Mans-Land. The smoke of battle aided by a dense fog, made it very hard to keep the proper direction, even though Engineers with illuminated marching compasses were attached to each company. The fog aided by covering their advance, but it made liaison between units almost impossible to be kept. Down the slopes of Hill 304 went the 7th Brigade, and over the swamp land in the Forges Brook bottom; then up the sides of the hill upon which were the first German lines, through the wire which had been shattered and into the German trenches. The Germans who had taken refuge in the dugouts when the artillery opened fire, were willing prisoners. Most of them seemed to be dazed. The 7th Brigade experienced little or no opposition at this time from German Infantry weapons. An occasional German shell exploded in the area of the advancing troops without doing serious damage. The advance was continued over one hill and up another, until the assaulting battalions of the 39th and 47th Infantry reached the German intermediate position south of Cuisy. Here the Germans offered slight resistance. The 47th Infantry had no difficulty in establishing its hold on this line, but the 3rd Battalion of the 39th Infantry met considerable opposition from the direction of Cuisy. The battalion continuing the attack captured Cuisy, over 600 prisoners, and twelve pieces of 77mm. Artillery. Up to this time, the Germans had skillfully withdrawn the bulk of their artillery and that which could not be withdrawn was used for direct fire against our advancing troops. Of the twelve pieces of artillery captured, eight had been rendered useless by our artillery fire, or had been destroyed by the Germans preceding their retirement.

At this point, in accordance with divisional orders, the troops were to rest under the protection of the barrage. During this period the Assault Battalions were to be leap-frogged by the supporting battalions and the advance continued to the corps objective. This was successfully accomplished by the 47th Infantry, the

3rd Battalion now becoming the assault battalion. On the left of the line, the 3rd Battalion, 39th Infantry, was not relieved by the 1st Battalion. The failure of the 1st Battalion to lose contact with the 3rd Battalion, made it necessary for the 3rd Battalion of the 39th to again lead the attack.

The 1st Battalion, 39th Infantry, having lost its way in the fog, moved to the left outside of the divisional sector. It soon found itself engaged with the Germans who were in prepared positions on the eastern slope of the hill upon which is located Montfaucon. The positions held by the Germans were protected by a mass of barbed wire entanglements and machine gun nests. Two platoons of A Company executed a partially successful flank attack and after considerable loss, succeeded in capturing more than a hundred prisoners. At this time, liaison was made between the regiment and the 1st Battalion and it was ordered to move forward in the direction of Septsarges. Upon moving forward from this apparently successful attack, the battalion was suddenly fired on by numerous machine guns from the same hill, the Germans having come out when our troops started to advance in the direction of Septsarges. Again they were attacked by platoons from Companies C and D, and after continued fighting the Germans retired from their positions. Our casualties had been very heavy.

The 79th Division had made very slow progress and was at that time about three kilometers south and south-east of Montfaucon exposing the entire left flank of the 4th Division.

As the 7th Brigade moved forward after their thirty minute halt, the Germans from a position on Hill 315 opened a heavy machine gun and minenwerfer fire on the advancing troops of the 3rd Battalion, 39th Infantry. At the same time, a small German counter attack was directed against their left flank. This attack was broken up by rifle fire from three platoons of the 3rd Battalion. From this position use was made of the fire power of the machine guns of the 11th Machine Gun Battalion, which was attached to the 3rd Battalion of the 39th Infantry. Neutralization fire was placed on Hill 315, and Fayel Ferme, and permitted the further advance of the 39th Infantry.

As yet, 1st battalion had not arrived, and the 3rd Battalion was forced to push on, though gradually weakened by its losses. As the advance progressed, strong enemy resistance and machine gun fire from the vicinity of Septsarges was met. One whole platoon of I Company was practically annihilated during an attack against these machine guns. Their attack was supported by the remainder of I Company and Company K. They succeeded in wiping out the machine gun nests that were holding up the advance. The battalion then pushed forward to the Corps objective and proceeded to consolidate their positions on this line. The assault battalion of the 47th Infantry, having arrived on this line, had experienced but little difficulty during its advance. The 80th Division connected with the 47th Infantry on the right and was also on the Corps objective. Outposts were placed north of the Corps objective, and the battalions dug in and awaited further orders. It was now 12:40 P. M. and the 7th Brigade had made an average advance of one kilometer an hour since the jump off.

In order to protect the left flank of the brigade, the 79th Division having been unable to capture Montfaucon, Company K supported by Company I and one platoon from the 11th Machine Gun Battalion, went into position facing west. While in this position three small counter attacks were attempted by the Germans, but were each time repulsed.

At 5:30 P. M. after a wait of five hours, orders came from division to push the attack, regardless of the progress of the 5th Corps. The 1st Battalion, 47th Infantry, now came up on the line with the other assault battalion of the 47th Infantry. The assault echelons had now advanced beyond the range of their supporting artillery. During the five hour wait on the Corps objective, the Germans mistaking the cause of the delay, had gained heart, and were filtering back to their former positions in front of our advance. When the new advance started a withering fire met our troops with the result that little progress was made. The 1st Battalion, which had arrived during the delay on the Corps objective, took up a position on the right of the 3rd Battalion, and connected up with the 47th Infantry. Owing to the heavy enemy fire the advance was held up and the front lines for the night remained approximately on the Corps objective. 7th Brigade Headquarters had now been established at Cuisy and during the night the advance Division C. P. moved from Montzeville to Cuisy.

The 8th Brigade had moved at 8:45 A. M. from its reserve positions to the jump off trenches on Hill

304,—with the mission of holding that position in case of a determined German counter attack. At 4:00 P. M. it again advanced and occupied the German intermediate positions south of Cuisy.

Now let us go back to the area in rear of the Division. There were no roads running north and south through the Division sector. The road running from Malancourt to Cuisy had been assigned to the Division by the Corps, to make whatever use of it they desired. The road was in fair condition to Esnes but from that point north it had been badly torn up by shell fire. After passing the French lines and up to Malancourt the road had almost become obliterated. The immediate repair of this road was necessary and the 4th Engineers were directed to put it in shape in order that the artillery ammunition and food could be sent forward. Work was commenced at Esnes and progressed rapidly during the afternoon of the 25th and after working all night, a full sized road with two artillery bridges had been completed by 1:35 P. M., September 26th. Over 40,000 sandbags had been used.

The progress of the artillery units toward the front had been very slow. The battalion which was to support the assault battalions, arrived at Malancourt about dusk on September 26. The traffic conditions had become the most serious problem in the rear of the lines. Forward movement on the road running north of Cuisy through Malancourt were now impossible because the road was under direct observation from Montfaucon, which had not been captured as yet by the 79th Division. The battalion was then moved to Cuisy via the Bethincourt road. It was caught in the traffic jam at Bethincourt and did not arrive at Cuisy until late in the afternoon of the next day. Two batteries which had been able to get through supported the attack on the morning of the 27th, arriving about 9:00 A. M. One Battalion of the 77th Field Artillery reached Cuisy about sundown on the afternoon of the 26th. It went into position on the Cuisy—Montfaucon road, west of Cuisy to cover the exposed left flank of the division. The remaining divisional artillery got into a firing position in the vicinity of the Malancourt—Montfaucon and Malancourt—Cuisy roads, during the afternoon of the 27th.

During the first day of the advance, great difficulty had been experienced by the signal battalion in maintaining communication. All forms of communication had been used during the advance including radio telephone, runners and carrier pigeons.

The German aviators were exceedingly active. They set fire to two observation balloons well behind our lines, and flew low over our positions. From the viewpoint of the Doughboy it appeared that the Germans had control of the air over this portion of the American sector. Our planes, however, maintained good liaison with our advancing infantry. During the day, one enemy plane was destroyed. The Commanding General, 4th Division, realizing the necessity of supporting artillery, issued an order that the artillery, ammunition supply and kitchens would use the road to the front in the order named. The 79 Division also attempted to move its artillery and supplies along the Malancourt—Montfaucon road, thus impeding the progress of the 4th Division artillery along this road. Late in the afternoon the Commanding General directed the Commanding General of the 8th Infantry Brigade to detail one battalion to aid in the movement of this traffic. The 2nd Battalion, 58th Infantry, accordingly reported for this duty and aided in the direction and control of the traffic on the Esnes—Malancourt road until relieved on September 28th.

SEPTEMBER 27TH.

The attack commenced at 6:30 A. M. The divisional sector had now begun to spread out. The 47th Infantry with two battalions in the assaulting echelon and one battalion in support, now inclined to the north east in the direction of Briuelles. Its advance lay through the Bois-de-Septesarges and the Bois-de-Briuelles. Company A, 10th Machine Gun Battalion was attached to the support battalion. The zones of advance of the 39th Infantry had not changed. The 3rd Battalion formed the assault battalion, the 1st battalion the support, and the 2nd Battalion was still in the Brigade reserve. Units of the 11th Machine Gun Battalion took up a position on the left flank.

The Germans, during the night had brought additional men, guns and ammunition forward and there resistance became more determined. Former German Machine Gun positions on Hill 266 which commanded the open country northeast and south of Nantillois were now used by our troops. The advance of the 39th Infantry with three companies of the 11th Machine Gun Battalion from the Bois-de-Briuelles, in the direction of

Nantillois was now halted by artillery fire from the southern edge of the Bois-des-Ogons, and the Bois-de-Fays. In addition very heavy machine gun fire from Nantillois caught the 39th on the flank. The men of the 1st Battalion broke under this fire and retreated into the Bois-de-Septesarges and behind the cover of Hill 295. The 3rd Battalion which now supported the withdrawal of the 1st Battalion, became the target for direct artillery fire from Nantillois and suffered many casualties. During the confusion, units of the 3rd Battalion began to withdraw to better protected positions. Units had intermingled. Lieutenant Haney, who was now the Commanding Officer of the 1st Battalion, strived to maintain order, and had succeeded in keeping about a platoon of riflemen and several sections of machine guns on Hill 266. The Brigade Commander, as well as the Regimental Commander, exerted all possible means to hold the retreating troops in check. They were finally reorganized under the cover of Hill 295 and dug in for the night.

On the right of the line machine gun and sniper fire seriously interrupted the advance of the two battalions of the 47th Infantry, but they steadily advanced forward clearing the path of all obstacles. Their further advance was halted because the 39th Infantry could not resume its advance on the left. The right of the Divisional sector had advanced about a kilometer. On the left flank, the new line occupied by the 39th had given ground to the enemy. The line that night ran from Hill 295—along the edge of the Bois-de-Septesarges—through the Bois-de-Brieulles to the woods on Hill 280. At this point, connection was made with the 80th Division.

Shortly before noon of the 27th, Montfaucon was captured by the 313th Infantry, (79th Division). The capture of Montfaucon somewhat relieved the pressure on the Division's left flank, but the advance of the 79th Division was very slow. That night the front line of the 79th Division extended east and west along the Ivoiry-Montfaucon road, which left them two kilometers less advanced, than was the 4th Division. During the early morning hours, rain had set in. The roads which had hitherto before been blocked with traffic now became a sea of mud. The mud was as bad as the German shells. Heavy trucks going forward would slip off the road and the supplies would have to be carried forward by hand. The men of the Division had not as yet received hot food. It had been impossible to get the rolling kitchens forward. The resistance of the men was beginning to weaken, as they became cold and wet.

The German artillery had been particularly active on this date. We were under direct observation of the German battery positions on the east bank of the Meuse. Our Divisional artillery fired in support of and at the request of the Infantry Commanders. The four German 77's which were serviceable, had been organized into a battery, and now, was sending German shells into the Bois-des-Ogons. As all the artillery units of the Division, and the attached artillery were now in the vicinity of Cuisy, the 4th Artillery Brigade Headquarters was established there.

The 8th Brigade, less the 58th Infantry remained in the vicinity of Cuisy, and its Headquarters moved to that village. The 58th Infantry, in order to protect the left flank of the Division, was moved to the vicinity of Septesarges. The 318th Infantry, (80th Division) had been attached to the Division. The regiment was ordered to take up the position formerly occupied by the 58th.

Owing to the poor weather conditions there was very little aerial activity in the Divisional sector on this date.

SEPTEMBER 28TH.

The jump off was made at 7:00 A. M. and was supported by an artillery barrage. The 47th Infantry made excellent headway through the woods, and although meeting with much machine gun fire, eliminated these positions in rapid succession, and soon found its front lines close to the northern edge of the Bois-de-Brieulles. Large quantities of ordnance supplies were captured in the woods. The fire from snipers hidden in trees had caused many casualties during the days advance through the forest.

The 79th Division's lines had approximately reached the left flank of the 7th Brigade. The 39th Infantry jumped off behind a barrage and continued its advance to the northeast. A joint attack on Nantillois by a platoon of Company H, 30th Infantry, and a platoon from Company M, 315th Infantry, (79th Division) forced the Germans to withdraw to the Bois-de-Fays. The lines then advanced a short distance north of Nantillois. The Regiment was receiving heavy machine gun fire from the Bois-des-Orgons and the Bois-de-Fays, which caused severe casualties. After the attack on Nantillois, the 39th Infantry moved by the

right oblique back within the Divisional boundary. The advance progressed to the edge of the Bois—de—Fays. Again the advance of the 79th Division had been slowed up and the 39th Infantry was now receiving heavy fire from the woods on its left flank. They were ordered to withdraw to a position southeast of the Nantillois—Briculles road.

During the night of September 28-29 the 8th Brigade took over the lines, the 7th Brigade moving back to the Bois-de-Septsarges where it remained as the Divisional reserve.

During the day, German artillery had been very active, directing its fire on our forward areas. The Divisional Artillery had given the Infantry excellent support from its new positions just south of the Bois—de-Septsarges. One enemy plane had been brought down within the Divisional area. An American plane was driven down and fell in the Area. This plane had been working with the Division.

Every effort was being made in the rear areas to get the kitchens and food supplies forward so that the troops could at least have hot coffee. At last on the night of the 28th the kitchens of many units, finally moved through the traffic conjection and took up their positions in the southern edge and south of the Bois—de—Septsarges. The advance Divisional distribution dump had been located at Cuisy on this date. Hereafter, the units had no trouble in getting supplies during the first phase of the offensive.

SEPTEMBER 29TH

The relief of the 7th Brigade by the 8th Brigade, reenforced by the 318th Infantry (80th Division) was well executed, taking place just before daylight. The first battalion of the 58th Infantry as the Assault Battalion passed through the intermingled elements of the 39th Infantry with C Company, reenforced by a platoon of machine guns from the 12th M. G. Bn., 58th Infantry making the attack on the left flank, supported by D Company. The attack was to be directed against the Bois—de—Fays and was launched about 5:00 A. M. The attack was to be supported by an artillery barrage. The barrage failed to materialize, only a few shells from our batteries falling in front of our advancing troops. Owing to the misty weather, the direction of C Company was lost, and it soon found itself entering the woods which proved later to be the Bois—des—Ogons. It advanced through the woods until within sight of Madeline Farm. Company D which was to support the attack of Company C, failed to keep contact, and as a consequence Company C, about noon, was forced to withdraw owing to the heavy minnenwerfer and machine gun fire. They took up a position on a slope south of the woods with outposts in the woods. In this position they successfully repulsed two German counter attacks. Their losses had been heavy. About 5:00 o'clock that night Company D came up and dug in about 500 yards in their rear. This position was held until the night of the 30th at which time Company C and D moved to the right into the Division's area. The 3rd Division had now relieved the 79th, and contact was made on the left flank between the 58th and 4th Infantry. The advanced elements of the 8th Brigade were now facing the Kriemhilde section of the Hindenburg lines which ran west from Briculles. While this line did not have as great depth as some of the other lines of defense, its front was naturally very defensible; which made it a very difficult position upon which to launch an attack. The 59th Infantry, on the right of the sector, had been unable to advance in force from the northern edge of the Bois—de—Briculles, owing to the withering fire which the Germans directed against them from the direction of the Bois—de—Fays and Briculles. They therefore dug in and consolidated their positions.

During the day our artillery had been unable to give active support to the attempted advance of the 8th Infantry Brigade. The enemy artillery had been very active, and particularly so during the early morning and early evening hours.

The German Air Service had been exceedingly active all day and manœvered over our positions without any restraint, many times flying low enough over our advancing Infantry to drop grenades on them and to effectively fire upon them with their machine guns.

SEPTEMBER 30TH—OCTOBER 3RD.

During the period of the next four days, the front lines remained unchanged, the elements of the 58th Infantry, which were out of the Division area and in front of the Bois—des—Ogons had now moved to the right, within their own area. The 4th Infantry during this period, came up on the left of the Division and contact was established. The units within the 8th Brigade made their own reliefs, and the patrols were sent

out for thorough reconnaissance of the terrain, preparatory to the advance of the Division in the next phase of the battle. The front line organizations organized their positions for defense in case of counter attacks.

During this period, ammunition for the artillery was being brought up, and preparations were made to support, with adequate artillery fire the next advance of the Infantry.

On the 30th the German Divisions on the American front were estimated to be of about an equal strength to our forces. Their artillery never ceased its activity and caused many casualties through its intermittent periods of shelling.

RECAPITULATION.

During the first seven hours of the first days attack, the troops of the 4th Division had made an average advance of a kilometer an hour, Having reached the Corps objective, with very slight losses. The losses for this phase of the offensive have not been tabulated.

The 7th Brigade, in its first five hours advance, had captured nearly 2,000 prisoners, 40 pieces of artillery, of all calibre, and a great number of minnenwerfers and machine guns. In addition, large supplies of artillery and small arms ammunition had been captured. Two German defensive lines had been reduced.

ANALYSIS AND CRITICISMS.

The American General Staff had underestimated strength of the German positions in the area assigned to the operations of the American Army. This is shown by the fact that the Army objective in the 4th Division's area, was 14 kilometers in advance of the original jump off lines. Our troops had been expected to reach the army objective at the end of the first days fighting. With the poor roads, over which our artillery must advance, it would have been impossible to have supported the Infantry advance for such a distance. The Infantry attack after the 3rd day of this offensive, had failed, because they were attacking against prepared positions which had not been subjected to our artillery fire.

The fallacy of the limited objective in open warfare against a shaken enemy was proven in this phase of the engagement. Had not the 4th Division been halted for five hours upon the Corps Objective, it is reasonable to assume that the attack of the Third Corps could have successfully been pushed to the army objective by the end of the first day. The enemy, mistaking the cause for the long halt, gained heart and came back into their prepared positions, during this interval. The taking of the ground, between the lines established by the 4th Division, at the end of the fighting on September 29th, and the Army Objective took an additional fifteen days and cost six thousand casualties in this sector alone.

When the advance of the 79th Division was halted by the Germans in Montfaucon, during the early morning of September 26th, it is believed that a careful estimate of the situation would have caused the Commanding General of the 79th Division to have committed his Reserve Brigade to the action by sending them to the left of Montfaucon, thus flanking the position, which would have enabled the 4th Division to have moved forward from the Corps Objective much sooner.

It is believed more consideration should have been given by the Staff to the question of the forward movement, of Artillery, supplies, and the moving of the wounded from the forward areas. Their apparent lack of knowledge of the road conditions in the Division's sector, was evidenced by the orders sending the artillery organizations along the Malancourt—Cuisy road. It is believed that the use of this road could have been facilitated, had its use been coordinated by the Commanding Generals of the 4th and 79th Divisions.

The communication between the larger elements of the Division, functioned exceedingly well. It is believed however, that the Regiments and Battalions displayed great negligence in maintaining liaison between their respective units.

There is little to be criticised in the tactics employed during the first days advance, as the Germans had withdrawn from the sector and those who had been unable to get out, had been captured. The operations, after the first three days, were mostly minor ones in which company and platoon commanders conducted the fire fights against enemy positions which were adequately prepared and concealed by the natural formations of the ground. The advance of an entire battalion would be held up by a single machine gun.

The American Staff had successfully covered the movements of troops preparatory to the attack. However, the Germans knew that an attack was impending, but believed it to be east of the Meuse.

One can criticise very little the tactics employed by the Germans. At the beginning of the attack their forces were numerically inferior to the Americans. They fought a rear guard action principally through the use of machine guns, cited in positions ideally located for the defense of this area.

It is hard for an Infantryman on the field of battle to have casualties occur all around him, and still be unable to see an enemy. This may partially have been the cause of the withdrawal of the 39th Infantry on September 27th. Men are prone, when under fire to misunderstand and misinterpret orders. In this case it is believed that orders were given for certain units to withdraw a short distance to the rear. When this movement was seen by the other elements they practically all left their positions and started to retire without orders. Another probable cause of this retirement may have been the fact that the 1st Battalion 39th Infantry on that date was commanded by a Lieutenant, all the senior officers having become casualties. The platoons practically all commanded by Sergeants.

While to the soldier on the ground, it appeared that the Germans had control of the air, it must be remembered that planes are assigned missions, and if American planes turned and went back in rear of their own lines when attacked by German planes as frequently happened, their mission had been one of reconnaissance and not of combat.

With inclement weather, an invisible enemy, and no hot food, it is no wonder that at times it is hard to get the soldier from his fox hole in the advance forward.

LESSONS TO BE LEARNED.

One of the most important lessons to be gained from this operation is the fallacy of limited objectives, when the enemy is in full retreat.

Infantry cannot successfully advance, against strong prepared positions, manned with machine guns, without serious losses, unless artillery supports their attack.

Small groups of Infantrymen, properly employing infantry weapons and tactics, can successfully reduce machine gun nests.

Even lacking in experience and training, an Infantryman, if possessed of courage and initiative, is superior to an enemy whose morale is low.

Troops following a barrage must keep close to the barrage, otherwise its effects are lost.

When in combat, liaison must be maintained between units.

Infiltration is the basis of advance, while moving forward under fire.

Since artillery cannot be moved forward as quickly as infantry, their respective advances should be coordinated by the staff.

All officers and non-commissioned officers should receive a thorough training in the use of the compass, in order that they may be able to keep their proper direction in the zones of advance during an attack.

That proper provision during an advance must be made for the moving forward of all rear elements.

References:—Final Report of General Pershing; Out of My Life, Vol. 2, by Von Hindenburg; Our Army at the Front, by Heywood Brown; The 39th in the World War; Battlefields of the World War, by Johnson; The 58th Infantry in the World War; History of the 7th Infantry Brigade; The 4th Division; History of the 47th Infantry; The Last Four Months, by Maurice; History of the A. E. F., by Thomas; Our 110 Days Fighting, by Page; The American Army in the World War; The Story of the Great War, Vol. 3, by Collier.

OPERATIONS OF THE 30TH INFANTRY SEPTEMBER 26TH—OCTOBER 28TH, 1918.

By

Captain Turner M. Chambliss, Infantry.

FORWARD MOVEMENT OF 3RD DIVISION.

During the night of September 25—26 the movement forward commenced in a sea of mud. The 5th Brigade was directed to occupy Le Fays Woods and the 6th Brigade to occupy Bois de Sivry. The positions were reached about 2 A. M. the morning of September 26th, at which time, the great secrecy of the coming of offensive was disclosed to the men. The movement to the above position was made by marching across country. The roads were avoided on account of the heavy traffic. Care was necessary in crossing columns over the main traffic routes. At these crossing points, the battalion formed in close line with the heads of the companies within a few feet of the road. At a given signal by the military police, the traffic was halted, then the battalion crossed over the road in a rush with the least possible delay. This proved an efficient means of crossing heavy traffic routes with a minimum delay.

At 11:00 A. M., September 26th, the Division moved out of its position in Le Fays Woods and Bois de Sivry in two columns 6th Brigade on right and 5th Brigade on left. The route of march of each column had been marked out by the engineers and instructions were given to avoid all roads as they were for use of wheel vehicles.

At 4:00 P. M. the Division was in position in the northeast corner of Bois de Hesse. For three days, the units of the division remained in this location.

THE 5TH BRIGADE RELIEVES 79TH DIVISION.

The Division passed into the 5th Corps on September 29th, while located in Bois de Hesse, and on Sept. 30th the 5th Brigade went forward to relieve the 79th Division and the 6th Brigade to occupy the northern portion of Bois de Montfaucon. Units of the 6th Brigade reached its destination by noon same day. The relief of the 79th Division was accomplished by the 5th Brigade during daylight hours of September 30, 1918.

ACTIONS OF THE 30TH INFANTRY AND ENEMY ACTIVITY FROM SEPTEMBER 30TH TO OCTOBER 4TH INCLUSIVE.

The regiment was now in division reserve along the north edge of Bois de Montfaucon, 2 kilometers south of the town of Montfaucon. During this period, preparations were being made for an early entry into the line. Commanding officers of small units assured themselves that they were supplied with sufficient reserve rations, ammunition, and pyrotechnic supplies.

The enemy air planes were very active during this period. Often groups of planes would fly low over the trees and machine gun our position. The German artillery did not harass the area to any great degree, however, on one occasion, a German gun from the east bank of the Meuse, played havoc with one battalion of the regiment. One high explosive high calibered shell struck the body of a large tree about 30 feet from the ground, exploded and killed five men, two horses and wounded seventeen men. The area in which the regiment was stationed was very limited—causing the battalions to be crowded in small areas.

At five-twenty-five A. M., October 4th, 1918 the attack was to be resumed all along the American line. The 5th Brigade was assaulting Brigade for the 3rd Division. The 6th Brigade moved to the vicinity of Bois de Beuge and was ordered to be in position at H 2 hours.

The 30th Infantry left Bois de Montfaucon at 4 A. M. October 4th marching via the road extending south from Montfaucon to a point within one-half mile from Montfaucon, thence across country west and northwest of the town, to Bois de Beuge. At 7:30 A. M. the leading battalion (3rd Bn.) was entering the Bois de Beuge from the south. While enroute to the position in Bois de Beuge, German artillery began registering on the column, which made it necessary to take up the approach march. Upon first entering into the zone upon which the enemy shells were falling, the battalions assumed an approach march—each company in line of platoon columns in two waves. Later on the shelling became more intense and it became necessary to take up a formation less vulnerable, whereupon each company assumed a line of section columns in two waves. As a result of this well conducted advance from Bois de Montfaucon not a single man was wounded or killed

in spite of the fact that enemy artillery shells fell within areas of the advancing battalions. As the 3rd Battalion was entering Bois de Beuge, the enemy began to shell the roads with high explosive shrapnel and gas. It was evident that German air reconnaissance reported the fact to German artillery that troops were entering the woods. Notwithstanding the terrific artillery shelling within the limits of the woods, the 3rd Battalion entered and the leading element of the 2nd Battalion was about to enter when the Colonel of the Regiment halted the advance of the remainder of the regiment and caused them to dig in along the south and south-east slopes of the hill from the woods.

IN RESERVE AT BOIS DE BEUGE.

While the 5th Brigade was attacking in conjunction with adjoining troops in an effort to reach the combined army, First Phase Line, the 6th Brigade remained in reserve in the vicinity of Bois de Beuge. About 11:10 A. M. October 4th several groups of German planes flew low over the 30th Infantry and machine gunned the troops. Later German planes in large groups bombed the regiment causing a few casualties. It was now certain that our position had been disclosed to the enemy artillery and that we would soon be greeted with a concentration of artillery fire. Thanks to the Germans in that they only concentrated within the limits of the woods, thereby only causing casualties in the 3rd Battalion. The remainder of the regiment which remained outside of the woods did not suffer nearly as badly as the battalion within the woods. The temptation to fire on the low flying enemy planes was too great so the men opened fire on one of the groups and brought down three planes within the vicinity of the area where the regiment was located.

For several days the regiment remained in this position being subjected to heavy artillery fire and bombed continuously by enemy planes. At 11:00 P. M. October 5th the division issued orders for a defensive organization of the sector held by the division. The trace of the outpost zone would be selected by the Commanding General, 5th Brigade. The zone of Resistance was to be organized in depth and its positions to be selected by the Commanding General, 6th Brigade with the first line of defense along the General line Nantillois—Bois de Beuge. In compliance with instructions from the Commanding General, 6th Brigade, the 3rd Battalion remained in Bois de Beuge and the 1st and 2nd Battalions moved during the night of October 5th and 6th to the ravine 1,000 yards southwest of Montfaucon.

6TH BRIGADE RELIEVES THE 5TH BRIGADE.

During the night of October 7th and 8th the 6th Brigade relieved the 5th Brigade in the front line. The 30th Infantry was directed to take over the right sector held by the 4th Infantry and the 38th Infantry to take over the left sector held by the 7th Infantry.

In accordance with F. O. no 50, 3rd Division, October 7th, 1918, and instructions from the Commanding General, 6th Brigade, the 30th Infantry relieved the 4th Infantry in line during the night of October 7th and 8th. The 3rd Battalion was designated by the regimental Commander to take over the front line held by the 4th Infantry. The 1st and 2nd Battalion again moved forward from the ravine southwest of Montfaucon to their former position along the south and southwest slopes of the hill upon which Bois de Beuge is situated. This movement took place during the night of October 7th, and 8th. The relief of the 5th Brigade was completed the same night and the command of the sector passed to the Commanding General 6th Brigade.

ENEMY SITUATION ON OCTOBER 7TH, 1918.

On October 7th, when the 5th Brigade discontinued its attack, and began to organize the position held, the German line in front of the division extended through Ferme de la Madeline—along the southern edge of Bois de Cunel—crest of Hill 253—west to the Cierges-Romagne Road. All indications showed that the enemy were strengthening his positions by means of reinforcements, constructing trenches, and wire entanglements. German prisoners, however, stated that the morale of the German Troops was very low, due to the lack of food and strenuous fighting in line without relief.

PATROLS SENT TO BOIS DE CUNEL

On October 8th, 1:05 A. M., the division commander had information that the enemy were withdrawing on the left and directed strong patrols to be sent out—one into the Bois de Cunel. At 1:10 A. M. the Com-

manding Officer, 30th Infantry received from Brigade Headquarters, "Brigade Commander directs that one patrol, one company strength, be sent forward to gain contact with the Enemy, 30th Infantry patrol to Establish itself in Bois de Cunel and the 38th Infantry patrol to take and hold 253". Regardless that a relief of a Brigade was being accomplished during the night of October 7th and 8th, this patrol, consisting of Company D, was assembled in its position near Bois de Beuge, and moved forward at 2:25 A. M. in the dark hours of the night, over ground unfamiliar to the leader. By daylight, the patrol reached the north edge of woods 250, causing the leader to halt the patrol. It was evident from the fire from Bois de Cunel and Fermede la Madeline that the Germans occupied these positions in force. The patrol leader, having properly estimated the situation, decided to return with his company.

ORDERS FOR ATTACK

On October 8th, division orders directed the attack to be continued at 8:30 A. M. October 9th, with the 6th Brigade in the assault and the 5th Brigade in reserve.

Mission 1. To clean up Bois de Cunel.

2. To capture that part of Trenches de la Mamelle within its sector.

3. To occupy Cunel, to clean up and occupy Bois de la Pultiere.

Preparation: Artillery preparation fire to start at 1:00 A. M. on October 8th. A rolling barrage was ordered to precede the advance. A smoke screen by Company D, 1st Gas Regiment was ordered placed along the south edge of Bois de Cunel at H-10 to cover the advance of the assault battalion from 250. One platoon and one section of machine guns was sent to the right to maintain combat liaison with the 80th Division.

RECONNAISSANCE BY REGIMENTAL COMMANDER

During the afternoon of October 8th, the regimental commander, with all his battalion commanders, made a personal reconnaissance of the front lines in woods 250. While on reconnaissance, the regimental commander informed the battalion commanders of his detailed plan for the attack on October 9th.

MOVEMENTS OF 2ND BATTALION DURING NIGHT OF OCT. 7TH AND 8TH.

The battalion commanders and commanders of special units, received their final attack orders verbally from the regimental commander at his C. P. in the northern edge of Bois de Beuge at 10:00 P. M. October 8th. The 3rd Battalion was designated as the assault battalion, the 2nd Battalion in support and the 1st Battalion in Brigade reserve.

The 2nd Battalion moved out from Bois de Beuge at 3:00 A. M. to a position along the south edge of woods 250. This battalion was ordered to be in position at daylight. While en route to position, a message was received by the battalion Commander to the effect that the attack would commence at 9:12 A. M. instead of 8:30 A. M. for the 30th Infantry, and that the 38th Infantry on the left would attack one hour later—10:12 A. M. Guides from 3rd Battalion were furnished the battalion commander, 2nd Battalion for the movement to Woods 250. The battalion moved out in a *column of twos* across a shell swept zone. There were strict orders from higher authority that in all movements of troops there should be 50 yards distance between platoons and 200 yards distance between companies. The spirit of this order was carried out, but it was impracticable to move a body of troops with such distances during darkness and over a shell swept zone, even if there are numerous connecting files. The battalion commander followed the route selected by the guide from the 3rd battalion in stead of marching by a compass bearing or over a route previously reconnoitered by the battalion commander. The battalion was about half the distance to the woods 250, when enemy artillery shells began to fall in the area of the battalion. The guide was completely lost and from here the battalion commander marched by compass to the position selected. The enemy artillery continued to harass the area resulting in a break in the column. Only one company and a half reached the destination in woods 250 at the appointed hour. The remainder of the battalion was lost and the battalion commander immediately sent out officers patrols to locate the other companies. As daylight was breaking, the battalion was all assembled in south edge of the woods. 250.

ENEMY SITUATION IN BOIS DE CUNEL AND FERME DE LA MADELINE.

The enemy situation in the Bois de Cunel is best explained in the following message written by the adjutant, 5th Brigade: "Three times the 4th Infantry tried to advance across the field into Bois de Cunel, and each time the line melted away. This space was thoroughly covered by machine gun fire." Prisoners captured indicated that a fresh German division (28th Division) had relieved a worn out division in line between Cunel and Romagne on October 8th, with the 207th German regiment in Bois de Cunel and the 110th German regiment in the trenches south of Cunel. The regimental commander, 30th Infantry, was now to confront a serious obstacle in Bois de Cunel and the high ground to the north thereof, in view of fresh German troops and the strengthening of these positions into the main line of defense. In order to cope with the situation, the Brigade Commander offered the Brigade reserves, if the necessity required the use of same.

Ferme de la Madeline, a German stronghold with well fortified pill boxes and concrete trenches on the hill just east of the farm and west of Bois de Fays. For four days this position had held up the attacks of the 80th Division on the right of the Nantillois-Cunel Road.

THE ATTACK ON OCTOBER 9TH, 1918.

The 3rd Battalion attacked with two companies in the assault and two companies in reserve. One platoon of machine gun company to follow each assault company and one platoon to follow in reserve. Each assault company was deployed in two waves with 10 meters between waves. The reserve companies to follow in the same formation—at 100 meters. It was the general plan of the battalion commander to pass through the assault companies with the reserves when the necessity arose. The battalion would direct its attention to the immediate front in Bois de Cunel and allow the 2nd Battalion to protect its flanks. The 3rd Battalion launched the attack straight into Bois de Cunel at 9:12 A. M. October 9th, behind a smoke screen and a rolling barrage.

The 2nd Battalion was in position to follow the rear elements of the 3rd Battalion at 200 meters with companies in the same relative disposition as the 3rd Battalion. The mission of the 2nd Battalion was to pass through the 3rd Battalion when the necessity arose, without orders from Regimental Commander and to protect the flanks. Reconnaissance to the elements of the 80th Division on our immediate right divulged the fact that the 80th Division had no orders to attack at 9:12 A. M. This placed the assault battalion in a precarious and dangerous position in that the 38th Infantry was ordered not to attack before 10:12 A. M. Regardless of the troops on the flanks, the 3rd Battalion went forward and entered Bois de Cunel with the assistance of supporting artillery, smoke and a dense fog. The 2nd Battalion followed close in rear of the 3rd Battalion and when the two forward companies were entering the woods, German machine guns and rifle fire opened from Ferme de la Madeline, a German stronghold, outside of the regiments' zone of action, and poured a ruinous fire into the flanks of the 3rd Battalion. At this point, the Battalion Commander, 2nd Battalion, faced his two right two companies (Companies E and F) to the right and attacked Ferme de la Madeline—clearing it of the enemy, taking a large number of prisoners and machine guns. These two companies held their position along the eastern portion of Bois de Cunel to the right of the Nantillois—Cunel road 500 meters north of the farm. When the edge of the woods was gained, connection was made units of the 3rd Battalion on the left. The Germans were forming for a counter attack within a few hundred yards of the edge of the woods. Rifle fire from these companies broke up the attack. Attempts at further advances were halted by enemy rifle fire from front and right flanks. These companies remained in this position until elements of the 80th Division occupied the area late in the afternoon. The artillery barrage on the right of the road by the 80th Division caught these companies within the 80th Division Sector, thereby causing numerous casualties. This happened in spite of the fact that the higher command was informed of the capture of Madeline Farm and the position of the 30th Infantry troops in the 80th Div. Sector. Companies E and F moved to the left of the road just before dark, October 9th, and occupied the northeast spur of Bois de Cunel, with the 3rd Battalion on the left and elements of the 80th Division on the right. Companies H and G had been advancing through the west portion of Bois de Cunel generally following the left of the 3rd Battalion. Company H was pushed forward and took up a position in the northwest corner of Bois de Cunel on the left of the 3rd Battalion. Company G, depleted prior to the attack by detaching one platoon as combat liaison group between 3rd Division

and 80th Division and practically another platoon to carry ammunition for the attached machine gun Company, was in the southern half of Bois de Cunel. This company was used in cleaning the enemy out of the woods.

Lets again take up the 3rd Battalion during its advance through the woods. The right flank was enfiladed from Ferme de la Madeline and the left flank from the enemy on the north slope of Hill 253. The interior of Bois de Cunel had well constructed trenches from which resistance was stubborn, and throughout the woods the battalion met with isolated enemy positions. Fighting against odds in the woods with both flanks exposed, the battalion advanced to the north edge of the woods where its advance was definitely held up from the enemy in that portion of Marmelle trench to the north of Bois de Cunel.

Several attempts were made by the 2nd and 3rd Battalions to capture the hill to the north of Bois de during the afternoon of the 9th. Request was made for the artillery to fire on the hill after which the battalion would attack. The support of the artillery was not given, so no further attempts were made to take the position during the day. At dark October 9th, the 30th Infantry held the northern edge of Bois de Cunel and connected with the 80th Division on the right and the 38th Infantry on the left. The two assault battalions suffered many casualties during the day's fighting. During the night of October 9th the 2nd and 3rd Battalion Commanders began reorganizing their battalions.

During the day's fighting the regiment had captured about 160 prisoners from the following German regiments: 257th, 259th, 209th and 48th and much material.

PREPARATIONS FOR AND THE ATTACK ON OCTOBER 10TH.

The night of October 9th and 10th was occupied in reorganizing the units of the regiment. Thirteen replacement lieutenants reported during the night and were immediately assigned to companies depleted in officer strength—some of whom took command of companies immediately upon joining. The 1st Battalion had now been released from Brigade reserve and moved forward to Bois de Cunel during the early hours of October 10th, preparatory to continuing the advance at 5:10 A. M., October 10th. A preliminary bombardment was ordered placed on the trenches north of Bois de Cunel. Orders for the attack were received and issued to the Battalion Commanders at 2:00 A. M. The regimental Commander discussed with the Brigade Commander over the phone, the plans for the attack. The plan outlined was: 1st Battalion to attack from the northern edge of Bois de Cunel; the 2nd Battalion to be in support; and the 3rd Battalion to revert to Brigade reserve and take position in Mamelle trench just west of Bois de Cunel. One battalion of 7th Infantry was ordered forward to a position in readiness in Bois de Cunel as support for the attack. This battalion was not expected in time to be of any material assistance for the attack in the morning. Prior to the receipt of the division order for the attack warning orders were sent out. The hour of attack was changed from 5:10 A. M. to 7:00 on account of getting the necessary artillery support. The 1st Battalion was in a position ready to attack at H hour, with the 2nd Battalion ready to follow close behind.

At 7:00 A. M. the attack was commenced and the 1st Battalion reached a point about 500 meters north of the woods, where the advance was stopped by heavy rifle, machine gun and one pounder fire from both flanks and the high ground to the front. The men sought holes in the ground for cover. The fire of the enemy was so terrific and the area was so thoroughly covered that any movement of troops would be suicidal. It was now evident that it was useless to attempt any further advance of this battalion with the enemy machine guns from the flanks pinning the men to the ground. At this time, the 80th Division had not advanced beyond Le Ville Aux Bois Ferme, although reports repeatedly informed the Brigade that they occupied Cunel and the 38th continued to hold the section of Mamelle Trenches in its front. As a result, the 1st Battalion remained in the open field, in front of Bois de Cunel until dark. The regimental C. P. was now located at Ferme de la Madeline, with an advanced C. P. in the northern portion of Bois de Cunel.

The Division Commander directed that the trenches to the north of Bois de Cunel, in the 30th Infantry sector, be taken at once. Arrangements were made with the artillery to cover the trenches with a preparatory fire followed by a barrage. The attack to commence from Bois de Cunel at 7:30 P. M.

The plan of attack on the enemy position was as follows: The 1st Battalion, now 500 meters north of the woods, to withdraw to edge of woods in order to escape the preliminary artillery bombardment and barrage, and then advance from that line of departure, closely following the barrage. The 2nd Battalion to

remain in its present position and follow the 1st Battalion. The 3rd battalion to continue in reserve. The 1st Battalion could not be withdrawn from its position in the open until dark on account of the fact that it was impossible to move in this open space during daylight. Therefore any movement of the 1st Battalion before dark would be serious. At dark the battalion began to fall back to the woods and there began reorganizing for the attack at 7:30 P. M. Reorganization was difficult—due to loss of control in the darkness, loss of direction in withdrawing and the enemy artillery fire, which was terrific within the limits of the woods. Soldiers became mixed with other units in the woods and could not locate their commanders. It was approaching H hour (7:30 A. M.) The preliminary bombardment had commenced and the battalion commander designated to make the attack was still in the process of gathering together the remnants of his battalion in the confusion that existed. H hour arrived and yet the battalion was not in any condition of organization for an attack of so great an importance—consequently, no troops moved forward at the designated hour.

OPERATIONS DURING THE NIGHT OF OCTOBER 10TH AND 11TH.

The hill to the north of Bois de Cunel had to be taken by the 30th Infantry during the night of October 10th and 11th. The 2nd Battalion and one company 7th Infantry were designated to attack the enemy position at 10:00 P. M. The 2nd Battalion attacking from the northwestern portion of the woods and the company of the 7th Infantry attacking from the northeastern portion of the woods. The attack was to be made without any artillery support. After placing the companies of the battalion in their proper position along the line of departure, the battalion commander assembled all of his company commanders at which time the details of the attack were thoroughly discussed and understood by all. At 10:00 P. M. the battalion was deployed for the attack with three companies in the assault and one company in reserve. The frontage to be covered was large and the companies had been depleted almost 40 percent during the previous days, so each platoon was deployed in two waves,—three platoons in assault and one in support. The interval between men was from two to five yards and the distance between waves was 50 yards. The reserve company was directed to follow the center company in line of squads column in two waves at 100 yards. The machine gun company supporting the battalion to remain in the edge of the woods until the enemy was driven from his position and then to assist in the organization of the ground.

At 10:00 P. M. everything was "all set" for the advance, at which time the companies moved off in the designated direction with orders to capture and hold the enemy trenches 800 yards to their front. It was just 2½ hours after the preliminary bombardment and barrage at 7:30 P. M., when the attack of the 1st Battalion did not materialize. The enemy evidently expected an attack at that time and when no attack followed the barrage he did not look for any further advances on his strong positions during the night. Companies of the 2nd Battalion moved forward slowly and cautiously. The movement was slow for specific instructions had been given to keep the movement secret and not be observed by the enemy at least until they were within assaulting distance of the trenches. The flares over the area were numerous and went up at frequent intervals, thereby retarding the advance. Each time a flare began to illuminate the area, every man stood still and began to move forward again when the illumination disappeared. This method of advance continued until within a few hundred yards of the enemy positions. Now, the movement had been observed by the enemy, when he opened up with machine guns and rifles from both flanks and front. The companies reached the positions, killed and captured many of the enemy. A portion of the trenches were taken in spite of the determined resistance offered by the enemy. The situation was serious,—particularly from the flanks—even the Germans occupied a portion of the trenches. The reserve company, which had been closely following the assault companies, had by this time become intermingled with the other companies. There was no organization—many officers and leaders of platoons and sections, were casualties in addition to the numerous casualties in the ranks. Request for reinforcements from the regimental reserve was submitted. Immediate efforts were taken to reorganize the companies. At 2:30 A. M. October 11th, the Battalion Commander reported to the regimental C. P. and informed the Colonel that his men were occupying the trench and had connected with the company from 7th Infantry on the right. Reinforcements were necessary especially on left flank, where the enemy continued to occupy the trench. Accordingly, one company was dispatched to the left flank before dawn of the 11th October. As this company was advancing, it was caught under

a heavy machine gun fire at daylight and suffered heavily, but finally drove the enemy from that position of the trench on the left. The enemy was now scattered out in front of the left company with isolated machine guns here and there. At 6:00 A. M. October 11th, the strength report of the troops that attacked the hill and occupied the same was as follows: Company E—1 Officer and 30 men, Company F,— Officer and 40 men, Company G,—1 officer and 20 men,—Company H,—1 officer and 27 men,—Company G 7th Infantry, 1 officer and 10 men. When the attack was initiated at 10:00 P. M., these organizations were all depleted from 40 to 50 per cent. Many men were lost in the darkness and efforts being made to collect the lost men and send them forward.

As anticipated, the Germans attempted to drive the troops off the hill about 7:00 A. M. October 11th. Rifle and machine gun fire broke up the counter attack made by the enemy. Several other minor attempts were made throughout the day to drive back our troops, but they held their ground.

The Kriemhilde Stellung line of the Hindenburg system had now been broken.

No appreciable advance was made on the 11th, however, the lines were improved considerably. Prisoners stated that the 458th and 459th Regiments (German) of Infantry had completely melted away in our front, with the 136th and 457th Regiments rapidly approaching the same condition. Prisoners were captured on the morning of October 11th from the 110 Grenadier Regiment (28th Division) 48th Infantry Regiment (208 Division) and 351st Infantry Regiment (123rd Division) on the heights just south of Cunel. The statements of these prisoners indicate that the German regiments had been hopelessly mixed in their attempts to support the line. Enemy artillery continued active, however, his rear area harassing fire diminished to a great extent.

October 12th was utilized in reorganizing units and organizing the position with a view of holding the ground already gained while preparing for a further attack upon receipt of orders. The 38th Infantry relieved units of the 32nd Division now in the 3rd Division sector and the 5th Division relieved the 80th Division on the right during the nights of October 11th and 12th.

The entire 7th Infantry was now at the disposal of the Commanding General, 6th Brigade and it was this regiment that drove the enemy from the left of the line held by the 30th Infantry. During the attacks on October 11th, the 7th Infantry and the 30th Infantry cooperated until the 30th Infantry was withdrawn and placed to the east side of Nantillois-Cunel Road.

RELIEF OF 5TH DIVISION.

The 3rd Division was transferred to 3rd Corps on October 12th. The 80th Division, occupying a line just north of La Ville Aux Bois Ferme—Bois de Fays, was relieved by the 5th Division during the night of October 11th and 12th. Thirteen hours after the command of the 80th Division sector passed to the Commanding General, 5th Division, the 30th Infantry was ordered to relieve the 9th Brigade, 5th Division, on practically the same line from which they relieved the 80th Division the previous night. Accordingly, the 30th Infantry moved, by battalion, to the right of the Nantillois—Cunel Road during the night of October 12th and 13th in a heavy rain and thick fog and affected the relief of the 60th Infantry by 5:00 A. M. October 13th and the 61st Infantry later in the day. This relief was made without any daylight reconnoissance. The 9th Brigade, 5th Division, withdrew after the relief for reorganization, preparatory to an attack west of the Nantillois—Cunel Road. While the 30th Infantry was relieving the 9th Brigade, 5th Division, the 4th Infantry relieved elements of 4th Division on the right in the west end of Bois de Foret and east end of Bois de Peret de Faux. The regiment repulsed a heavy counter attack from the northwest during the morning after the relief of the 5th Division, the entire line holding, with the exception of a small piece of woods near Saint Chaistophe in which the artillery concentration was so heavy that the troops stationed therein withdrew a short distance for protection, and advanced to their former position just as soon as the artillery fire slackened.

SITUATION 3RD DIVISION OCTOBER 23TH, 1918.

After the relief of the 5th Division by the 30th Infantry and the relief of elements of 4th Division by the 4th Infantry, the following dispositions were made:

Right Brigade (4th Infantry and 30th Infantry) passed to the Commanding General 5th Brigade, which held the line—Bois de Peut de Faux—western edge Bois de Foret,—thence southwest to a point about 400 yards, south of Cunel.

The 30th occupying the line from the western edge of Bois de Foret and to a point on the Nantillois—Cunel Road, about 400 yards south of Cunel.

The 4th Infantry, occupying the sector held by elements of the 4th Division from the eastern end of Bois de Pent—de—Faux to the western end of Bois de Foret.

Left Brigade (7th Infantry and 38th Infantry) passed to the Commanding General, 6th Brigade, which held the line along the high ground of the Cunel—Ramagne road.

Division reserve: 2nd Battalion, 4th Infantry in woods 250.

THE ATTACK ON BOIS DE LA PULTIERE.

On October 14th, the regiment was given a mission to clean up Bois de la Pultiere and Bois de Rappes in cooperation with the 5th Division which was ordered to attack through the 7th and 38th Infantry to the left of the Nantillois—Cunel Road. The 9th Brigade, 5th Division, now on the west side of above road, was ordered to attack direct on Bois de la Pultiere and Bois de Rappes. Patrols from this Brigade occupied the northern edge of the woods, but could not push on into Bois de Rappes. The enemy still remained in the woods. The cleaning up of these woods was a serious proposition, for the thick underbush was filled with enemy snipers and machine guns. The Germans had made these woods a veritable fortress.

During the morning of October 14th, the 30th Infantry, now a depleted regiment, started forward on its mission to clean up Bois de la Pultiere and Bois de Rappes, assisted by the 5th Division from the southwest. It was a thankless job. The attack developed slowly, meeting with stubborn resistance and night found the regiment in possession of the eastern half of the woods, with Germans still in the woods. The 5th Division on the left occupying a portion of the woods to the west. The advance of the 30th Infantry was met by heavy machine gun fire from the woods and Hill 299—On several occasions the advance elements were completely wiped out and it was not until late in the afternoon that the eastern half of the woods was in our hands.

On the 15th of October no great advances were made. The regiment, somewhat mixed with elements of 60th Infantry, remained in the north edge Bois de la Pultiere. Several attempts were made to further the advance but each attempt was halted by machine gun fire from Bois des Claires Chenes and Bois des Rappes. An enemy counter attack was launched against our troops in north edge of Bois de la Pultiere early in the morning of October 16th and was repulsed.

The effective strength of the 6th Brigade at 11:30 A. M. October 16th, 1918, was 74 officers and 1387 enlisted men.

The effective strength of the 5th Brigade at 10:50 A. M. October 16th, 1918, was 59 officers and 1105 enlisted men.

The effective strength 30th Infantry—15 Officers and 917 enlisted men.

THE 30TH INFANTRY IS RELIEVED.

Units of the 6th Brigade were relieved from the front line during the night of October 16th and 17th by the 5th Brigade. The regiment marched during the night to a position just south of the Montfaucon—Cuisy Road via Cunel—Nantillois—Cuisy Road—arrived in the area assigned at 5:00 A. M. October 17th. The day of October 17th was utilized in reorganizing the regiment preparatory to reenter into the line at an early date.

30TH INFANTRY RELIEVES ELEMENT OF THE 4TH DIVISION.

At dark October 18th the regiment moved through Septsarges, thence through Bois de Septsarges to Bois de la Cote Lemont and relieved elements of the 4th Division. The 1st and 2nd Battalions holding the front line and the 3rd Battalion in reserve.

The 5th Division in Bois de Rappes was relieved during the night of October 21st and 22nd by the 90th Division.

Bois de Claires Chenes was cleaned up on October 20th by the 7th Infantry, and on the 21st of October the 5th Brigade, reenforced by three companies, 6th Engineers, one battalion 6th Brigade and the 7th Machine Gun Battalion, captured Hill 299.

The Commanding General 5th Brigade, was now charged with cleaning the enemy out of the eastern half of Bois de Feret. For this operation he had the 5th Brigade, one battalion 38th Infantry, 2nd Battalion 30th Infantry and the 7th Machine Gun Battalion.

The 2nd and 3rd Battalion moved during the night of October 21st to vicinity of Ferme de la Madeline and there reported to the Commanding General 5th Brigade. The 2nd Battalion reported to the Commanding Officer 7th Infantry and the 3rd Battalion to the Commanding Officer 4th Infantry and were used as Reserves for the operation in the eastern half of Bois de Foret. The 2nd Battalion, operated until relieved in vicinity of Bois de Clairs Chenes and the 3rd Battalion in Bois de Foret.

On October 24th the 3rd Division was in the process of organizing for defense. A system of out—posts was organized along the ridges to the south and east of Briuelles—Hill 299—Bois de Clair Chenes. The zone of principal resistance was organized along the line Hill 280—northwestern corner of Bois de Briuelles Bois de Fays—Bois de Malanmont—trenches south La Ville Aux Bois Ferme—Bois des Ogons—Woods 250 Bois de Cunel.

The 5th Brigade occupied the zone of outpost with the following troops:

5th Brigade

2nd Battalion 30th Infantry

Machine Gun Company, 30th Infantry

6 Companies, 38th Infantry and 38th Infantry Machine Gun Company.

The remainder of the 6th Brigade with the 7th Machine Gun Battalion occupied the zone of principal resistance.

From October 24th to October 26th the time was employed in patrolling in Briuelles and in the vicinity of Aincreville on L'Andon stream.

On October 26th the Division passed to corps reserve and was relieved by the 5th Division during the night of October 26th and 27th. The regiment assembled on October 27th on reverse slope of the hill between Ciusy and Septsarges where it remained until the night of October 31st when it was withdrawn to a training area south of Bar la Duc.

The 30th Infantry had suffered casualties as follows: 48 officers and 1438 enlisted men. The regiment was sorely in need of a rest. During the previous 30 days, Officers and men alike had existed under the most trying conditions. Through out almost all of the period there had been rain, which kept clothing wet and rendered the battle fields "seas of mud". The chill of autumn was in the air and the warmth of a fire was never possible. A shelter tent pitched over a shell hole half filled with water was all the protection that could be had against the weather. Food usually reached the men cold and it was difficult to serve it under the existing conditions. The kitchens and supply dump remained in the same place (one kilometer south of Montfaucou) during the entire period of fighting. Water was not plentiful and often found contaminated. Practically every officer and man left was suffering from diarrhea and exposure. Many casualties resulted from this disease, thereby depleting the regiment further.

ACCOMPLISHMENTS OF THE DIVISION.

The 3rd Division advanced 7 kilometers against most highly organized and skillful defenses. It had accomplished its difficult mission in breaking the hinge to the line of the German Army. The advances of the division that took its place in the battle line showed that the enemy who had opposed the 3rd Division had been literally fought to pieces.

Beyond the fact of practically continuous fighting, ten distinct attacks had been planned and executed. By days of the meanest, most bitter fighting that one can picture, the 3rd Division had broken the defenses that had been organized for four years and had paved the way for the victorious advances that followed. The troops that followed walked on the pavements laid by the stubborn work of the 3rd Division.

ANALYSIS AND CRITICISMS.

1. The regiment remained in Bois de Hesse from September 26th until September 30th, men living in

shell holes in seas of mud and raining almost continuously. For two days, orders were received almost hourly to be prepared to move at a moment's notice. About 9:00 P. M. the night of September 29—30, orders were received that the move would be made almost immediately and that packs would be rolled and battalions held in readiness to move upon orders. Two hours later, after remaining under orders with packs rolled and rain falling in torrents, an order reached the battalions, stating that no movement would be made during the night and that the men could pitch their tents. Within one hour after this order was received, another order arrived directing the battalions to be ready to move in 30 minutes. The actually took place at 3:30 A. M. the morning of September 30th. Continuous changing of orders, as mentioned above, causes a great amount of confusion and lowers the morale of the men.

2. From September 30th to the morning of October 4th, the regiment remained in Bois de Montfaucon—a woods with sufficient concealment and not too heavily taxed with troops. The Brigade commander assigned a certain area for the 30th Infantry in which the entire regiment was required to bivouac. This area was not sufficient to hold even one battalion of infantry, nevertheless it was necessary to crowd men in this small area like rats. As a result of the density of the troops in these areas, one enemy artillery shell alone caused the death of 5 men and wounded 17 men from one company. The areas, when under hostile artillery fire, should be sufficiently great so that the burst of a shell would cause the minimum number of casualties among the troops located therein.

3. The 30th Infantry was ordered to occupy Bois de Beuge at H 2 October 4th, while the 5th Brigade was attacking. It was evident that the enemy had observed the march from Bois de Montfaucon to Bois de Beuge and the entry of one battalion into the woods. The battalion had not completed its entry into the woods before the German artillery opened with high explosive, sharpnel and gas which lasted for three days. This one battalion suffered more casualties—during the three days than the remainder of the regiment, stationed outside of the woods, during the same period. Troops should always avoid shelled areas when in rear of the line if practicable.

4. While one battalion was in Bois de Beuge, the remainder of the regiment was located along the eastern and southern slopes of the hill extending from the woods, where it had escaped much of the hostile artillery fire directed on Bois de Beuge. However, a battery of artillery took position within the area of one battalion and was located by the enemy, whereupon the enemy artillery began counter—battery firing. As a result the infantry battalion suffered. Infantry and artillery should not be placed in the same locality because the artillery, when once located will draw enemy artillery fire and result in heavy casualties.

5. The 2nd Battalion moved from Bois de Beuge to wood 250 during the darkness of night of October 8th—9th. The Battalion Commander had previously reconnoitered a route of advance, but he followed the route selected by the guide from 3rd Battalion. As a result the battalion was lost and much delay occurred. During the same move the battalion commander tried to follow out instructions from higher authority and march his battalion with a distance of 50 yards between platoons and 200 yards between companies. These distances could not be maintained while marching in the darkness. Men became confused, the column broke and was not found until after daylight. Any column of troops marching under the same conditions would never reach its objective in the proper formation and at the proper time.

6. The division orders for the attack directed the 30th Infantry to attack at H—hour and the 38th Infantry at H—1 and giving no reason at all for such a plan of manœuver. It is believed that the division commander intended for the 30th Infantry to take Bois de Cunel which would materially assist the advance of the 38th Infantry. The manœuver resulted in the 30th Infantry being flanked by fire from Hill 253 and from Ferme de la Madeleine as the 80th Division did not attack.

7. Bois de Cunel was a German stronghold and the difficulty in capturing these woods had already been foreseen by higher authority. The 30th Infantry was given a chemical warfare company to place a smoke screen along Rau de Moussin in front of the 30th Infantry sector to cover the advance of the assault battalion. The enemy in this locality had held up the 5th Brigade several days and it was the intention to push the two front battalions into Bois de Cunel with the least practicable delay. Companies lost direction and confusion resulted with caused disorganization. Of course Bois de Cunel was strongly held, but the flanks were of far more importance in so far as the proper use of smoke. There was Ferme de la Madeline on the

right and hill 253 on the left from which the advance could be observed and from these positions the flanks of the assault battalion were enfiladed. The attack of the 30th Infantry at 9:12 A. M. was no surprise for the smoke gave away the point from which the attack was launched and the German artillery inflicted heavy casualties on the 2nd Battalion which was following closely behind the 3rd Battalion.

8. The brigade commander's plan for the regiment caused the 3rd Battalion to attack Bois de Cunel with two companies in the assault and two companies in the reserve. Each assault company to have two platoons in the assault and two platoons in support with each platoon in two waves 10 meters between waves. This formation resulted in loss of control and difficulty of manœuvering.

9. The 2nd Battalion was directed by the Brigade commander to follow the assault battalion at 200 meters and to pass through the 3rd Battalion (assault) when necessary, without orders from regimental commander. Now, this left the regimental commander with a reserve only in name, as the 1st Battalion was already in Brigade reserve.

10. Throughout the operations, particularly during the first two weeks, hostile aircraft flew over our troops with impunity, directing the enemy artillery, bombing and firing upon all concentrations with machine guns. Many of the casualties were due to the work of these planes. In spite of all efforts made and repeated request, our planes invariably put in their appearance only very tardily and never for any extensive period of time. The enemy had the superiority of the air in the sector. It is absolutely necessary from a tactical standpoint and from that of morale that our air forces attain the supremacy over those of the enemy.

11. The 1st Battalion attacked the trenches north of Bois de Cunel behind an artillery preparation. Its advance was held up about 600 yards north of the woods, where the men had to remain in the open under heavy artillery rifle and machine gun fire until dark, at which time the battalion was ordered to withdraw to edge of the woods and there follow a rolling barrage in a night attack. Night attacks cannot be made and success attained with a disorganized body of men. The night attack should be well planned and made by troops other than those who have seen continuous fighting all day.

12. Machine gun companies were assigned usually with assault battalions and there they remained throughout the operation. The battalion commanders were held responsible for the tactical employment of the machine guns, of course, considering the advise of machine gun company commanders. As a general rule the battalion commanders left the tactical handling of the machine gun companies almost entirely to the commanders of the machine gun companies. A battalion commander should understand the powers, characteristics, and limitations of machine guns, so that he can properly direct employment. Machine guns usually followed the assault companies in action and when the advance was held up they were immediately placed, some in line with advance elements and others at good machine gun positions in rear, in such a manner as to be able to fire on hostile infantry and machine gun nests and to repel possible counter attacks.

13. The 37 mm gun proved its worth as an infantry weapon on several occasions, particularly in firing from the north edge of Bois de Cunel at enemy machine guns north of the woods.

14. The 3rd Trench Mortar, a very destructive weapon, was not used to an advantage except in a few cases. In many incidents the range was within its limits but seldom were the mortars available for use at opportune times. The failure to employ them seems to have been due to the difficulty of moving the mortars and their ammunition to the area where they were needed most.

15. Rifles were used but little during the operation, their use being confined principally to irregular and intermittent individual sniping. The enemy usually kept himself concealed in woods or out of sight in shell holes and seldom offered a rifle target. The bayonet was used on one occasion during a night attack.

16. The Infantry naturally liked to see the artillery close behind, but they did not always like to have it at their right hand. The former condition inspires confidence and the latter raises fear because it draws fire. Artillery support is necessary for the success of infantry advances against strongly organized positions. You cannot expect success when you use personnel only against fortified places.

17. The evacuation of the wounded was difficult. Men lay wounded where they fell for 12 hours or more in many cases. Before any engagement of such a nature careful plans should be made with reference to the evacuation of the wounded.

18. Companies of battalions were depleted at the beginning of their entry into the line to carry ammunition for machine gun companies and other details. The men were a complete loss to their organizations.

19. The regiment was in action practically every day from October 1st to October 27th without rest, time for reorganization or relief, except two days. The officers and men were fatigued from the exposure and hardships of battle. Troops in such condition are not able to do justice to their higher commanders.

20. The French Chaushot automatic was used in the regiment. Many men so armed abandoned the Chaushot and used the rifle in its place. The present Browning automatic rifle were plentiful in the areas occupied by the 79th and 80th Divisions and these weapons were picked up and used in many cases.

21. A German lieutenant of the 351st German Infantry Regiment who was captured in Bois de Pultiere made the following statement of the tactics and methods employed by the American troops in the attack of October 14th:

"From my command post which I occupied at the beginning of the combat I was able to observe all the developments of the American attack. My company occupied a front of 800 meters on a hill opposite a second hill which was held by the Americans. The artillery preparation preceding the attack was weak; as a consequence, our machine guns remained intact. The day before the attack, however, we were subjected to an 18 hour barrage. The intervening hours there fore gave us an opportunity to regain control of our nerves and the renewed barrage left us quite undisturbed.

"The attack itself was not uniform and did not come as a surprise. Under present conditions the element of surprise is necessary to insure a tactical success.

"Our machine guns were able to sweep each succeeding attacking wave which emerged from the enemy positions. The tactics of the advance employed by individual soldiers was correct but in the case of units concerted action was lacking. It was very noticeable that platoon commanders and non-commissioned officers had little authority over their men. This fact was disastrous when our line was reached. Our infantry of the earlier years of the war possessed of their old spirit would have repulsed the attack easily.

"The American troops reached the heights only in small numbers, but unfortunately part of our garrison surrendered. Now was the time for the American commanding officer to decide and to act. This initial success could have been followed up very easily, but it was not.

"I wondered at the time why the attack came to a standstill after it had gained the crest of the hill and when, as I passed to the rear of the American lines as a prisoner, and had an opportunity to see the organization of our adversary, I was astounded to see the gigantic reserves which, had they been put into action at that moment, would have undoubtedly had a decisive effect upon the continuing of your advance.

"Many valuable minutes were lost by your front line troops in the lowland between the two positions where Americans, who should have been with the advance elements, busied themselves in examining the pockets of German prisoners. Three of them surrounded me, but I gave them nothing. Members of my company, however, were relieved of their watches and their pocket-books while moments which should have been invaluable to your command were being wasted.

"If the American officer who first reached our position on the heights had sized up the situation quickly he could have attacked our unprotected right wing during three minutes without incurring any casualties and he could have penetrated much deeper along the road. The American unit on the right flank could also have advanced easily since our line opposite to it had been withdrawn.

"In the German Army, emphasis is laid on the fact that the smallest tactical success may have a great bearing on the successful issue of an operation. When I reconsider the position of the reserves, I am of the opinion that they were too far behind the advancing columns. Whether I am referring to battalion or regimental reserves I do not know. At any rate your leadership failed completely in this engagement."

LESSONS

1. To withdraw a unit, once engaged, in the face of hostile small arms fire, will result in disorganization.

2. Daylight reconnaissance of the area occupied by the troops to be relieved is necessary by units commanders of the relieving troops.

3. Information received concerning the enemy should be studied by the commander before committing himself to action.
4. Guides are invaluable in many cases, however, a commander is solely responsible for his unit and he should take the necessary precautions to move his units forward over a route selected by himself.
5. In battle, leaders of platoons (lieutenants) are usually the first to become casualties, therefore, our non-commissioned officers will be called upon to lead these platoons and they should be so instructed.
6. Reorganization of a unit after each attack on an enemy position is necessary and proper.
7. To successfully march at night, the route must be well defined, or the march made by the use of the compass.
8. Shelled area should be avoided even if it is necessary to get without your zone of action.
9. Do not crowd units in small areas when the area is under effective artillery fire.
10. A commander should have a portion of his troops under his direct control for maneuvering purposes. This force is known as the reserve.
11. Smoke screens placed directly within the zone of action of a unit causes confusion and loss of direction and also gives away the surprise effect.
12. A subordinate is told what to do but not how to do it, unless the higher commander has a reason to believe the subordinate incapable.
13. Reserve battalions should follow assault battalions at such a distance as not to be in the area of the enemy counter barrage at H hour.
14. Rifle fire, well directed, can bring down low flying enemy planes.
15. Attacks must be coordinated with the supporting weapons, and units on the right and left. A commander cannot expect success unless he coordinates the units within his control.
16. The battalion commander should know the powers, characteristics and limitations of all infantry weapons and other supporting weapons.
17. The rifle and bayonet, although not used to any great extent, still is the basic arm and inculcates aggressiveness. The rifleman only fired at what he actually saw, for instance, when the enemy counter attacked, our troops being on the defensive for the moment, the rifleman could see the enemy and effectively used his rifle.
18. Pyrotechnics should have a water-proofed case. Rain rendered those issued useless.
19. Stragglers should be collected in rear of assault lines and returned immediately to their organizations.

References:—Report of General Pershing; History of the 3rd Division; Personal Experiences as Commander of the 2nd Battalion, 30th Infantry; Field Orders of the 3rd Division; Report of Operations, 3rd Division; Messages; History of the 5th Division; Summary of Intelligence.

OPERATIONS OF THE FIRST CORPS
SECOND PHASE OF THE MEUSE—ARGONNE

By

Captain James Metcalf, Infantry

While the second phase of the Meuse—Argonne offensive is only a continuation of the battle as it was launched on September 26th, 1918, it is believed, that in order to reach a clear understanding of it, it will be necessary to discuss briefly the conditions existing on the Western Front during the earlier part of the year.

During the early part of September the Allied drives had bent the German lines back at several points, and by the middle of September, had driven the Germans back to the Hindenburg Line along the entire front, from the North Sea to the Swiss border. The battle line was now back to where it was when the Germans began their drive in 1918.

In March 1918, the Germans had on the Western Front a great superiority of men and guns, and their troops were inspired with high confidence in a speedy and complete victory. Five months later, however, in September, they no longer had this superiority, due to casualties and the speedy arrival of American troops during the summer.

During all the month of September, despite the heavy thrusts of the Allies, the Germans had accomplished their retreat in a masterly manner. Choosing their positions and not being hurried past those they had chosen.

However, it had progressed to a most ticklish point when the west wing, against which the Belgians, British and French were operating, was being folded back toward the east wing, against which the American First Army was operating.

THE TERRAIN

The terrain in the American sector very much resembled a wilderness. Cut up with steep hills and deep ravines. Here and there patches of woods, the western portion of the sector being dominated by the massif of the Forest de Argonne, impenetrable except by a few trails that led into it.

The entire area was almost entirely devoid of roads, those shown on the map having been almost entirely obliterated by artillery fire during the past four years. Therefore in the entire American sector, there was only one passably good road running generally north and south, that was one running through the Aire Valley.

The rainy weather coming on at this time, made it difficult to build and repair roads. Consequently the movement of troops and supplies (especially Artillery and heavy trucks) were difficult.

THE ENEMY

The enemy, (although retreating in a masterly and organized manner, compelling the Allies to fight for every inch of ground gained) was confronted with a grave situation. Bulgaria had been defeated, Turkey was making preparations to surrender, Austria was on the verge of collapse and Germany (her Armies short of food and supplies), knew that she was defeated.

On October second, Major Von Busche, representing Field Marshal Hindenburg and General Ludendorff, appeared before the assembled Reichstag leaders, and in a speech, made a statement, "that while it was possible for the German Army to carry on and inflict heavy losses on the Allies and lay waste the country while retiring from France and Belgium, they could not win the war.

On October third, Von Hindenburg himself appeared before a meeting of the German Cabinet and made a signed statement to the effect, that "it was impossible for Germany to win the peace by force of arms". Accordingly the German Government, on October fourth, requested the immediate conclusion of an Armistice, on land and water and in the air.

Since this monograph primarily, is only concerned with the First Army Corps, and as I have been unable to find any record of the actual number of German Divisions operating against the First Corps, I believe that it would be well to state here that during the offensive, September 26th to the end of October, the

First Army had met an increasing number of Germany's best divisions, rising from twenty in line and reserve on September 26th, to thirty-one on October 31st. During the entire offensive, September 26th, to the signing of the Armistice, the First Army engaged 44 German, and 2 Austrian divisions.

On September 26th, the First American Army launched its offensive against the semi-permanently fortified positions, on a front of about twenty-five miles, the general plan being to break through the enemy lines, on the front Briulles—Romagne, Montfaucon—Grandpre, there after developing pressure towards Mezieres, was to insure the fall of the Hindenburg line along the Aisne River in front of the Fourth French Army which was to attack west of the Argonne Forest. Since the operations of the First Corps in the first phase has been covered in a previous monograph, I will here take up the second phase.

On October 4th, at 5:30 A. M. the general attack was resumed without artillery preparation, but accompanied by a heavy rolling barrage, regulated at the rate of 100 yards per minute.

The mission of the 1st Corps was to capture heights northeast and north of Exermont, thus assisting Fifth Corps in capturing heights west of Romagne, sieze Hill 244, west of Chatel Chehery and the main crest of the Forest de Argonne, thereby cutting of the hostile enfilade fire against the attack east of the Aire River.

The attack was launched with the First, Twenty-eighth and Seventy-seventh Division in line. The First Division was on the right attacking across the open fields and into the Bois de Montrebeau. The Twenty-eighth Division driving down the west bank of the Aire River until they were held up by machine gun fire from Abbataile Farm and Chatel Chehery.

Under intense machine gun fire, some of the elements forded the river, and at seven P. M. took Abbataile Farm and Plunchamps farm and placed the right flank of the Division on Gesnes creek at the foot of Exermont ravine.

On October second, during an assault against the German entrenched and heavily wired line, running east from Binarville, the First Battalion, 308th Infantry, under command of Major Charles S. Whittlesey, and a detachment of the 307th Infantry, all of the 77th Division, broke through the enemy lines and advanced down a narrow canyon to Charlevaux Mill and were cut off from the Division. Several attempts had been made to go to their relief but were unsuccessful. On this date (October fourth) the entire 77th Division made an attack but made little progress, and the so-called lost Battalion was still lost.

At the end of the first day, gains had been made along the entire front, but the gains of the First and Twenty-eighth Divisions were the greatest.

On October 5th, the 1st Division resumed the attack on the crest south of the Exermont Ravine. The Germans had filled the ravine with machine guns and on the hills opposite, not more than a thousand yards away, they had placed several batteries of three inch field guns which fired directly into the advancing waves.

Four German divisions opposed this advance earlier in the day. Later three more first class German divisions were identified, making a total of seven divisions opposing the advance of the 1st Division on this date, The 1st Division, made material gains and at the close of the day had driven a large salient into the German lines far in advance of the divisions on their flanks. The losses of the First Division on this day was very high, the 2nd Battalion, 26 Infantry, alone, in crossing the Exermont ravine, losing 24 Officers and more than 700 men.

The 28th Division did not attack on this date, but utilized the time in mopping up and consolidating positions.

The 77th Division made another attempt, in the Argonne to advance to the rescue of the lost battalion, but their lines remained immovable.

By the evening of October 5th, the 1st Division had driven the Germans back to a distance of about five kilometers, which coupled with the advance of the Fourth French Army west of the Argonne, left the enemy in the forest, in a salient about five miles deep.

Since both the American 1st and the French Fourth Armies were fast approaching the openings in the forest, where the Aire River cuts the plateau and flows into the Aisne, it was evident that the Germans in the forest in front of the 77th Division would soon either have to evacuate the forest and plateau south of Grand Pre, or be cut off.

During the night of October fifth and sixth, the 82nd Division was moved into the line and took over the right half of the 28th Division sector from Fleville south along the Aire River to La Forge.

The rapid advance of the First Division, and the inability of the 77th Division to advance in the forest, had caused the 28th Division to extend its front to about seven kilometers in order to keep contact.

The placing of the 82nd Division in the line enabled the 28th Division to regroup for an attack on Chatel Chehery while the 82nd Division was to attack Cornay. The taking of these two towns was necessary in order to clear the Aire Valley and compel the enemy to vacate the Argonne.

On October sixth, the only Division to attack was the 77th, which made another attempt to go to the relief of the lost Battalion. This attack failed and the lost Battalion was still isolated.

The 82nd Division spent the day (October 6th) in moving into position. The 28th Division regrouped for an attack the following day. The First Division held its front and reorganized in depth, and during the night of October sixth and seventh was transferred to the Fifth Corps, but still retained its place in the line.

While on this date (October 6th) there was no material change in the front lines, in the rear were busy bringing up the Corps and Army Artillery and getting Tanks into position ready for the action on the following day.

Meantime the Air Service was busy locating sensitive points in the enemy's rear for the artillery to engage.

On October seventh the entire First Corps launched an attack at 5:00 A. M. with the 82nd, 28th, and 77th Divisions in line.

The 82nd Division participating in its first assault, was scheduled to attack with one brigade in line, jumping off on the line Fleville—La Forge towards the two dominating hills (223 and 180) north of Chatel Chehery.

The 327th Infantry on the right crossed the Aire by fords and assaulted hill 180, continuing northwest until they reached the Cornay—Chatel Chehery road, where they were checked.

The 328th Infantry, which was to take hill 223, became lost in the darkness while coming up to the jump off line, and did not begin the attack until 10:00 A. M.

The 28th Division, using foot brigades which the 103rd Engineers had built the night before, assaulted the town of Chatel Chehery. This assault was one of the great difficulties, as the town lies about one third of the way up the steep slope, having in its rear the Argonne Plateau and flanked at either side by the dominating hills 223 (north) and 244 (south). Two hours after the attack was launched, the town, and hill 244 had been taken.

Since the 328th Infantry had failed to reach hill 223 the Commander of the 28th Division, in order to protect his troops from enfilade, rushed a company of Infantry and a Machine Gun Company to seize and hold it. These two companies held the hill until 1:00 P. M. when they were relieved by the 328th Infantry, this regiment reaching the hill just in time to ward off a determined German attack. That afternoon the 28th, and 82nd Divisions forced a footing on the plateau, and cut a narrow gauge road which supplied the enemy further south in the forest.

The 77th Division, on this date found a weak spot in the enemy lines and by rushing troops through established themselves in rear of the German position, thereby forcing their retirement. By this action the 77th Division succeeded in going to the rescue of the lost battalion; Captain Thomas states in his History of the A. E. F.

“About nine o'clock that night the advancing Americans (307th Infantry) came upon Major Whittlesey and his much shattered command. They had stuck it out, despite the fact that they had suffered fifty per cent casualties, and were in a state of exhaustion, but still their spirits were high.

On the morning of this date the Germans had sent them an offer of surrender; this had been treated with the utmost contempt, and the defenses were strengthened”.

Summing up the days action, the 77th Division had broken the backbone of the German defense in the forest.

The 28th, and 82nd Divisions had established themselves in, and were advancing through the Argonne at Chatel Chehery where the forest was very narrow, and as this was in rear of the German lines, it insured their withdrawal from the Argonne south of Grand Pre. The advance of the First Corps on this date, also relieved the left flank of the First Division, from the fire which the Germans had for three days been pouring into them from three sides. On October 8th, the success of the day before was exploited.

The 77th Division, now that the Germans were retreating in their front, maintained a slow but steady advance toward Grand Pre.

The 28th Division, after thirteen days of almost continuous fighting in one of the most difficult positions on the entire front, was relieved by the 82nd Division extending its front and putting its other Brigade into line.

On October ninth, the 82nd and 77th Divisions, now the only Divisions on the line in the First Corps, while following up the retreating Germans, were heavily engaged, (when the enemy rear-guard made a stand on the line, Lancon—Cornay—Fleville), and made little progress during the day, but by night had penetrated sufficiently into the German lines to make them untenable.

On the morning of October 10th the 82nd and 77th Divisions again attacked and pushed on through the forest until night, when they emerged in the Grand Pre gap with every thing south of them cleared of the enemy. Marcq and Cornay were seized by the 82nd Division, while Chevieres was taken by the 77th, and liaison was established with the Fourth French Army, through the Grand Pre Gap.

On October 11th the 82nd Division crossed the Aire River and connected with the First Division in Summerance. The 77th Division did not attack on this date, but made preparations for an attack on Saint Juvin the following day.

On October 12th, the 77th Division with the 152nd Artillery Brigade supporting, after a dense preparation attacked and carried Saint Juvin and part of hill 182, capturing 500 prisoners.

On October 13th, no attempt was made to attack. The entire American front was now facing the last line of the Hindenburg system, which consisted in most part of a single trench system protected by a series of belts of barbed wire, and thickly held by German Infantry and Machine Guns, strongly supported by Artillery.

The 82nd Division held the line from Summerance, to include the Argonne forest. The 77th Division was facing Grand Pre.

The entire day of October 13th, was spent in bringing up supplies and Artillery, and preparing for the general attack which was to be launched the following day.

The Attack was launched on October 14th, at 8:30 A. M., The 82nd Division attacked in conjunction with the 42nd (Rainbow) Division the 328th Infantry going up ravine Pierres west of Saint Georges and seized the ridge south of that town, where they made connection with the Rainbow Division, here they were stopped by the enemy's wire. The 325th Infantry on the left pushed forward and established the line on the Saint Georges Saint Juvin road.

The 77th Division did not make very much headway on this date, but succeeded in improving their position on hill 182.

While all units made some gains on this date, the attack was considered a failure as it did not accomplish the purpose for which it was intended, this being the breaking of the last line of the enemy resistance. So much confidence was placed in this attack that a Reserve Division the (78th) and a French Cavalry Division was held in readiness to take up the pursuit.

On October 15th, the attack was resumed, the 77th Division, in conjunction with the 82nd Division, making its final assault at 7:30 A. M. against Grand Pre.

This attack was bitterly contested, and it was not until evening that a foothold was gained in the town.

That night the 77th Division, after twenty consecutive days fighting through the Argonne, was relieved by the 78th Division.

This was the last general attack in the second phase of the Meuse—Argonne, and the only fighting on the entire front of the First Army, for the remainder of the phase, was a long and bitter series of attacks made

every alternate day by the 78th Division, which on October 25th, finally completed the taking of Grand Pre.

The lines thus established remained the same until October 31st which date marked the termination of the second phase of the Meuse—Argonne offensive.

During this phase the First Corps had employed five Divisions in the front lines, these being the 1st, 28th, 77th, 78th and 82nd.

There is no available record of the number of prisoners taken nor the number of casualties, either German or American, during this phase.

ANALYSIS AND CRITICISMS.

The First Corps, had during this phase, broken through the last line of the Hindenburg system. Had cleared the Argonne forest of the enemy and had advanced about 14 kilometers on a 10 kilometer front.

The lack of roads in this area had caused the Americans considerable delay and gave the enemy ample time to select and occupy desirable positions. The road up the Aire Valley was the best on the American Front.

There is only one criticism that can be made of the Americans, that was insufficient reconnaissance on the part of the 328th Infantry. This regiment, after being in the line twenty—four hours, became lost while coming up to the jump off line, thereby failing to accomplish its mission, the taking of hill 223.

Had it not been for the timely action of the 28th Division, in seizing this hill, the error would probably have been a costly one.

No criticism can be made of the Germans, since they were conducting a withdrawal, fighting a delaying action and apparently doing it in a most efficient and masterly manner.

LESSONS.

1. That the maximum amount of reconnaissance is necessary for the successful accomplishment of any mission.
2. That good roads are essential to the proper maneuver and supply of a modern Army.

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OPERATIONS OF THE 3RD CORPS IN THE SECOND PHASE
OF THE MEUSE—ARGONNE
OCTOBER 4TH—31ST, 1918.

By

Lieutenant Raymond J. Williamson, Infantry.

OPENING OF THE SECOND PHASE.

The second phase of the Meuse—Argonne offensive began at 5:30 A. M., October 4th, 1918 and ended October 31st, 1918. After a very intense preliminary bombardment the First, Third and Fifth American Army Corps attacked along the entire front under the protection of a heavy rolling barrage. The 111 American Army Corps, Commanded by Major General Joseph F. Dickman, was composed of the 33rd, 4th and 80th Divisions, from right to left, and occupied the right of the American sector.

Orders having been issued, we accordingly find the 33rd Division holding their line and protecting the right flank of the 4th Division, and the 4th Division starting forward with a mission to capture Bois du Fays, Bois de Malaumont, north edge of Bois de Foret, and to conquer the area within their zone, by outflanking from the west, the positions near the Meuse river, and to also keep in liaison with the 80th Division on its left. The 80th Division, on the other hand, was to attack the front along Bois des Ogons and penetrate the Bois du Fays from the southwest, halt south of the Cunel—Briuelles road, reorganize, and advance to a line on the northern edge of Bois des Rappes, Bois des Claires Chenes and Hill 299.

The men and officers were eager for the attack. Their morale and spirits were very high. Everything had been breaking in favor of the Allies—the First American Armies' recent successes, the western offensive, launched by the Germans, having collapsed, Hindenburg demanding peace, and the French and British successes on all fronts—which tremendously increased the morale and spirits of the American soldier, but, conversely, had a very depressing affect on the morale of the German soldier.

The attack, pushed with all heroism, was hidden by the morning mist for the first few hours, after which it lifted and disclosed the advancing lines of the American forces to the German machine guns and artillery pieces, located on the heights east of the Meuse river on the right, the Bois du Fays and high ground in the north, and the high and wooded ground to the west, which poured forth their projectiles of high explosives, gas and shrapnel. Despite this, on went the 4th Division behind a rolling barrage, with the 58th Infantry in the assault and the 59th Infantry following in support, down through the ravines to their front, through the Bois du Fays, across the Cunel—Briuelles road, and into the Bois de Foret. On the left, the 80th Division, with the 317th Infantry and the 318th Infantry Regiments in the assault, met with tremendous German resistance in the nature of machine gun, artillery and rifle fire, but fought bravely on and made several desperate attacks against the Bois des Ogons. They were unable to drive the Germans from their positions in the woods, and were, therefore, compelled to establish their line just south of it for the night. This failure of the 80th Division to take Bois des Ogons exposed the left flank of the 4th Division to hostile fire, and, on this account, the 4th Division was forced to withdraw their advanced units to the edge of Bois du Fays.

The attack, while not a complete success, was partially so, and, at the close of the first day of the second phase of the Meuse—Argonne offensive, we find the 3rd Corps occupying a line from a point on the Meuse river just north of Regneville, up the western bank of the river, thence westward passing south of Briuelles, along western edge of Bois de la Cote Lemont, to northern edge of Bois de Briuelles and Bois du Fays, southwest to hill 274, one kilometer south of Bois des Ogons, thence west to where it joined the 5th Corps on the left.

THE SECOND PHASE.

On October 5th, the 33rd Division being engaged in protecting the right flank of the 4th Division, continued its holding attack west of the Meuse river from just north of Regneville almost to Briuelles.

The 4th Division, on this date, repulsed three small counter—attacks but did not attempt to advance from the line they held along the northern edge of Bois du Fays, as they were ordered to assist the progression of the 80th Division on their left, who were yet several kilometers in the rear, and to take up the advance when the 80th Division arrived abreast of them.

The 80th Division made another attempt to carry and capture the Bois des Ogons. The artillery was used unsparingly during the attack in laying down a very dense barrage, and, notwithstanding the cold, damp and rainy weather, and the terrific hostile fire, the 80th Division succeeded in establishing a foothold well into the forest.

On October 6th, the 33rd Division continued to hold its' present line and carry out its original mission of protecting the right flank of the 4th Division.

The 4th Division again did not attempt to advance. Their line at this time formed a dangerous salient from which it would be unwise to advance until the heights, east of the Meuse river, and the high ground on the left, were captured from the Germans. However, the day was by no means an inactive one for the 4th Division, the time being consumed by straightening out their line and repulsing small local counter—attacks, launched by the Germans.

The 80th Division, in the face of reetermined German resistance, was able to slowly advance, driving the Germans before them through the Bois des Ogons, and establishing their line on the northern edge of the forest.

At the close of the third day of the second phase of the Meuse Argonne offensive, the line extended from a point on the Meuse river just north of Regneville, up the western bank of the river to south of Briuelles, along western edge of Bois de Briuelles and Bois du Fays, southwest to , and skirting, northern edge of Bois des Ogons, then west and joining the 5th Corps on the left.

On October 7th, the lines of the 4th Division and 80th Division remained the same. No advance was attempted, but patrols were kept active to the front while their present positions were further consolidated.

The 33rd Division, on this date, was detached from the 3rd Corps attached to the 17th French Corps, located on the east bank of the Meuse river, facing north.

It was essential at this time, for the success of the American advance, that the heights on the east bank of the Meuse river be captured from the Germans. These heights gave the Germans an ideal positions from which to deliver flanking fire against the right flank of the advancing forces, and to attack behind their rear. Consequently, it was decided to have the 33rd Division, from its position on the west bank of the Meuse river, across the river and attack in conjunction with the 17th French Corps to which they were now attached. Accordingly, at 5:00 A. M., on the morning of October 8th, under protection of a rolling barrage, the 33rd Division pushed off to the attack, crossing the Meuse river over bridges built by American Engineers the night before.

The attack was pushed vigorously and resolutely forward and was a complete success. The Americans stormed and captured hill after hill in the face of dense machine gun, artillery and rifle fire, until the last was taken, advancing to a line extending eastward from Dannevoux.

The 4th Division and 80th Division held their lines while the 33rd Division attacked on their right, and the 5th Corps attacked on their left.

On October 9th, the 80th Division renewed their attack, pushing forward behind a rolling barrage. Advancing slowly in the face of hostile fire they took Ferme de la Madeline, Bois de Cunel, Ferme de la Ville aux Bois, and advanced its' line to the edge of the Romagne—Cunel and the Cunel—Briuelles road.

The 4th Division continued to stand fast and made no attempt to go forward in the morning, but the 80th Division, having met with success in their attack, the 4th Division was able, and started, to attack in the afternoon, but, before they could clear the Bois de Malaumont, the Germans had concentrated their artillery fire on it. Most of the shells were gas, and, in a surprisingly short time, the woods were saturated with it. Gas masks were adjusted, and the hopeless task of advancing under these conditions caused the attack to be abandoned.

On October 10th, the attack was resumed. The 4th Division at 7:00 A. M., under protection of a barrage went forward passing thru Bois de Malaumont, and seized the small woods (Bois de Peut de Faux) north of Briuelles road, but due to annihilating hostile machine gun and artillery fire were compelled to withdraw. At 9:00 A. M., the 4th Division launched a second attack against the Bois de Peut de Faux, but, again, were driven back, but this time only to a point south of the Cunel—Briuelles road. At 2:30 P. M.,

the 4th Division, for the third time, attempted to wrest the woods from the Germans, and this time the hard fought for woods fell. Forward the 4th Division attempted to go, but the intense and effective fire resistance made any further advance impossible. The advance stopped and the line established on the Northern edge of the Bois de Peut de Faux.

On the left, the 80th Division pushed their attack forward and attempted to capture the town of Cunel. The attack was everywhere repulsed, but a patrol of large size succeeded in entering the town and capturing two German Staffs, consisting of thirty officers and sixty men.

The line at the close of the seventh day of the second phase of the Meuse Argonne offensive, extended from a point on the Meuse river, along western edge of Bois de la Cote Lemont, to northern edge of Bois de Briuelles, along eastern edge of Bois du Fay, to northern edge of Bois de Peut de Faux, southwest to Cunel—Briuelles road, along northern edge of Bois de Malaumont, westward, passing south of Romagne, and joining the 5th American Army Corp on the left.

On October 11th, the attack was renewed. The 4th Division at 7:28 A. M., under protection of a rolling barrage, attacked with the 2nd Battalion, 39th Infantry in the assault. Its' mission was to take Bois de Foret, woods in the vicinity of Clery le Grand, Hill 261, and Bois de Habiemont—to thoroughly clean out Bois de Foret and prepare for a counterattack.

The attack was pushed off in the face of severe machine gun, artillery and rifle fire, over the clearance between Bois de Peut de Faux and Bois de Foret to the north. The attack was a success and the 4th Division succeeded in clearing out the Bois de Foret, capturing approximately two hundred machine guns and prisoners, and practically surrounding the town of Briuelles to their right.

The 80th Division, on the left, were not so successful. Their mission was to take Bois de la Pultiere, Bois des Rappes, Bois de Claires Chenes, Aincreville, woods in the vicinity of Ferme de Chassogne and Andevanne, and to thoroughly clean up these woods, but their attack failed against the strongly organized positions in, and around, the town of Cunel.

The 80th Division, with but four days rest, had been in the Meuse Argonne fight since September 26th, and were by this time well spent. Accordingly, the 5th Division, held in reserve, was ordered forward to, and did, relieve the 80th Division.

The line at the close of the eighth day of the second phase of the Meuse Argonne offensive, extended from a point on the Meuse river, along the western edge of Bois de la Cote Lemont, to northern edge of Bois de Briuelles, along east edge of Bois du Fay, to northern edge of Bois de Foret, southwest of Bois du Fays to northern edge of Bois de Malaumont, westward, passing south of Cunel and Romagne, and joining the 5th Corps on the left.

On October 12th, the 4th Division and the 5th Division made no attempt to attack, but were subjected to German Artillery and machine gun harassing fire the entire day.

The 3rd Division, having been ordered to relieve the 5th Division and left Brigade of the 4th Division on this date, we find, by the morning of October 13th, the relief of those organizations having been successfully completed by the 3rd Division extending its' line to the right as far as the southeastern edge of the Bois de Peut de Faux. The 3rd Division had previously been with the 5th Corps on the left, but its' command was passed to the 3rd Corps at this time.

The 5th Division was withdrawn in the face of intense hostile fire, which resulted in much confusion, loss of command and disorder, and were reorganized in rear of the 3rd Division for an attack which was to take place on October 14th.

The 90th Division was also assigned to the 3rd Corps on this date.

On October 14th The past two days were spent in regrouping and reorganizing the Divisions of the 3rd Corps, in bringing up supplies, ammunition, and preparing for the attack planned for this date.

The line of the 3rd Corps, west of the Meuse river, now faced the famous Kriemhilde—Stellung line, running along the Kriemhilde crest, which marked an area beyond which the Germans could not afford to withdraw, if they wished to retain hold of their very important lines of communication, running along the Franco-Belgium frontier. In addition to this line, the area between it and the American position consisted for the

most part of wooded hills and ridges, organized in depth and made strong by every known artifice, and studded with machine guns and artillery weapons, so placed, as to sweep the valleys to the south, east and west.

Preparations having been made, we see the 3rd Corps attacking with their main line of attack along the Bois de Cunel, Bantheville and Grand Carres Ferme, with a mission to drive one Division through Le Grand Carres Ferme and high ground one kilometer northwest of it—to assist the 5th Corps, on its left, in reducing the Bois de Bantheville—to protect the flank of the attacking Division with other troops, and to continue the advance to a line west edge of Bois de Foret, Ferme de Chassogne and Hill 300 (one half kilometer southwest of Andevanne).

The 5th Division was designated as the attacking Division with a mission to attack Bois de la Pultiere, Bois des Rappes, Rau de Cheline and Romagne sous—Montfaucon and Bois de Bantheville, along the axial line Bois de Cunel, Bantheville, Le Grand Carres Ferme, Bois de Andevanne, passing through the line held by the 3rd Division while the 3rd and 4th Division held the line.

After a dense artillery preparation, the 5th Division went forth behind a rolling barrage and smoke screen at 8:30 A. M. to the attack. The 60th and 61st Infantry Regiments constituted the assault lines. On through the muddy fields they went in the face of hostile fire from machine guns, artillery and rifles, coming from Romagne on the west, and from the heights in front of Bois de la Pultiere, Bois des Rappes and Bois de Bantheville in the north. The attack was brilliantly executed. Cunel fell. Bois de la Pultiere was penetrated. Many prisoners and machine guns were captured, but further advance under such destructive hostile fire was impossible. The advance was held up and the line for the night extended from near Romagne, across Hill 260, toward Bois de la Pultiere and passing midway through it, connecting up with the 3rd Division which had, in the meantime, advanced their line between Bois de la Pultiere and Bois des Foret to maintain liaison with the left of the 4th Division and right of the 5th Division.

On October 15th, the 5th Division continued its' attack against the Bois des Rappes. At 7:30 A. M., after a fifteen minute artillery bombardment, the 5th Division, with the 60th and 61st Infantry Regiments, in the assault echelon, advanced toward the woods without the protection of a barrage as planned. This was due to no fault of the artillery, as the barrage was laid down as prescribed, but the assaulting units were a half hour late in getting started. The attack was pushed with all vigor, but the advance was very slow. The 5th Division was able to merely gain a foothold on the edge of the woods with their patrols. At noon a box barrage was laid down on the northern, eastern and western edges of the woods. Under protection of this barrage the patrols of the 5th Division succeeded in reaching the northern edge. Erroneous reports to the affect that the patrols were withdrawing caused General Castner, Commanding the 9th Infantry Brigade, to order the regiments to be reorganized and push forward to the northern edge of the woods, dig in and hold. General McMahon, however, ordered the units to withdraw to the vicinity of Cunel for reorganization, and no further advance was attempted this day.

On October 16th, 17th, 18th and 19th, the Divisions of the 3rd Corps did not attempt to advance, but spent the time in straightening out their lines here and there, sending out patrols, organizing their positions in depth, bringing up supplies, ammunition, and pushing the artillery forward to supporting positions in preparation for the attack planned for the 20th.

The 3rd Division during this time, on the 19th extended its' line further to the right and completed the relief of the 4th Division, which had been in the Meuse Argonne offensive since September 26th.

On October 20th, in compliance with Field Order No: 32, 111 Corps, 17 October 18, the 3rd and 5th Divisions were again ordered to attack and mop up the Germans in Bois de Claires Chenes and Bois des Rappes, respectively. A bombardment of great intensity was laid down for fifteen minutes by the 4th and 155 Artillery Brigades, which had been placed at the disposal of the 5th Division. Hostile machine gun fire from the vicinity between Bois des Rappes and Bois de Claires Chenes was so annihilating as to prevent any advance on the eastern edge of Bois des Rappes and the western edge of Bois de Claires Chenes. The German resistance was strong, but, in spite of this, the 3rd Division met with great success and succeeded in reaching and driving the Germans from the northern extremity of the woods on the east.

The attack of the 5th Division was not nearly so successful, but they did succeed in gaining a foothold along the southern edge of the Bois des Rappes.

On October 21st, the attack by the 5th Division was renewed at 11:30 A. M. A surprise attack was planned, consequently, a preliminary bombardment for the duration of five minutes was laid down on the Bois des Rappes and lifted to its northern edge. The 5th Division, with 11th Infantry Regiment in the assault, plunged forward and met with great success, driving back the Germans and taking the woods, many prisoners, machine guns and infantry weapons. Organization of the hard earned ground was undertaken immediately in anticipation of a counter attack which an attempt was made to launch, but was broken up by artillery fire, driving the Germans back in confusion and leaving still more prisoners for the 5th Division. Connection was now made with the 3rd Division, located in the northern part of Bois de Claires Chenes, who were, on this date, able to completely mop it up, and establish their along Hill 299.

At the close of the eighteenth day of the second phase of the Meuse Argonne offensive, the line of the 3rd Corps extended from a point on the Meuse river along western edge of Bois de la Cote Lamont, to the northern edge of Bois de Briculles, along east edge of Bois du Fays, to northern edge of Bois de Foret, to Hill 299, skirting along the northern edge of Bois de Claires Chenes and Bois des Rappes, southwest along the western edge of Bois des Rappes to north of Romagne, at which place it joined the 5th Corps on the left.

On October 22nd, the 5th Division was successfully relieved in the Bois des Rappes by the 90th Division.

The 5th Division had been in line eleven days, during which time they had captured the town of Cunel, assisted in taking of Romagne, captured Bois de la Pultiere, Bois des Rappes, approximately five hundred prisoners, many machine guns and other war material. They suffered many casualties, both in men and officers, and by their brilliant achievements wrote another beautiful page in American history.

On October 23rd, the 90th Division, now occupying Bois des Rappes, was the only division that was ordered forward this day. They set out to capture the town of Bantheville and Bourrut, located on the west of their position. These towns were now outflanked by the 89th Division in the Bois de Bantheville and the 90th Division in the Bois des Rappes. The attack was very successful and was pushed on to the ridge of Le Grand Carres Ferme and road just north of Bourrut.

At the close of the nineteenth day of the second phase of the Meuse Argonne offensive, the line of the 3rd Corps remained as of the eighteenth day of the second phase to the northeast corner of the Bois des Rappes. From here it extended to the high ground north north of Bourrut, to the northeast corner of Bois de Bantheville where it joined the 89th Division on the left.

On October 24th, the attack was renewed, and, after a heavy concentrated artillery fire, Le Grand Carres Ferme was captured, but, due to the intense return artillery fire by the Germans, the line was withdrawn to the south of it for the night.

On October 26th, the 5th Division, which had been out of line for five days, relieved the 3rd Division on a general line from the Meuse River to just south of Aincreville.

On October 28th, a line consisting mostly of machine guns was pushed out in front of the 5th Division along a line near Andon Creek and running to the southeast, dominating Aincreville, Clery le Grand, Clery le Petit, and Briculles.

On October 30th, one company and a section of machine guns of the 5th Division went forward, entered, and captured the town of Aincreville. The town of Briculles on this date was also occupied by the 5th Division. Both towns were consolidated in the outpost line, and on the following day, the lines were advanced to a distance of 400 meters north of Aincreville.

The line of the 3rd Corps on the last day of the second phase of the Meuse Argonne offensive extended from a point on the Meuse River near Bois de la Cote Lemont, up the western bank of the river, to east edge of Bois de Foret, skirting northern edge of Bois de Foret, to Hill 299, to Bois Claires Chenes, inc., to 400 meters north of Aincreville, thence following south of Rau de Cheline, including Bourrut, passing just south of Le Grand Carres Ferme and joining the 5th Corps on the left.

This closes the second phase of the Meuse Argonne offensive, commenced on October 4th. The Kriemhilde-Stellung line, located on a general line Clery-le-Petit, Clery-le-Grand, Aincreville, was still in the pos-

session of the Germans. The American Army's objective had not as yet been reached—its mission as yet had not been accomplished—and plans for another attack on November 1st had been made.

ANALYSIS AND CRITICISMS.

The plan of action laid down for the 4th Division in their attack on October 4th was very good. They were instructed to conquer the area within their zone by out flanking the enemy positions near the Meuse river. It will be seen that, as the 4th Division continued their attack forward, the town of Brioules, occupied and strongly fortified by the Germans, was taken without an attack against it, the Germans being compelled to evacuate it to the north in order to save themselves. Had an attack been launched against this strongly fortified town, the cost in American lives would have unquestionably, been appalling.

The placing of the 5th Division in the front line on the 11th day of October, to relieve the 80th Division, and withdrawing them again the following day in the face of intense hostile fire, behind the 3rd Division which relieved them, was bound to cause much confusion and needless sacrifice of life. Replacements could certainly have been sent to the 80th Division, and the 5th Division placed behind them for the attack (if the services of the 5th Division as the attacking Division was absolutely necessary) or the 5th Division should have been allowed to remain in the front line, and the 3rd Division, used for the attack. It is believed either plan would have been much better, and would not have involved the shifting of the 80th Division, the 3rd Division, and two changes for the 5th Division in the face of annihilating fire, in order to obtain the services of one Division occupying the front line, when one was available in reserve.

Liaison between the Infantry and Artillery was noticeably lacking in one or two instances. On October 15th in their attack against the Bois des Rappes, the 5th Division was compelled to go forward without the protection of a barrage. The barrage was laid down as previously described, it is true, but the assaulting line was late in getting started. Regardless of this, the barrage continued to roll away—several kilometers ahead of the attacking units. It is believed that if the proper liaison had existed between the Infantry and Artillery on this occasion, the barrage could have been held up and coordinated with the attack.

That the element of surprise being the basic principle of tactics was forcibly brought out by the 5th Division in their attack against the Bois des Rappes on October 21st. Many attempts to take these woods by the 5th Division had failed, and, on the above date, a tactical surprise, consisting of a quick and rapid bombardment for a few minutes and an energetic attack forward, was planned. The attack was a great success, the Germans being driven back and the woods captured.

The principle of surprise concentrations against parts of an enemy position is good tactics and worthy of much study. This principal was ably demonstrated on October 12th by the 5th Division in their attack against the Bois des Rappes, which proved very successful.

Lines of communication, artillery support, and good roads are absolutely necessary to an advancing Army. We see, during the period from October 4th to October 31st in the Meuse Argonne offensive, Division after Division being continually held up on this account and unable to go farther until roads were repaired, or new ones built, and the artillery pushed forward to supporting positions. Had the lines of communication been anything else but what they were—miserably bad—a more rapid advance, and, consequently, a speedier end to the war and the saving of many lives.

Training in rifle fire proved to be very valuable for the American soldier. In Bois des Rappes, Bois de Claires Chenes, Bois de la Pultiere, Bois de Foret, and others the extreme accuracy of the American soldiers' rifle fire greatly assisted the troops in going forward after the artillery barrage had been lifted.

The continual use of conventionalized trenches is not the best method of warfare. Flexibility of movement and the use of hasty entrenchments promises the greatest success. This method was followed by the Americans in the Meuse Argonne offensive throughout, and the result of this operation proves the truth of this criticism.

Woods and hills when organized in depth prove a great barrier to advancing troops, and less vulnerable than conventionalized trenches. We see in the Meuse Argonne offensive the woods and hill organized in depth, and it was with great difficulty that the enemy was driven back to his successive positions from woods to woods and hill to hill.

It is essential that more time and thought be devoted to national preparedness and military training in the United States. Had our soldiers and officers previously received the fundamentals in military training prior to the World War, needless sacrifice of life would have been avoided. It is not implied that blundering and mistakes on the battlefield were the cause of this needless sacrifice of life, but, rather, that our troops were untrained, and time was required to train them for battle, but in many cases very little time could be afforded. This of necessity prolonged the war and, in turn, needlessly cost the lives of many of our gallant soldiers.

SUMMARY OF LESSONS LEARNED

1. To maneuver an enemy from his position at every opportunity instead of launching a costly attack against his positions.
2. Never withdraw troops to another position in the face of hostile fire to perform a mission that could have been performed equally as well by a like unit, or when the unit withdrawn could have better performed the mission from its original position.
3. Liaison must be maintained between units of a large command in order to properly coordinate the work at hand, and to carry out successfully the will of the supreme commander.
4. Large advancing units must have good roads for communication to the rear. At least one good road for each Division.
5. A Commander's intentions should never be made known to the enemy by noticeable preparations. Secrecy and surprise must be striven for at all times.
6. Supporting artillery must have mobility in order to be able to support advancing units.
7. Rifle fire training is one of the most important phases of a soldiers' training. Everything possible should be done to make him expert in his primary weapon.
8. Training in open warfare, and the inculcation of the offensive spirit, must continue to be the uppermost thought and doctrine in the American Army.
9. Woods and hills should always be included in any and all defensive systems, if available, in order to seriously delay and embarrass the enemy in any advance made by him.

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THE FIRST DIVISION IN THE MEUSE ARGONNE
SEPTEMBER 26TH—OCTOBER 12TH, 1918

By
Captain Barnwell R. Legg, Infantry.

EVENTS LEADING UP TO THE OPERATION

In order to furnish a background for a connected narrative, it will be necessary for me to pick up the thread where we find the Division resting in the Bois de Belle Oziere, in the former Saint Mihiel Salient, on September 19th, six days after its successful advance as left division of the right wing of the American Army in the Saint Mihiel attack.

On September 19th orders were received transferring the 1st Division to the 3rd Corps and placing it in army reserve.

The movement was made in French Camions by the infantry, the motorized elements following. The horse drawn elements marched westward to join the infantry over improvised bridges constructed over the streams of the Woevre by the Division Engineers.

On September 26th when the great offensive started, we find the 1st Division in the vicinity of Bencit-Vaux, in the area of the 3rd Corps.

It was tentatively planned, that should the attack progress favorably, the First Division would cross the Meuse in the vicinity of Verdun and prolong the attack of the Corps to the eastward.

Reconnaissances were made and conferences held between the Division Commander and the French Corps and Division Commanders holding this part of the front.

On September 28th we find the Division in the vicinity of Nixeville after a twelve hour march in a down-pour of rain, the troops in woods rendered filthy and boggy by old bivouacs and horse lines and cluttered up by a mass of wire entanglements of rear area defenses. Plans were changing.

On September 29th the Division was suddenly transferred to the First Corps and ordered to Nevilly. The Division Engineers remained with the 3rd Corps, assigned to reconstructing the roads over what was formerly no-mans-land.

The uninterrupted movement of the infantry by truck, and the horse drawn elements by marching, across the congested lines of communication of the First and the Fifth Corps was an achievement in which the staff and line share equally.

Let us leave the 1st Division for a few moments and turn to the situation on the front of the 1st Army.

The evening of September 29th finds the situation on the attacking front greatly altered. The impetus of the swift advance of the first two days had been lost. All attempts to advance the right of the line had met with failure; on the extreme left in the Forest of Argonne, only a slight gain had been made, while the enemy had reacted violently against the 35th, 37th, and 79th Divisions.

Orders were issued for the 1st, 3rd, and 32nd Divisions to move up immediately and replace those divisions in line.

September 30th marks no change in the position of the American lines between the Meuse and the Argonne. The 77th Division had been able to advance its lines slightly in the Argonne. The French 4th Army on the left was pushing ahead.

In the meantime the 1st, 3rd, and 32nd Divisions were hurrying at top speed to the front.

Operating under the 1st Corps the 1st Division was ordered to relieve the 35th Division, now somewhat disorganized, along the line from Baulny extending generally eastward to Eclis Fontaine, on the night of September 30th—October 1st.

The Division command post was established at Cheppy early on the morning of September 30th and the different sections began to function. The troops were ordered to reach the vicinity of Cheppy at dusk.

Regimental Commanders and Staffs went forward to reconnoiter. The movement forward was made by

battalion. Roads were denied the infantry because of the congestion of in and out traffic on the single axial road of the Corps.

Artillery, trains, ambulances and every conceivable form of military transportation blocked and jammed the roads, and, to add to the confusion an immense mine crater south of Varennes as wide as the road and 30 or 40 feet deep, had to be passed on a one way plank bridge, over which the military police regulated the traffic with the greatest difficulty. The entire transportation, of three combat divisions, was passing day and night in a steady stream over this obstacle.

The infantry too was having its difficulties, marching over a sea of barbed wire, and trench after trench widened and revetted in four years of stabilized warfare. Wire cutting details preceded each battalion; animals had to be abandoned; machine guns were carried by hand. Men tugged and pulled each other over the obstacles. One battalion passed through a mined area and suffered casualties.

Dusk found the infantry regiments in a position in readiness in the ravine running east from Cheppy. No further advance could be made until nightfall. Kitchens and combat trains were blocked somewhere on the road south of Varennes and the troops could not be fed.

Field order 43 was issued for the Division to attack on October 1st. This was almost immediately superseded by Field order 44, which ordered a relief, upon change of intention of the high command.

THE MARCH TO BATTLE

The somewhat disorganized condition of the 35th Division made formal relief impracticable.

Leading battalions of the 1st Division in order from right to left, 26th Infantry, 28th Infantry, 18th Infantry, 16th Infantry, were ordered to form up with their leading elements on the Charpentry-Eclisfontaine road at midnight and advance to the line Boleau Bois—Serieux Farm—Chaudrun Farm—L'Esperance, arriving not later than 3:00 A. M.

Upon arrival of the leading elements of the 1st Division on this line, the infantry of the 35th Division was to stand relieved informally.

Moving up under cover of darkness from Very toward Epinonville, leading battalions faced left and marched by the compass.

The darkness of the night and the anxiety of battalion commanders to reach the line on time caused them to greatly diminish intervals and distance. Battalions marched in narrow fronts, companies in columns of twos without distance between platoons, battalion commanders leading.

Running into sharp machine gun fire from the ridges north of Baulny, leading battalions halted and dug on along the line as indicated.

During the night elements of the 35th Division were relieved. Daybreak found the infantry as follows: 1st line battalions on the line indicated, 2nd line battalion in the Charpentry—Eclisfontaine ravine, holding the Charpentry—Eclisfontaine road, 3rd line battalions in the ravine running east from Very. Each battalion had its usual machine gun company attached.

The artillery brigade forcing its way over roadless bogs had gone into position as follows: The 6th Field Artillery (75's) was skillfully emplaced east of Charpentry, screened from view from Argonne Forest; the 7th Field Artillery (75's) in the ravines southeast of Eclisfontaine; the 5th Field Artillery (155's), one battalion near Charpentry; two battalions near Very.

The 1st Machine Gun Battalion (motorized) was in division reserve near Choppy. Field hospitals and ambulance companies were at Very. The Division Command Post and Artillery Brigade Command Post were at Cheppy. The 2nd Brigade Command Post was at Very, the 1st Brigade at Charpentry. The 1st Division was now in its normal order of battle.

THE TERRAIN.

When the mist cleared on the morning of October 1st, from their fox holes along Baulny ridge and thence eastward to Les Boleaux Bois, leading battalions could get some idea of the task before them when the order to attack finally came. It was not difficult to see the problems which had confronted the 35th.

West of the sector of the Division lay the Forest of Argonne, a densely wooded plateau, rising abruptly to the height of 300 feet above the valley of the Aire. Close beside the eastern edge of the Forest the Aire river flows south, skirting the heights of Cornay—Chatel—Chehery and Apremont. East of the Aire and squarely in the line of advance of the 1st Division lay row and row of buttress like hills with wooded crests and glaciais like slopes with small fringes of brush and woods. These were cut at frequent intervals by transverse ravines drained by small streams into the Aire. The most imposing of these were the Montrefange (Hill 240), the barriers of Hill 263 and 269 and a great forbidding ridge Hill 272 which seemed to defy all progress.

The terrain lends itself admirable to a strong rearguard action.

Contemporary writers have called this barrier, three miles in depth and three miles in width, the key position on the front of the American Army. With this position dominating the valley of the Aire and the terrain to the west, the enemy could successfully hold the 77th Division in the Forest and prevent the out-flanking maneuver of the 28th Division and seriously impede the progress of the divisions on the right of the First.

General Pershing says in his report: "Positions embraced in this area were of vital importance to the continuation of the general advance".

It was apparent to the high command that before the junction with the 4th French Army at Grand Pres could be effected, this position must be carried.

While the First American Army was hastily repairing its roads and rushing ammunition and supplies forward for the beginning of the second phase of the battle, the 1st Division lay in its fox holes, while enemy artillery pounded the area with high explosive and drenched the ravines and woods with gas, and machine guns and snipers harassed constantly wherever movement was observed.

The ravine northeast of Charpentry was constantly drenched with mustard gas. The ground became so impregnated with it that when the Sun came out after the habitual morning fog, severe burns developed on many men and the casualty list increased hourly.

On the morning of October 2nd, before daybreak, front line battalion commanders were astonished upon receipt of verbal orders originating at Corps Headquarters, to penetrate the enemy screen in their front with strong combat patrols and locate his defensive position. This order was based upon a report from the French on the left of the Forest that the enemy had withdrawn.

At daybreak strong patrols started out in a heavy fog. Passing through the enemy outguards in the mist and fog they penetrated to the vicinity of the Exermont ravine where most of them gave their lives. Some of the few survivors were not picked up until the advance of the 1st Division on October 4th.

The similarity of the experiences of these patrols makes it unnecessary to go into the details of the operations of each. Because of the great difficulties facing the Junior officer under these circumstances, I shall deal with one.

The battalion commander of the right flank battalion, complying with the regimental order, sent a patrol of two officers and 70 men. Anxiety for the safety of the patrol caused him to send with it a signal detachment corporal and private with a reel of breast wire and a telephone.

In the confusion of events which followed no report except a verbal one was made. In this detachment one officer and twelve men survived. The following comes from the officer's personal diary: "The patrol left battalion headquarters about one hour before sunrise, two officers and 75 men; it advanced in double file to the line of outguards. At the line of outguards it deployed in two waves, the first wave in skirmish line the second in squad column about 50 feet in rear—the fog was thick. The two officers were between the skirmish line and line of squad columns. When the patrol had advanced about a half kilometer, it was fired on by several machine guns from Montrebeau wood. Lieutenant X ordered the patrol to double time to the draw which was just ahead of us. We advanced at a run and up the crest of the hill on the other side. Several men fell; we could see nothing to fire at. At this point the patrol was stopped by machine gun fire from the left rear, the left and from across the Exermont ravine. Suddenly a nest of two about 40 yards in front of us opened up. Lieutenant X, the patrol leader, was killed, as were a number of the men, while trying to rush the nest. It was finally put out and two Boche killed. Fire was so heavy that we had to

dig in where we were. Men were falling on all sides. At this time Corporal X cut the phone in. I got the battalion commander and told him what a mess we were in. He said "to hold where we were". The fire from the woods to our left rear became so heavy that I sent Corporal X. and six men to work their way against it. They succeeded in putting out one light machine gun and reported the woods heavily held. About one hour later some 30 Boche were discovered immediately in rear of the remnants of our patrol in skirmish line. Part of the patrol was faced to the rear. Just then Captain X was seen coming forward with a part of his outfit and the Boche withdrew. About 1:00 P. M. orders were received to withdraw to the line of outguards. We had about 20 men left deployed on a front of 200 yards. I managed to get 14 survivors back to the line of ourguards and reported my arrival to the battalion commander.

As great as was the cost, the patrols had accomplished their mission. Information was now available to lay the barrage for the initial attack.

On the night of October 2nd, after a long and exhausting march the First Engineers rejoined the Division and went into Division reserve, one kilometer southeast of Very.

Throughout the 3rd of October enemy artillery from the heights west of the Aire and north of Baulny and machine gun fire from apparently everywhere kept up the toll of casualties. The losses had averaged 500 a day since the 1st of October.

On the night of October 3rd about 11:00 P. M., battalion commanders were assembled at their regimental C. P's. for verbal orders.

To understand the mission of the Division, a brief recapitulation of the situation on the front of the Army is necessary.

After the impetus of the assault of September 26th which swept everything before it, the First American Army had advanced with steadily diminishing gains until the lengthening of the lines of communication, the increasing resistance of the enemy, who was rallying after the first shock, and a steadily increasing casualty list, caused a virtual stabilization of the front on September 29th. This marked the end of the first thrust, and had there not been fresh divisions to renew the assault, it might well have terminated the offensive.

The line ran from Brieculles on the Meuse to Apremont on the Aire and sharply southwestward to Binardville in the Forest of Argonne. Before the Army lay the Kriemhilde Stellung, the last prepared defenses on the Allied side of the Meuse.

If a deep wedge could be driven in the German lines east of the Aire valley the enemy would be forced to loosen his hold on Argonne Forest and the whole line could be carried forward. This was the mission of the 1st Division.

THE ATTACK OF OCTOBER 4TH.

Keeping the mission in mind let us consider for a moment the order for the attack.

The 1st Division, as right division of the 1st Corps was to advance rapidly to the Corps objective as indicated, without reference to the units on its flanks, assisting the 91st Division on the right in reducing the Bois de Moncy and the Petit Bois.

Normal formations were to be used; brigades abreast, regiments abreast, battalions in column. Second line battalions were in regimental reserve; exterior third line battalions were in Division reserve; interior third line battalions were in brigade reserve.

Machine gun companies of 1st and 2nd line battalions were to accompany their battalions by bounds keeping close liaison with battalion commanders.

Machine gun companies of 3rd line battalions were held out and placed under brigade commanders for emergency.

The 16th Infantry was ordered to detail one company from 1st and 2nd line battalions for combat patrol duty up the valley of the Aire at the same time insuring liaison with the right regiment of the 28th Division.

The 26th Infantry was ordered to have strong patrols on its right flank to assist the 91st Division and maintain contact.

Two accompanying guns (75mm) were attached to each assault battalion.

The regimental 37mm platoons (3 guns) and the 3 inch stokes mortar platoons (6 guns) were in regimental reserve.

Two companies of light tanks (American Units) were to deploy across the front of the division as follows: One platoon in front of each regiment of Infantry; the two supporting platoons at the right and left of their respective brigade axes. The mission of the tanks was defined: To attack strong points and machine gun nests and assist the advance of the Infantry, leading the assault waves.

Observation squadron No. 1 was attached for the operation. It was to have one Infantry command plane and two artillery planes in the air at all times during the advance.

Balloon Company No. 2, also attached, was to observe and adjust artillery fire.

Company "C" of the 1st Gas Regiment, also an attached unit, was ordered to place a smoke screen along the southern edge of Montrebeau woods from H-5 to H-30.

A provisional squadron of cavalry consisting of three troops of the 2nd American Cavalry also attached was ordered alerted in place and ready to move on thirty minutes notice.

The artillery reenforced by the 219th French Field Artillery, which was Corps Artillery, was to put down a deep barrage 200 meters in front of the line of departure at H-5.

At H the barrage was to lift and advance at the rate of 100 meters in four minutes to the first objective, a line running from the northern edge of Hill 212, southwest through Montrebeau woods. Here the assault waves would reorganize while the barrage stood for thirty minutes. It would then move forward at the same rate to the 2nd objective, a line passing from the northern edge of Hill 269 southwest to Ferme les Granges, where it would again stand for thirty minutes and then roll forward to the corps objective, as indicated on the map, where it would stand for twenty minutes and cease.

The line of departure now held by outguards, was slightly in advance of Baulny Ridge. Assault battalions were ordered to throw out screens to mark the line of departure, not later than midnight, to form up in rear of the line, so as to cross it at H-hour.

The 5th Prussian Guards were facing the 1st Brigade, the 52nd Division faced the 2nd Brigade, both were first class divisions.

At 5:25 A. M., without a preliminary shot our barrage fell 200 meters in front of the line of departure, stood five minutes and rolled forward.

Simultaneously with the first few shots rocket after rocket of every color went sailing up along the line of outguards, the signal was repeated rearward for several moments, and a few moments later, the enemy S. O. S. Artillery and machine gun barrage came down.

The attack started in a dense fog, it was still dark.

The objectives as set by the Division indicate that the 2nd Brigade by advancing vigorously on the right would relieve pressure on the front of the 1st Brigade, which, in addition to serious obstacles in its front was exposed to a demoralizing enfilade fire from west of the Aire. Let us see how the plan of maneuver worked.

We find following the barrage closely, in the 2nd Brigade; the 1st Battalion 26th and 3rd Battalion 28th; in the 1st Brigade, the 3rd Battalion 18th and 3rd Battalion 16th. In the heavy fog and darkness, the 2nd battalion 18th moving up into position in reserve, closed on the 3rd Battalion at Chaudrum Farm and went over with it.

Side by side these three battalions forced their way through Montrebeau wood and open ravines to the west and reached the first objective on time. There was practically no rifle fire delivered. The hung close to the barrage and bored through.

The assault battalions of the 26th and 28th were unable to follow this barrage across the Exermont Ravine and the Rau de Mayache.

From the wooded crests to the north and northeast, bands of machine gun fire enfiladed the two deep ravines which lay in their zone of advance. The combat liaisons group which was to protect the right flank was annihilated by machine gun fire at the "jump off". A battery of 77's in the vicinity of La Neville

Conte Farm fired point blank at the advancing lines at less than 300 yards, until detachments from the 26th and 28th worked their way forward in the folds of the ground and killed the crews.

When the barrage moved forward to the second objective, the 16th and 18th, in the same formation moved forward. Crossing the Exermont ravine they were exposed to raking enfilade artillery fire from the heights west of the Aire and artillery and machine fire from Hill 240 and the ridges in rear. Fighting their way through Exermont, where enemy groups were resisting they continued to advance. The 16th pushed its line out west of Hill 240 and reached the second objective on schedule. The assault echelon of the 18th, now badly depleted, fought its way up the steep slopes of Hill 240, small groups reaching the crest. Here they met with such heavy fire that they were unable to dig in. They withdrew to the base of the hill and held. At nightfall reorganization was effected; the 3rd Battalion digging in in front of the 2nd, which was echeloned to the rear near the Exermont ravine.

The assault battalions of the 28th and 26th were still held up by the ravines. Both were confronted with the problem of crossing a deep gulch enfiladed at close range by machine gun and light artillery fire, climbing steep and unprotected slopes and assaulting strongly held positions on the other side. The machine gun company of the 1st battalion 26th was placed in position in Montrebeau woods and delivering overhead fire.

The 28th assisted by pressure of the 18th Infantry was able to work forward in the afternoon capturing La Neville le Conte Farm and Beaugard Farm.

The 1st Battalion 26th after unsuccessful efforts to maneuver to the right and left in the Rau de Mayache had lost practically all its officers and suffered about 50 per cent casualties. The Commander of the second battalion 26th had been killed while coming forward to assist the 1st Battalion. The senior officer left, assumed command and came forward to consult with the commander of the 1st Battalion. They decided that a maneuver was impracticable on account of the exposed right flank. A passage of lines was decided upon. Telephone communication had been established with the Regimental Commander, who approved the plan. The 37 M. M. Platoon had worked forward far enough to furnish support. It was decided not to wait on the artillery.

The 2nd Battalion came forward in squad column widely deployed crossed the exposed ground by infiltration, reformed in the ravine and passed the remnants of the 1st Battalion on the ridge south of Exermont ravine by rushes of small groups, and fought their way abreast of the 28th. The 1st Battalion rallied, reformed and followed closely.

Darkness was falling when the two battalions badly depleted and exhausted reached the line indicated and occupied the same ground, refusing the right flank sharply to prevent infiltration from the Bois de Morine on the right, which was still strongly held by the enemy.

In the meantime the 3rd Battalion, 16th, enfiladed from the bluffs west of the Aire and raked from hill 240 and the high ground in its front, followed its barrage to the 3rd objective, mopped up the town of Fleville and withdrew according to plan to the ridge to the south.

Two officers and 240 men of practically a war strength battalion, the survivors of the day gained for their regiment the signal distinction of being the only unit of the Army to reach its objective.

The tanks too had fared badly. Arriving on the jump off line after the assault had started they worked forward. Those supporting the 2nd Brigade met with disaster. Anti tank guns on Hill 240 prevented a single tank from reaching the assault waves. The tanks supporting the left brigade were more fortunate, although the commander of the tank brigade states that they encounterer the stiffest resistance of the war. Five tanks succeeded in reaching the Exermont ravine and one got into Exermont. Of the tanks in the fight, three came out at the end of the day. Casualties in personnel amounted to 84 per cent.

The accompanying guns were all put out of action at the jump off and did little more than to add to the casualties of the day.

When darkness fell, dead and wounded were still scattered all over the ground over which the division had advanced. Litter bearers did their best but it was impracticable to care for all. Burial details were not attempted.

On the right of the 1st Division the 32nd Division line remained at Tronsol Farm. On the left the 28th Division had reached Gesnes Creek.

bombed them at frequent intervals. Seldom has there been such a combination of horrors and seldom have the supreme qualities of endurance of mind and body and quiet heroism been in greater demand."

About 4:30 A. M., October 5th, the German artillery placed a particularly heavy bombardment on the Bois de Fays for about three hours. During this bombardment Captain Henry B. Keep and three lieutenants of Company "A" were killed and the fifth officer fatally wounded by shell fire. The company was partially surrounded and attacked but under the leadership of its noncommissioned officers repulsed the attack with loss to the enemy.

About 7:30 A. M. the Battalion Commander conferred with the D. M. G. O. in the Bois de Briuelles and obtained all available information of the situation. The barrage mission was ordered continued, the best location to be determined by reconnaissance.

Liaison was reestablished with Company "A" and officers sent to take charge. A reconnaissance was made with a view to selection of barrage positions and conference with infantry commanders. The vicinity of Company "B" appeared to be the best available barrage position. It was also an important position to be held and the support of the machine guns there was described by the infantry. Accordingly Company "A" was moved to a position extending the line of Company "B" to the right.

The salient in the Bois de Fays might be called a flying salient since, regardless of connecting groups, the fact remained that during the day no troops could exist for long in the kilometer of open fire swept ground between it and the nearest supporting troops in the Bois de Briuelles. The flanks of any salient bear watching, particularly those of one which is both narrow and deep, and when, in addition, there is a gap of a kilometer or more in both flanks the security of a flying salient depends in large measure upon the strength with which the extremities of the line are held. Machine guns of the 8th Brigade strengthened the eastern end of this line, while the 10th M. G. Battalion was in position to hold the western extremity. Numerous counter attacks were made on this salient several of them in force and the machine guns were a very important factor in breaking them up.

Just before dark a very heavy rolling barrage, fired by the combined artillery of three American Divisions, was observed approaching the position of the Battalion from the rear. It extended beyond the field of vision both to the east and to the west. To escape ruinous losses from this barrage it was necessary to move the personnel of the battalion four or five hundred yards to the east. Machine guns were placed in the bottom of the fox holes and orders given for everyone to return to the guns as soon as the barrage passed over or ceased.

The route to comparative safety lay through the southern extension of the Bois de Fays which was then a tangled mass of shattered trees and underbrush. The Germans increased the intensity of their shelling of the Bois de Fays and the open ground to the south (using both light and heavy guns). A group of six or seven enemy planes circled above the open ground using machine guns freely. Surrounded by greater dangers the men paid little attention to these planes.

Although considerably scattered, the officers and most of the men returned to the gun positions as soon as the barrage had passed over them. The positions were pretty much of a wreck and the overhanging trees and bushes which had previously screened the men and guns from aerial observation were either gone or stripped of their leaves so that the position was now in the open. Although many of the guns had been struck by small shell fragments, only one was so damaged that it could not be put in action. A number of riflemen who had sought refuge in the machine gun positions were found dead and with no survivors. A sergeant and two privates of the left flank machine gun platoon were found alive and uninjured though somewhat dazed by their experience. They stated that they had not seen any officer give the orders to move out and were not sure that the orders were correct. The importance of holding the position of the exposed flank platoon had been impressed upon them and they decided to remain. Of the few men who did not return to the gun position at once practically all returned during the night. Before daylight the positions were concealed as well as possible.

During the day of October 6th the Battalion maintained its position under considerable shell fire and closer liaison was established with the infantry. About 5:30 P. M. the enemy apparently decided to shell the American troops out of the southwestern corner of the Bois de Fays or wipe out any that remained. A

The Battalion was at this time attached to the 7th Brigade and covered the relief of the 7th Brigade by the 8th Brigade during the morning of the 29th. The guns of the 10th M. G. Battalion were kept in position until after the relieving troops and their machine guns were in place. About noon the Battalion was assembled in the Bois de Septsarges.

OPERATIONS SEPTEMBER 30TH—OCTOBER 7TH.

During the next few days the Battalion occupied part of a German cantonment in the southern edge of the Bois de Briulles. The men were well dug in to escape the almost continual harassing fire of artillery.

Meanwhile the transportation had come through and the bulk of it was held in Septsarges which was used as an advance supply base. This was necessary as the Battalion drew all its own supplies for the railhead about thirty kilometers distant. Although the roads north of Septsarges were practically impassible a few of the light Ford trucks were used to bring up ammunition and other supplies to the companies.

October 1st and 2nd spent in reconnaissance by officers and in getting men and equipment in the best possible condition. The men's packs were brought up, kitchens established and hot meals were once more served regularly.

During the night of October 3—4 the Battalion took up position for barrage in the northern part of the Bois de Briulles and on the morning of October 4th assisted the Infantry advance by firing on successive barrage lines in the Bois de Fays for about one hour. One gun was put out of action and three men wounded during the firing of this barrage. Following this an order was received directing the Battalion to proceed to a barrage position in the western edge of the Bois de Malaumont with the report that the Infantry advance had already passed that point.

In crossing the open territory between the Bois de Briulles and the Bois de Fays the Battalion came under considerable artillery fire and under machine gun fire from the left front and left rear. The troops were so maneuvered as to escape loss from the artillery and casualties from the machine gun fire were one killed and eight wounded. Company "B" was in the lead and reached the woods near the southwestern edge. Company "A" followed closely and entered the woods to the right of Company "B".

The position of Company "B" afforded some protection and most of the company remained in this position while patrols went out to dislodge numerous machine guns in front and on the left flank of the position.

Company "A" continued through the woods towards the designated barrage position encountering considerable machine gun opposition and reached a position about 400 meters north of the edge of the woods.

The location of the Battalion P. C. was the same as that of Company "B". Runners were sent back from Company "A" to establish liaison with Battalion Headquarters and Battalion runners were sent out to locate Company "A". These runners were hampered by enemy machine guns and failed to establish liaison.

A reconnaissance was made by the Battalion commander and Captain Thorne of Company "B" in the direction of the proposed barrage positions. A number of enemy machine guns were passed and the reconnaissance continued for a considerable distance but it was found that the western portion of the Bois de Fays was strongly held by enemy machine guns and there was no sign of friendly troops except that later in the afternoon Companies "M" and "H" 59th Infantry arrived in the vicinity of the position occupied by Company "B" with the object of cleaning out enemy machine guns. Further reconnaissance failed to locate Company "A". During the night the companies of the 59th Infantry occupying a line slightly in advance of that of Company "B", 10th M. G. Battalion were driven back to the line of machine guns which held, the attacks against it not being of a serious nature.

Conditions in the Bois de Fays at this time are well described in, "The History of the Fourth Division" as follows: "The Infantry and machine gun units in the Bois de Fays were under a terrific strain. A scattered line of precarious holes, dug amid the seared and shattered trees of the woods, afforded the only possible shelter. It rained nearly every day and dampness and cold, the mud and the darkness, made life almost unbearable. But they had to protect a salient open to attack from three sides and to suffer a continuous fire from every form of weapon that could throw a projectile. No fires could be built. Hot food could only be brought up from the Bois de Briulles at night. Gas reeked through the woods. Aeroplanes

rest, sleep was difficult because of the cold and the fact that their packs had been left in the Bois de Sivry to lighten their burden in the advance.

OPERATIONS SEPTEMBER 27TH—29TH.

On the morning of the 27th the attack was resumed through the Bois de Septsarges by the 47th Infantry, and before noon a request came for the close support of one machine gun company. Accordingly, Co. "B", under Captain Thorne, shouldered their equipment, splashed through a brook and climbed the long hill to the Bois de Septsarges. The advance had reached a wide opening in the woods just beyond a small German cantonment and it was there that the company was placed in the line thus securing a good field of fire. The gunners could see plenty of the enemy and kept busy until dark under considerable shell and small arms fire.

During the night the guns were withdrawn slightly to night positions but in the morning resumed their former positions under heavy fire and for thirty minutes fired a direct overhead barrage of 24,000 rounds covering a further advance of the 47th Infantry. This regiment won through the Bois de Briulles which extends about 2 kilometers north from the Bois de Septsarges and Co. "B" followed in support to the northern edge of the woods in which there still remained a number of enemy light machine gunners in concealed positions. The guns were placed along the northern edge of the woods in position to repel counter attacks. Some of them engaged enemy guns firing on our Infantry from Teton trench to the northeast.

It will be remembered that before any transportation could get forward, three miles of road had to be built, not repaired, but built, between Esnes and Cuisy. This great task was completed by the 4th Engineers at 1:35 P. M., on September 26th, the day of the attack. However, priority over the road was given first to the artillery and second to the ammunition trains and for several hours the road was blocked by transportation of the 79th Division so that it was not until the afternoon of the 27th that the first of the Battalion transport got through, traversing country passable only to mules and Fords.

On the morning of the 28th "A" Company, under Captain Henry B. Keep moved out in support of the 39th Infantry which was attacking across the open ground west of the Bois de Septsarges and Bois de Briulles while the 47th fought its way through the woods. This attack was made in broad daylight under heavy artillery and machine gun fire but was closely supported by several batteries of Seventy Fives. The attack passed Nantillois, and the Nantillois-Briulles road. The 3rd platoon of Co. "A" closely followed the attacking troops. An excellent machine gun position was found near the crest of a ridge one and one half kilometers northeast of Nantillois and just west of the Bois de Briulles and the two remaining platoons were ordered into action there. On the way they were subject to such vigorous machine gun fire from the Bois de Briulles on their right that the 2nd platoon found it advisable to stop long enough to knock out two guns that were giving most of the trouble. From this ridge these platoons were the masters of the whole wide valley in front and the open hillside opposite. An open field of fire extended for an average of 1800 meters from a line bearing slightly east of north, clear around to the southwest and there was concealment and protection for gun crews. No friendly troops were directly in front and the position had sufficient command to enable the guns to fire safely over troops advancing on the right and left. These troops were being held up and were suffering casualties from the fire of machine guns located near the crest of the opposite slope and in the edge of the Bois de Fays and the Bois des Ogons. A number of these were located and put out of action by the guns. A considerable number of Germans were observed working on trenches or wire in the opening to the west of the Bois de Fays. This was area frequently swept by fire to inflict losses and prevent completion of the work. Assisted by Company "A" of the 10th and by their own regimental machine gun company, units of the 39th Infantry succeeded in reaching the Bois des Ogons and the Bois de Fays. Both of these woods were very strongly held by the Germans and after dark the infantry was withdrawn to a position southeast of the Briulles-Nantillois Road.

Company "A" maintained its general positions during the night and on the morning of the 29th engaged various targets including a large combat patrol consisting of about twenty-five Germans who were advancing from the Bois des Ogons. Hostile artillery and machine gun fire on "A" Company's positions became increasingly heavy.

the Battalion toward Esnes at 8:30 P. M. in case the battalion commander was unable to return before that hour. The Battalion was met enroute for Esnes where it arrived about 11:00 P. M. despite very heavy traffic on the roads. From the vicinity of Esnes it was necessary to carry the equipment by hand more than two kilometers to the battery positions. The guns were carefully mounted using "T" bases and sandbags. They were laid and checked while details went back to the trucks for extra ammunition. Each gun was provided with 14 boxes to fire in the barrage and twelve to carry forward. The Battalion was ready with two hours to spare.

OPERATIONS SEPTEMBER 26TH.

Hill 304 has been bitterly contested. It is devoid of vegetation and is simply a mass of shell craters of all sizes with lengths of old trenches and wire in places. With the sharp shadows cast by the slanting rays of the moon it looked more like a lunar landscape than a part of our earth. At 2:30 A. M. the artillery attained a stupendous volume. The sky behind and for miles on either flank was continually alight from gun flashes and the bursting shells on the hills opposite were like hundreds of sudden bright sparks. The air was filled with rushing steel, yet each shell had a distinctive voice of its own. Smoke and mist filled the valley so that one received the impression of being on a mountain top with blue sky and stars above and a violent thunder storm raging in the clouds below. The scene was varied by the discharge of great quantities of rockets by the enemy and later came the wonderful changing light of dawn. Modern war is seldom beautiful but this was a fit setting for the final battle of the war.

At 5:30 A. M. the artillery commenced their rolling barrage with every gun firing at top speed and the first infantry waves went forward under cover of darkness and smoke. Eight minutes later the machine guns opened up and their exhilarating crackle was plainly audible above the heavy rumble of the big guns. About 70,000 rounds were fired by the 10th M. G. Battalion and a similar amount by the two companies of the 11th M. G. Battalion. At H plus 1 hour firing ceased and the Battalion immediately made ready for its six kilometer struggle to get the heavy machine gun equipment forward as rapidly as possible to the line of Septsarges. No infantry carriers were used. The Battalion moved forward in column of companies, each company being in line of squad columns.

The hostile artillery, which had not heretofore been in evidence began to shell the machine gun battery positions just as the last of the men were moving out. There was a dense fog which did not lift until about ten o'clock. Direction was successfully maintained by compass and approximate location checked by details passed over. The ground at first was very rough and there were many trenches to cross, but wide lanes in the wire had been cut by the Engineers and neither the wire nor Forges Brook proved to be a serious obstacle. One platoon was equipped with tracer and armor-piercing ammunition and fired at a number of low flying enemy planes during the latter part of the advance. No other targets were engaged enroute. The men marched ten minutes and rested five. Later on the rests were more frequent.

The move was completed about 11:15 A. M. Many of the men were sick from fatigue and their muscles were useless for the time being.

From the hillside east of Septsarges a German patrol about 400 yards distant was seen closing in on a one infantry scout who apparently had no support in sight and no thought of flight as he stood coolly firing on the enemy. Two guns of the 10th surprised the patrol before they could seriously harm the scout. One man was wounded and captured. The rest immediately disappeared in some brush and old trenches.

Firing data had been prepared for positions selected from the map. While locating these positions on the ground, officers of the Battalion were fired upon by a concealed onepounder some distance to the right flank. It was decided that, on the whole, some old battery positions and groups of shell holes a little further up the hill would make better barrage positions even if the firing data did require correction. The guns were mounted and laid for an S. O. S. barrage in front of the line of the Corps Objective and liaison established with the 47th Infantry, which had halted on that line in accordance with orders. The woods a short distance to the east, were patrolled, sentries posted to watch for the barrage signal and an ammunition detail started on its way to the dump at Esnes.

The night of the 26th was cold and windy with occasional bursts of rain. Much as the men needed

hour at which time the forward edge of the artillery barrage would reach the position. It was believed that to commence the machine gun barrage at H hour was unnecessary and that it might indicate to the enemy the exact moment at which the Infantry jumped off. The opening of the machine gun barrage was therefore to be delayed until H plus 8 minutes, at which time the advance from Forges Brook would be under way and the enemy would know that the assault had begun.

In this machine gun barrage the 10th Machine Gun Battalion was to cover the right half of the Division sector and the two companies of the 11th M. G. Battalion the left half. Thus the 10th M. G. Battalion had one kilometer of front to cover with its 24 guns, a width of about 40 meters per gun.

The orders for the attack gave the line of the Corps Objective and provided that troops of the 4th Division were not to go beyond that line until either the right or the center Division of the Fifth Corps on their left should reach it. The line of the Corps Objective ran east and west through Nantillois. This was about seven and one-half kilometers in front of the line of departure so that troops on the line of the Corps Objective would be without artillery support until three miles of road could be built across the devastated area and the artillery moved forward within supporting distance.

This lack of artillery support for troops on the Corps objective made it imperative to get a considerable number of machine guns forward very promptly. The machine gun plan, therefore, provided that, as soon as the barrage companies should complete the firing of their barrage they would move forward to positions from one to two kilometers in rear of the infantry lines and lay their guns to fire an S. O. S. barrage in front of the Infantry on signal. As before, the 10th M. G. Battalion was selected to cover the right half of the line and from the map tentative positions were selected east of Septsarges near the right boundary of the Division.

On September 22nd the Division Machine Gun Officer and the C. O. 10th M. G. Battalion selected battery positions for the battalion on the forward slope of Hill 304 and reconnoitered routes of approach. This reconnaissance party was very small by reason of the stringent rules imposed by the higher command to insure absolute secrecy. It was very difficult for anyone below the grade of Colonel to get anywhere near the front during daylight.

On the night of September 23—24th the Battalion moved northwest about twelve kilometers to the Bois de Sivry where some old French barracks provided shelter.

During the day of the 24th firing data was calculated from maps and carefully checked. Excellent maps with scales of 1:10,000 and 1:20,000 were used. The Battalion Supply Officer also established an ammunition dump on the reverse slope of Hill 304.

On the evening of the 24th company and platoon commanders were taken on a reconnaissance to Hill 304 and over the routes of approach to the battery positions, which were placed along the eastern branch of the Trench Mondon about 300 meters in rear of our front line trenches.

Towards morning of the 25th a Battalion motorcycle courier arrived with the complete Division orders for the attack. This was a very imposing publication with many annexes of all kinds. The machine gun annex was carefully verified and then a diligent search was made for information of importance. There was no information as to the time of attack.

During the day of the 25th everything was put in readiness, the men acquainted with the task which confronted them on the opening day of the attack and the communications officer was given the single but important duty of finding out the day, and, if possible, the hour of the attack. This he was unable to do. Division and brigade headquarters were moving forward and the couriers were unable to locate them. There was a Battalion courier on duty at the Division message center but no word was sent by him.

About 6:30 P. M. the battalion commander and the communications officer started out in search of Division Headquarters which was finally located about 8:30 in a couple of large dugouts on a high hill somewhere near Montzeville. There it was learned that the attack was to be made on the following morning at 5:30 and that Corps had announced H hour only five minutes before. Traffic jams made it impossible to return to the Battalion but the senior company commander, Captain Thorne, had been directed to stare

OPERATIONS OF THE DIVISION M. G. BATTALION OF THE 4TH DIVISION
DURING THE MEUSE—ARGONNE OFFENSIVE.

By

Major Francis R. Fuller, Infantry.

PREPARATION FOR THE ATTACK.

September 19th found the 10th M. G. Battalion in the Bois de Lemmes about 10 miles southwest of Verdun. Men and officers were in bivouac, as there was no shelter available. In spite of persistent rains the men were fairly comfortable in their shelter tents and the Battalion was in good condition.

About September 20th some general information of the impending attack was obtained and a few officers of the Battalion had opportunity to study a large relief map of the terrain involved. This map showed that the ground to be covered by the Division consisted generally of a series of rounded ridges, 150 to 300 feet in height, which crossed the zone of advance either at right angles or diagonally.

The ground for about five kilometers behind the enemy front lines was open. This included the first four ridges. Thereafter woods alternated with open stretches, the woods being generally on the higher ground. Small streams were shown in several of the valleys. These streams ran east into the Meuse and there was a general slope of the ground toward the river.

The suitability of the terrain for defense was further enhanced by the fact that it was dominated by the heights east of the Meuse which were not to be attacked at this time and which provided many excellent battery positions and observatories for the Germans. The Hill of Montfaucon was a dominant feature to the west of the 4th Division but little anxiety was felt with regard to it for the reason that although it rose within 2,000 meters of the 4th Division boundary, it was to be the subject of attack by our artillery and by the 79th Division on the left.

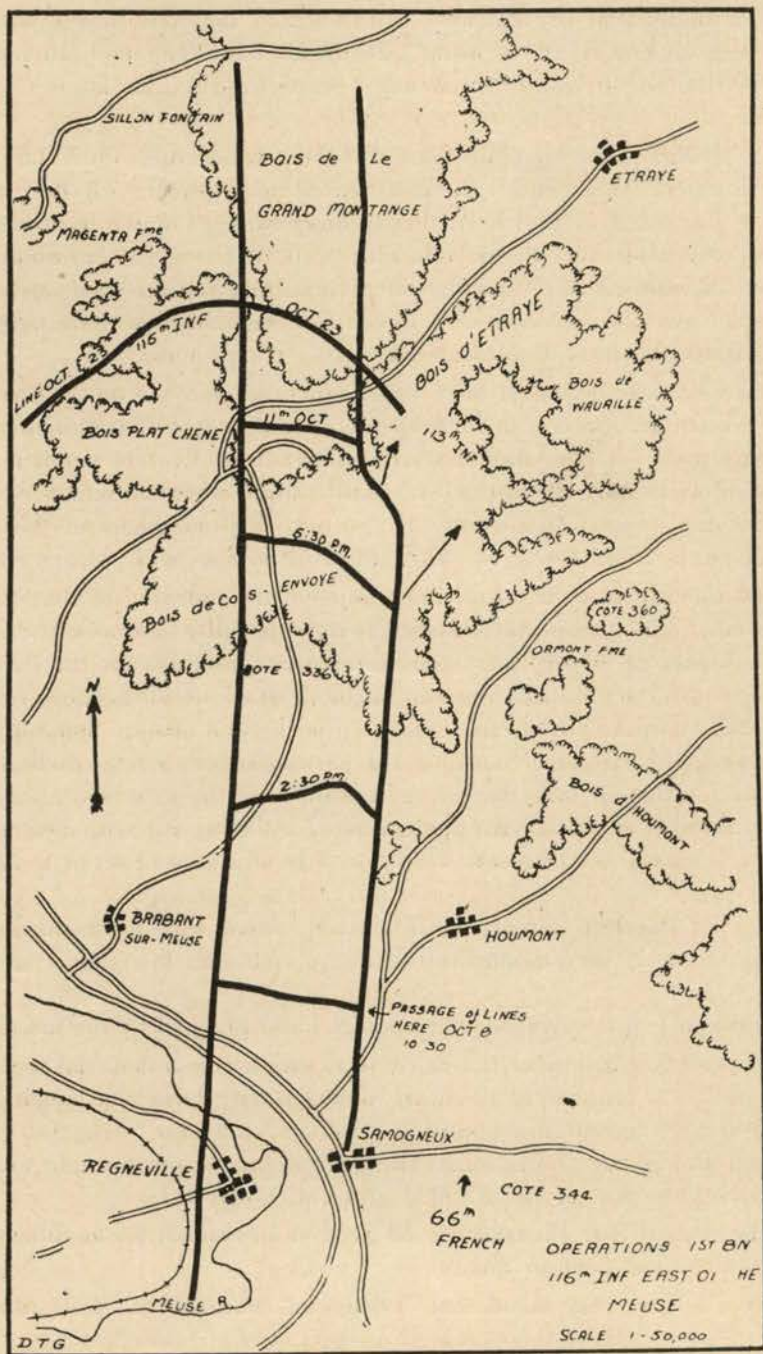
For the initial attack the artillery of the Division was to be re-enforced so that the total amounted to 108 pieces of 75 mm. and 60 of 155 mm. As soon as the artillery plan was made known the machine gun plan was drawn up by machine gun officers and a representative of G—3.

Since the fight promised to be a long one and the Division sector was only about two kilometers wide at the beginning, the Division attacked with the 7th Brigade in the assault echelon and the 8th Brigade in reserve. The 7th Brigade was to attack with regiments in line, the 47th Infantry on the right and the 39th on the left.

In view of the unusual strength of the artillery support for the initial attack it was decided that the machine guns of the 8th Brigade would not be used to support the attack of the 7th Brigade as it was deemed advisable to conserve their power for the support of their own brigade which would probably be called upon to continue the fight against stiffened resistance and with very much less artillery support.

This left eight companies or a total of 96 machine guns for the support of the 7th Brigade. These were divided into forward guns and barrage batteries as follows: Forward guns: The two regimental machine gun companies and two companies of the 11th M. G. Battalion. Barrage batteries: The 10th M. G. Battalion and two companies of the 11th M. G. Battalion. It is with the barrage batteries that we are chiefly concerned.

The artillery plan called for a three hour preliminary bombardment and a rolling barrage. This barrage was to begin on the line of Forges Brook about midway between the opposing lines. It was to remain stationary for eight minutes in order that the assault waves might advance from the jump off trenches and form closely behind it. The first important defensive lines were organized on the crest of a ridge a full kilometer beyond Forges Brook and 150 feet above it, the intervening slope being strongly organized with outpost trenches, successive lines of wire and other obstacles. The barrage was to move slowly in order that the troops might keep up with it in crossing this difficult kilometer of ground. Thus the barrage would not reach the hostile first position until H plus one hour and 5 minutes. Since most of the artillery was to be concentrated in this barrage the enemy in the hostile first positions would be free to fire machine guns and other weapons on the troops they knew to be following it and as it slowly approached their position they might escape in front of it to aid in the defense further on. For these reasons it was decided to place the machine gun barrage on the first hostile position and ground in its rear and to hold it there until H plus one



Pigeons were on hand but were not used. Visual signalling was not used. Radio was used from Regimental P. C. to rear, reported not satisfactory due to delay in encoding. The usual liaison officers were detailed at various headquarters. These officers were in many instances taken from combat organization a day before entering the line. It is believed this is bad practice. The war proved that platoon leaders soon became casualties any way and they are badly needed with organizations at this time. The need for liaison personnel should be foreseen by all headquarters and provided for from other sources. In one case an officer was reported missing, it was later found that the Brigade Adjutant had detailed him by verbal order as Brigade Liaison Officer to the French on our right "as usual", by order of the Brigade Commander, without consulting the Brigade Commander. Had the Brigade Commander been consulted as later ascertained, he would not have approved the action.

Liaison between the artillery and the battalion was not satisfactory until late in the operation, the personnel not being familiar with their duties, in some cases they thought all they had to do was to keep the Battalion Commander informed as to where the artillery was. Combat liaison was established in the conventional manner, however, stretching to the breaking point on the right continuously. As always happens during operations, there was considerable difficulty in maintaining liaison with adjacent units, of course as the trouble was discovered it was corrected. It is believed that this could be eliminated by having one of the group report back to the Battalion P. C. that sent him out each half hour.

Battalion aid stations were handled in a very satisfactory manner. Usually three surgeons, one a dentist who during the operations functioned as a surgeon. Aid stations were maintained close to Battalion P. C.'s, at all times dug outs being used. The wounded were evacuated as fast as conditions would permit. No medical personnel operated with assault companies. While units were stationary wounded were moved to aid station by personnel of the organization and in the advance the members of the band section were used as litters bearers, they having volunteered for this duty. Prisoners were also used for this duty.

Persistent gas was first used against the assaulting troops on the morning of the 9th October, after that almost continuously to the end, the terrain and weather being especially favorable for use of gas. The Division Gas Officer reported that 35,000 gas shells of various kinds were used against the division during this operation. Our own gas offensive was very limited on account of shortage of shells, however, in the last stages and as the supply improved this method of offense was used with good effect. Some difficulty was experienced with the supply of gas masks, the 10 per cent supply of gas masks was not available. This is a matter that must be given serious consideration, it must be borne in mind that the wounded always carry their gas masks with them and also that a number of masks are made useless by being hit with fragments of shell as well as bullets. A surplus supply of masks is as necessary as a supply of ammunition or food if we are to use gas in warfare.

Engineers were active on the Battalion front in putting down wire after the last objective was taken on night of October 25th, however, they demonstrated that a course of this character should be laid down in engineers text books.

A large amount of ordnance was salvaged and repaired and reissued by the mobile ordnance repair unit.

Kitchens were pushed well forward after the third day, which was a material factor in the results obtained by being able to serve hot meals, however, they were unnecessarily bunched, causing undue losses both in personnel and kitchens. Straggling was not a serious problem, however, straggler posts were established, the personnel coming from the reserve battalion. The outstanding lesson brought out by this operation was the few men who understood the use of the 37 MM gun and howitzer.

This battalion was the Assault for 13 days out of 21 days in combat for regiment.

Casualties suffered were 60 per cent in men.

Casualties suffered were 70 per cent in officers. Only one man of this battalion was captured by the enemy.

and continuous use of his aeroplanes day and night to regulate his artillery and machine gun fire, and also to attack our infantry. In this, his disregard for unfavorable weather was particularly noticeable. Our Air service on this front was negligible. It may be mentioned that a German plane was brought down by infantrymen using a captured auto tank gun.

CRITICISM

Little criticism can be made of this operation as a battalion, however, a Regimental Commander should not lose sight of the fact that when his battalions are committed to action he is responsible for the supply of his units, particularly food and water. In this operation it was the third day before any food or water was gotten up to this battalion. The Regimental Commander must have been aware of the fact that no water was available in this terrain.

The artillery support was at times not what was expected.

It is believed by the writer that, had the French Commander directed a reserve battalion to envelope the enemy right in Ormont Woods on the third day of the attack, these woods would have been taken and the line advanced more quickly with less loss of life. This was brought to the attention of the French Commander, but without result. It is believed that an American Division commander would have successfully handled this attack and accomplished the same results in one third of the time. It must be borne in mind that when an advance stops for even one hour it is worth two hours to the enemy, for if he has any resources he will be moving them up.

LESSONS AND COMMENT

1. The Organization was faulty in that no reserves were provided within the battalion. Machine gun company and howitzer platoon were assigned to sector with a mission without consulting battalion commander. They should have been attached.

2. Limited objectives are not sound for smaller units. The Kriemhilde Stellung which was the last German position on the ridge of heights of the Meuse was poorly organized and any opposition could have been swept away from west to east, forcing the enemy out on the great plains of the Woevre.

3. Liaison within the battalion was maintained by a runner, to regiment by wire, although frequently cut was promptly repaired, numerous casualties resulting in the performance of this work. There was a serious shortage of officers.

4. The proper use of the Accompanying Gun was not understood.

5. The 37mm. gun proved very useful on numerous occasions, the Stokes mortars were not much used on account of difficulty of ammunition supply. V. B. Grenades and automatic rifles were found quite useful, hand grenades were used only for mopping up.

The bayonet was used as an individual weapon as the occasion arose. Ammunition supply was abundant. The pack was ordered carried, however, this order was usually violated.

No tanks were used in this operation, however, they were used on our right by the French, but were speedily put out of action by automatic tank guns.

Intelligence service was not satisfactory due principally to systems employed, i.e., reported to higher authority, report should have gone through battalion P. C.

The enemy had much better visual observation than our own troops, as from the heights he could very easily see the whole area as far back as Verdun, weather permitting. Our forces had to rely on patrols from the front line, however, the best information obtained during this operation was had by questioning prisoners.

The personnel of the Signal Platoon, Regimental Headquarters Company were well trained and disciplined and usually made their own repairs to wire very quickly and maintained telephone communication with rear from Battalion P. C. in a highly satisfactory manner, although suffering many casualties in proportion to their number.

Main wire axis was cross country from 100 to 200 yards from the road, road crossings being avoided as much as possible. The telephone was used too freely, however, code words were used for all unit commanders from battalion down. The enemy without doubt used his listening in sets to great advantage.

was assigned a machine gun company and the stokes mortar and 37mm. platoon and to each regiment a battery of 75's.

From 5:30 to 6:15 of the 23rd the artillery of the 29th and 26th American Divisions and of the 15th Colonial Division and the 17th French Corps delivered a preparatory fire of 100 rounds per gun per hour. Then as the Infantry advanced a rolling barrage at the same rate was fired and continued until 11:00 A. M. The Division Machine Gun Battalion executed fire of position from the southwest corner of Molleville farm for 45 minutes. During the day the machine gun units are reported to have fired 1,000,000 rounds of ammunition. The jump-off line ran practically north and south through Molleville farm and it was designated to take from the enemy the Pylone Observatory, which was one of his strongest points. The second battalion of the 116th was designated as the assault battalion and was to attack due east while the 1st Battalion, 116th was to move forward and take up a position along the forward slope of high ground in northern part of the Bois d'Etrayes facing north and covering the left flank of the assaulting battalion. (a difficult move in itself.) The 2nd Battalion met with considerable opposition in its attempt to cross into the Bois d'Etrayes. The first wave of the two assault companies followed the barrage closely and partially attained their objective, but the two support companies were caught in the enemy counter-barrage and were held up long enough to enable the enemy to man their machine guns and reform their lines of resistance. Therefore the 1st Battalion was partially prevented from occupying the position designated for it.

Companies A and C were sent forward to the east to reenforce the 2nd Battalion. The final objective was reached about 3:30 but due to the terrain the line was drawn back to the natural defensive position on Hill 361 to Hill 375 in the Bois de la Grande Montagne.

Before this was accomplished it was necessary to clean up many sniper posts in trees and machine gun nests that had been overlooked or had filtered in from the north between the assault and support companies of the 2nd Battalion. In order to prevent any gaps in our lines it was necessary to place all four companies in the front line again, taking over part of sector of 2nd Battalion. This was finally completed about midnight and each small group of men verified. In some cases only two men knew where the man was located next to him. The line was held in this manner until 26th October, 1918, repulsing a counter attack at 2:45 o'clock on the 25th October. The rest of the time was utilized in digging in and otherwise strengthening positions. At 5:00 o'clock P. M., on the 26th of October, the 114th Infantry took over that part of the Sector east of Point 26.8. This enabled one company of the 1st Battalion to be withdrawn and placed in support. Also enabled the battalion to narrow its front and thereby further strengthen their positions. The position was now organized in depth. The front line of each company consisted of several 2 man rifle pits, then a line of resistance of one platoon of each company and the support line by Company D. Wire was placed in front of our position by engineers during this time. Orders were received on the 28th to relieve the 1st Battalion, 116th and the Division by the 79th Division, American. The position of the 1st Battalion was to be taken over by the 114th Infantry, Companies C and D were relieved at 8:25 P. M. on the 29th of October, Companies A and C were not relieved until 7:10 the morning of the 30th of October. The 114th having some difficulty in effecting the relief. During the night of the 28th and 29th the battalion was subjected to a continuous artillery bombardment of high explosives and gas. The last elements of the battalion reached Belleville about 11:15 joining Companies B and D who had arrived during the night. The battalion rested until 3:30, when it marched to Glorieux to entruck for other areas.

ANALYSIS

It is believed a test of the value of the services of this battalion and in fact the rest of the Division is found from a study of the ground over which it operated, and the character and fighting qualities of the enemy, bearing in mind that the German High Command knew that the Meuse Sector was the hinge upon which must swing the gate of their retirement, and we have heard that orders were to hold it at all costs. He had excellent observation at all times. Our forces had to depend almost entirely upon captured prisoners for information. As the enemy's reserves in the rear dwindled he had to make up this loss of power by a proportionate increase in his machine guns and artillery. His Infantry Companies had come to be practically machine gun units with a few riflemen as support to the machine gun crew. His use of this weapon was masterly, while the employment of his artillery was skilful and effective. A notable feature of the enemy's activities was the aggressive

ment, for the enemy knew our position. Our position was kept under artillery fire and included the usual amount of gas. The support battalion had suffered heavy casualties also due to enemy artillery fire on back areas.

On the morning of October 12th, in order to effect liaison it was necessary to place all four companies in line again, all of which had become considerably depleted in numbers. However, the support battalion was kept very close up. Under heavy bombardment and gas, this position was held until the night of the 13th of October, 1918, when by 10:00 o'clock the 1st Battalion was relieved and moved back by companies to the Bois de Brabant, via Meuse-Rappe-Malbranck road, a distance of three kilometers. The battalion remained here in reserve in dugouts until the 15th of October, 1918, resting and furnishing such details as called for by the Regimental headquarters. Salvage and burial details in particular. The battalion was still under heavy artillery fire and gas from the vicinity of Ormont Woods. The attack was resumed at 8:00 A. M., 15th of October, 1918, with the 1st Battalion in reserve, less Company C, sent forward to fill a gap between the 115th and 116th, moving north and occupying the same position it held on the night of the 11th of October, during the night of the 15th and early morning of the 16th the 1st Battalion moved up and relieved the 2nd and 3rd Battalions, who had during the day taken the enemy's lines in the southern edge of the Bois de la Grande Montagne. The relief was completed at 4:00 A. M., the 16th of October, 1918. At 8:00 A. M. the 1st Battalion with two companies of the 115th Infantry attached was ordered to attack and continue the advance at 9:30 A. M. The remnants of the 37mm. and Stokes Mortar Platoon were assigned to assist in this attack. One Machine Gun Company was assigned to the battalion. The Objective was the high ground in the Bois de la Grande Montagne.

The attack resulted in very heavy fighting against emplaced machine guns, some of which was hand to hand fighting in dense woods, fighting continued all day. As this was considered by the Corps Commander to be the ultimate advance practicable to the north until the capture of Ormont Woods the position was consolidated.

The line here formed the arc of a circle, bending back sharply on the right in order to maintain liaison with the 57th Brigade.

The Etraye Ridge was densely wooded and held by the enemy within 40 yards of our troops in the western edge. A counter attack launched from this position may have resulted seriously for our right flank and rear. Defense against such an attack was difficult because of the deep open ravine of Molleville farms lay immediately behind our right front. Movement was very difficult for the proper performance of liaison and was held more for information than for combat. The ridge afforded very good hostile observation.

On October 17th a feeble counter attack from the north of the Bois de la Grande Montagne was repulsed during which a squad from the left assault company captured an enemy mess detail with hot coffee which was enjoyed by our men. Little or no artillery fire was received on the 17th and 18th.

On the night of the 18th of October, the 1st Battalion was relieved by the 2nd Battalion, relief completed by 11:00 P. M., the 1st Battalion moving back to old positions, Bois Boissos, P. C., remaining here until the morning of the 23rd of October in support, however, some salvage details were furnished Regimental Headquarters, during this time the battalion was continuously under artillery fire and gas concentration. On the 19th the sun was shining and this had a wonderful effect on the morale of the men, and incidentally an issue of new dry socks was made which added greatly to the comfort of the men.

During these few days of so called rest, excellent opportunity was afforded for reconnaissance. On Hill 361, Etraye ridge was located the Pylone Observatory, which in addition to the ridge afforded unrestricted observation for the enemy of our positions clear down to Verdun, weather permitting.

The capture of this ridge was regarded as necessary to the successful outcome of our attack on Belleau Woods, which in turn had to be taken before a successful attack against the Ormont Woods could be made, consequently Field Orders No. 22 were issued for a combined attack by the 29th and 26th (American) Divisions on the 23rd of October, 6:15 A. M. (The 26th Division, American, had relieved the French on our right). Thorough preparation was made for this attack in the way of plans and material. The rate of advance was to be 100 meters in ten minutes. After half hour on intermediate objective, organizations were to reform and advance at same rate to normal objective, then reorganize and entrench. To each assaulting battalion

ing the 1st Battalion was wounded during the day, but on account of heavy artillery bombardment could not be evacuated until after dark. Several litter bearers were wounded in attempts to evacuate this officer during daylight. The senior Captain assumed command of the battalion at this time. This leaves the line companies of battalion with only one officer per company. An opportunity was afforded here for much needed rest and check up on personnel. By night liaison had been affected with the French on the right, who were being held up by terrific machine gun fire and minnenwerfer from the Bois de Ormont. No supplies had yet been brought forward for our troops.

The original attack order of the 17th French Corps provided that when the normal objective was reached it would be exploited by the 29th Division (American). It had been contemplated that the 57th Brigade would pass through the 58th and take up the advance with fresh troops. Stiff resistance met by the French, however, made this impracticable, the 58th Brigade (American) was ordered to continue the advance and the 57th Brigade was used in the French sector.

Later, in order that the 18th Division might fulfill its mission, the Corps Commander of the 17th French Corps, whose orders the 58th Brigade were still operating under, directed that the continuation of the attack planned for the next morning (10 October) be not made.

An effort was made on morning of the 10th to effect liaison with the French on the right. This necessitated putting all four companies in the 1st line. This was reported to Headquarters 116th Infantry and arrangements were made for a battalion of the 113th to take position on right of 1st Battalion, 116th, permitting this battalion to shorten its line. This arrangement was completed late in the afternoon of the 10th.

At 5:00 o'clock on the morning of the 11th October the command of the Division, less the 57th Brigade reverted to General C. J. Morton. Needless to say, this caused a wave of satisfaction because the Americans did not like the manner in which the French handled the situation.

During the night Colonel A. J. Harris was relieved of command of the 116th Infantry and Lieutenant Colonel R. H. Kelly who had been Division Machine Gun Officer was placed in command with Lieutenant Colonel C. C. Bankhead, second in command. Colonel Kelly immediately issued Field Order No. 14 directing an attack at 6:00 A. M., 11th October 1918. Regiment in column of battalions—1st Battalion, with Company D, 112th Machine Gun Company attached, will be the assaulting battalion, the 37mm. and Stokes Mortar Platoon will join the 1st Battalion by 6:00 o'clock. Battalion will advance with two companies in front line, two companies in support, compass bearing seven degrees west of north. The artillery will support the advance by concentrations on such strong points as may be necessary and at 5:30 an intense barrage will be put down on the south edge of Bois de Grand Montagne and its continuation to the west, and lifted at a safe rate towards the north. Promptly at 6:00 A. M. the battalion moved out to the attack and made rapid progress through the woods until it reached the open ground north of Milleville Farm. Here the battalion met intense artillery and machine gun fire from the enemy position, particularly Bois de Grand Montagne. These woods were found to be strongly fortified and filled with machine gun nests, which covered the open ground to the south. After advancing about 400 meters into this open ground the battalion was forced to stop and seek cover in shell holes and natural folds of the ground, due to heavy enemy machine gun fire and artillery fire enfilading the battalion from the east in the Bultry Bois. The 57th Brigade on the right with the French had not progressed out of the ravine de Molleville and the enemy still held the Bois de Molleville. The fighting was extremely heavy all afternoon. In order to prevent any attempt on the part of the 1st to assist the units on the right, a strong counter attack was launched where the lines of the 115th and 116th joined but was repulsed with very heavy losses to the enemy. Our troops had also suffered heavy casualties during the day. Our artillery support was feeble. The personnel of the 37mm. and Stokes Mortar were badly shot up, thereby decreasing the effectiveness of these valuable weapons, also the personnel of the attached machine gun company had suffered heavily and was of little value.

When darkness set in the 1st Battalion, 116th, was ordered to withdraw 400 yards to the northern edge of the Bois de Bossois south of the Farm. Artillery fire was then directed upon the edge of the woods bordering the clearing on the north. The Regiment then organized in depth for the night. The 1st Battalion had suffered severely in numbers from the days fighting. During the night hot food and water was supplied to the battalion and cigarettes were furnished by the Y. M. C. A. representative. There was no attempt at conceal-

vance was pushed forward and the second objective was passed at 11:30 A. M. At this time the French could be seen moving forward very slowly, but fighting hard. They do not have the dash of the Americans. After passing the Second Objective the Enemy became more determined and was fighting desperately, however, the front line companies pushed on to the 3rd objective capturing many prisoners, some of whom could speak good English, due to their having been employed in the U. S. at Pittsburg. These stated they were called home as reservists in 1915. Did not want to fight the Americans, but were compelled to fight by Prussian Officers. The Advance continues on through woods and ravines. The Men are thirsty, no water supply had reached them since the beginning of the march the night before. Our artillery was not successful in registering on enemy positions, cause unknown. The Battalion after mopping up continues on and reaches unimproved road south of Bois Boissos and Bois de Mileville at 3:40 P. M. Here the Battalion came under its own artillery fire and was a considerable distance ahead of the French on our right. The Battalion Commander directed companies to withdraw to positions on high ground overlooking the Ravine de Borneaux to avoid unnecessary casualties and to effect liaison with the French, whose advance had been definitely halted by heavy artillery fire. Darkness came on and fighting ceased for the night, the battalion moving back to high ground on south side of Ravine de Borneaux very much exhausted and falls asleep for the night. No water has been brought up, no water is available. The water found on the surface and in shell holes had mustard gas in it and the few men who drank some of this water, of course, became casualties. It was apparent that something was wrong at Regimental Headquarters, for the supply was not functioning as it should, communications broke down at this time. Enemy artillery was very active during the night, however, men not much disturbed due to exhaustion. Gas shells also added to disturb the rest so much needed at this time. The casualties of the day for the 1st Battalion was approximately 10 per cent, among them being two company commanders, leaving two companies in command of lieutenants, one of whom was a 2nd lieutenant, recent graduate of a training camp. Needless to say these two companies were somewhat disorganized after losing their company commanders. The withdrawal of the two front line companies to High Ground overlooking ravine, which was accomplished about dark, resulted in some confusion, during the night, however, after hard work by officers and non-commissioned officers, the companies were gotten into shape again.

It was on this day that Earl D. Gregory (Trench Mortar Platoon) distinguished himself by seizing a rifle and a trench mortar shell which he used effectively as a hand grenade against a stubborn machine gun nest and 7.5 howitzer, capturing 19 prisoners and the guns, for which he received the Congressional Medal of Honor. The number of prisoners taken this first day is difficult to determine due to the fact that early in the operations prisoners were sent to the French C. P. Some writers place the number at 2,000, others 1,000. In any event a very large number of prisoners were taken.

The morning of the ninth found the battalion ready to take up the advance again. At dawn a heavy wet fog hid the enemy and the ground, however, this did not deter the enemy from making the expected counter attack, apparently a local one, but found later to be a part of a general counter attack on a front of 10 kilometers in which 20 battalions from five different divisions took part. Captured orders of the enemy contained the following injunction. "Retake the main line of resistance, and, at the very least, the Volker Stellung." (his third prepared line of resistance). In this they were not successful, again losing a large number of prisoners, many small arms, several large pieces of artillery and two anti tank guns. The anti tank guns were immediately used against their former owners.

The brunt of this counter attack fell heavily on the 1st battalion, the enemy having gained the ravine and placed machine guns under cover during the fog, however, our riflemen from the high ground on this side of the ravine did excellent work. The attack was repulsed, many prisoners and machine guns being taken. The battalion advanced cautiously through the ravine, mopping up as it proceeded toward the normal objective, which was reached after crushing many strong machine gun positions. Our positions were consolidated and strengthened and prepared to resist further counter attack. A combat patrol sent out to the left to effect liaison with the 115th infantry suddenly walked into two of the enemy's larger caliber 210 mm. guns in place, this gun was being dismantled and the two men actually left to complete the work were captured by this patrol. This necessarily delayed the completion of their mission, i. e., to perfect liaison with the 115th Infantry, however, this was accomplished later on without difficulty. The Major command-

Formation; column of battalion, front line battalions in two waves, two companies in first wave, two companies in second wave, first wave preceded by thin line of scouts, second wave in combat groups and to be deployed only in an emergency, other battalions as noted. It must be noted that the mission and disposition of troops would necessarily require additional orders or instructions of some kind in order to take care of the situation that would arise upon capturing the normal objective. This was taken care of in splendid manner by the addition of an annex to the orders of the French commander, known as Appendix E, which was F. O. No. 18, Headquarters 29th Division, dated 7th October, 1918, effective after reaching to normal objective.

This order directed that one section 75 gun be assigned to each assaulting battalion, however, the 37mm and stokes mortar platoon was "placed in" the front line. Pursuant to the above orders the first battalion 116th Infantry in accordance with Regimental orders, after an all night march through rain and mud and after some countermarching due to ignorance of French guides, or perhaps over methods in order of march, finds itself in position with two minutes to spare, H hour being 5:00 A. M., 8th October, 1918.

Having reported in position as directed, let us now consider the terrain. A succession of sloping upland, steep, sharp, rising to a height of about 500 feet, dropping abruptly to the plains of the Woerve as we move in a northerly direction. Deep Ravines heavily wooded running generally northwest and southeast: We have the same limestone formation, so well known to northern France.

A hostile advance directed either from the north or south would find a task of tremendous difficulty confronting them. This must be apparent to you as you are all familiar with the great effort made by the German Army in 1916—and a like effort made by the French to press the enemy back, thus we observe that this terrain is peculiarly formidable to an enemy from whatever direction he may choose to approach. In general, the limestone upland is dry, heavily forested and sparsely inhabited. To understand the operations east of the Meuse, the movements and plans of the enemy as they had been discovered and developed by the 17th French Corps previous to 8th October, should be bourn in mind.

The mission of this Corps during the first attack of the 1st American Army west of the Meuse was to camouflage that attack and to support the advance of the 1st American Army by artillery fire. As a result of this demonstration the enemy multiplied his precautionary measures on the front east of the Meuse in the following manner. First; The Infantry was re-enforced. Battalions at rest were brought up to main lines of resistance, and selected machine gun detachments were hurried into line, with the result that the enemy had achieved a density on his mainline of resistance of 10 Infantry companies and 3 machine gun companies per kilometer of front and echeloned in depth to approximately 600 meters. Second; The Artillery was continually re-enforced, twelve new battery emplacements were made and occupied and sixteen old ones reoccupied, in addition nine new long range guns had been brought into action; the density of active batteries on this Corps front was ten per kilometer, while at least four artillery regiments were in close reserve. Third; The general reserve in the Corps front was made up of three reserve divisions, i. e., the 112th Bavarian and the 27th and 106th Austro-Hungarian Divisions.

So we see that the enemy was well prepared to meet any attack on the east bank of the Meuse. In fact, the enemy expected a strong attack east of the Meuse rather than west of this point. However, when the American Army made its attack west of the Meuse several divisions were sent over to assist in that defense. Thus on the 8th of October we find in our immediate front the 1st Austro-Hungarian Division and the 15th Division, making a total of nine battalions and 40 batteries in front of the 17th Corps (French). So much for the terrain and information of enemy. The weather was cold and misty—in fact hazy, making visibility poor. The disposition of the 1st Battalion was at this time 500 yards in rear of the rear element of the assaulting battalion. Companies in double lines of combat groups, first line "A" Company, left, "B" Company right, Second line, "C" Company left, "D" Company right, following the assault battalion in conventional formation, every man in proper place. It was noticed at this time that the French were not moving up with our line. The assaulting battalion had fought its way to the 1st objective, the 1st Battalion had deployed its 1st line companies and at 10:30 A. M., executed a passage of lines, it becoming the assault battalion and continuing the advance. A glance at the map will show the difficulties now presenting themselves to the company on the right. The enemy artillery became very active and accurate, however, the ad-

OPERATIONS OF THE 1ST BATTALION, 116TH INFANTRY
EAST OF THE MEUSE, FROM OCTOBER 8TH—30TH, 1918.

By

Major William A. Stack, Infantry.

The subject of this monograph being the operations of a single battalion of Infantry for a definite period, it is believed necessary to identify the unit in order that the reader may have a more comprehensive idea of the subject.

The 1st Battalion, 116th Infantry, was a part of the 58th Brigade, 29th Division, U. S. Army; was composed wholly from the National Guard of Virginia, which had passed through a most successful period of field training on the Mexican Border in 1918, thereafter a period of interior guard duty in its home state, and then another period of intensive training at Camp McClellan, Ala., under one of the most efficient general officers of the U. S. Army, Major General Charles G. Morton. The Division was considered one of the best trained in the service and in June 1917 was forwarded to France, where, after receiving additional equipment, it was rushed up to a so called quiet sector in the Alsace zone of defensive operations. Here it received its first baptism of fire, taking part in several extensive raids and coming under daily bombardment and machine gun fire from aeroplanes, during its entire stay in this sector.

Under orders headquarters, 1st Army, (American). The Division was transferred to the vicinity of Verdun and held as Army Reserve Troops being attached to the 3rd Corps, U. S. A., and reporting to Commanding General, 2nd French Corps.

On the 3rd of October, 1918, the 29th Division, U. S., was released as army reserve and assigned to the 17th Corps (French) and the movement to the actual terrain, by night marches and one day stands, generally in woods, where it was to carry out the operations of which this article is written. Arriving in the vicinity immediately north of Verdun the troops were halted for a two day rest, while the officers made a reconnaissance, Regimental and Battalion commanders going well forward with guides, while Company commanders had to be satisfied with a look from the High Ground, no guides being available for these officers.

In accordance with orders dated 5th October 1918, received from the Headquarters, 18th Division, General Staff 3rd Bureau (French) the 58th Brigade (American) was assigned a mission to take the Haumont Woods, Ormont Woods and the Consenvoye Woods and throw the enemy back of the Meuse Heights, exploit towards the north and northeast, this in conjunction with the 66th French Infantry on the right and the 3rd U. S. Corps on the left in the Meuse Valley. The initial disposition of the 18th Division (French) for this attack was as follows: Right half of sector to 77th and 66th French Infantry; the two regiments to be re-enforced by a battalion of Senagalis sharp shooters. Left half of sector to the 58th Brigade, (American), composed of the 115th and 116th Infantry and the 112th Machine Gun Battalion. One battalion 32nd Infantry, (French), was held as Divisoin reserve. The objective of this provisional organization was the gaining towards the north of the saddle of Samogneux, the necessary space to allow the entry of the 29th Division, (American) under its own commander after the conquest of the normal objective as fixed by the French Corps Commander. The attack was to be preceded by artillery preparation which included the use of smoke.

Successive fixed barrages, closely followed by the Infantry was the method to be employed.

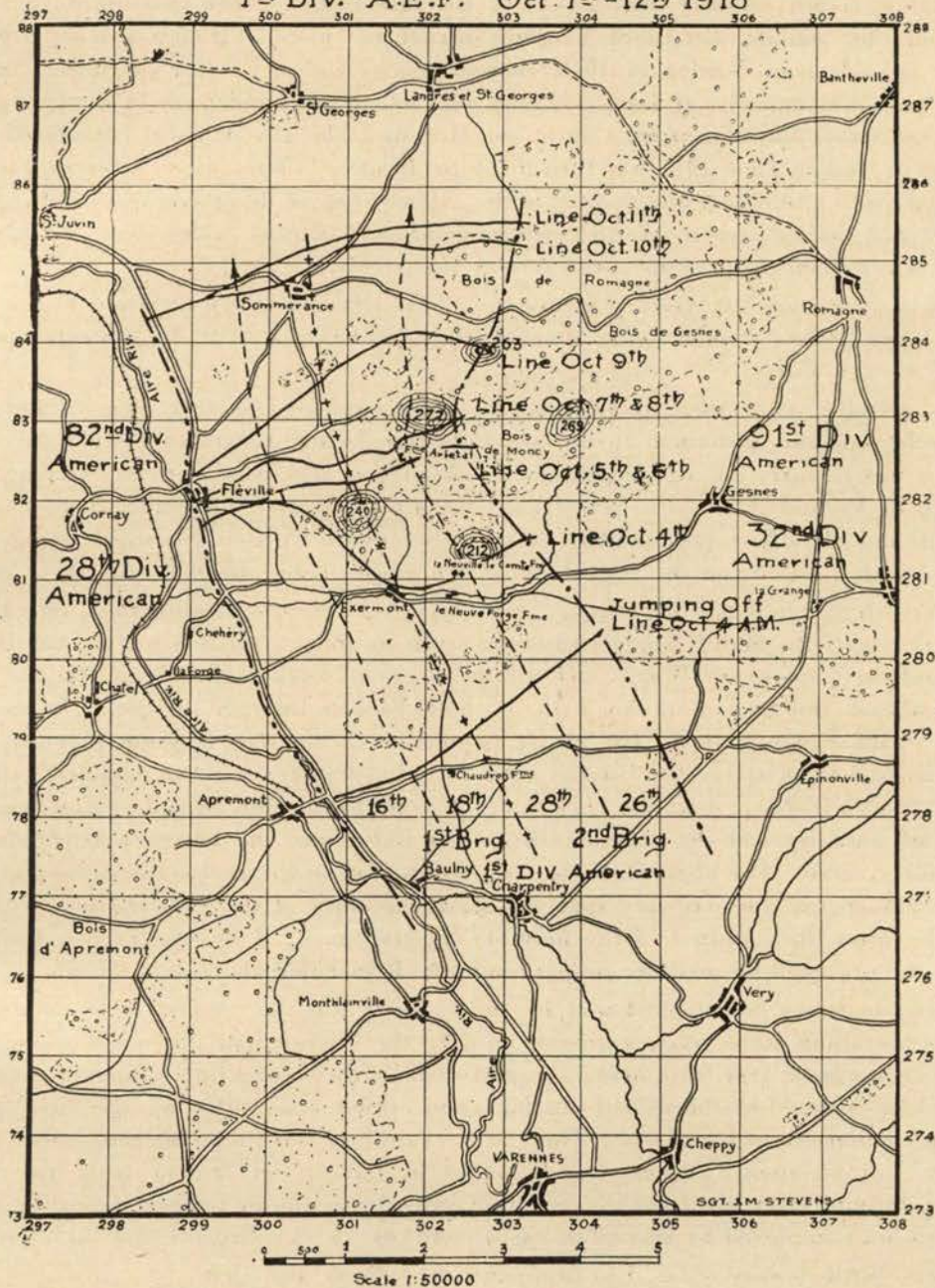
The first line battalions were given a mission to gain the intermediate objectives where they could halt and mop up the area passed over, this being accomplished by the second line companies, after which a passage of lines should be executed by the second line battalion which was following the first battalion at 500 meters interval in combat group formation. The reserve battalion was following the second line battalion at 1,000 meters, one half Company Infantry was detailed as liaison detachment from the 116th Infantry; one half company Infantry and one company machine guns for a similar purpose from the 66th French Infantry. The attack was supported by the 158th Field Artillery (U. S.) Brigade and three groups U. S. 155's.

Two day reserve rations were ordered to be carried by officers and men.

Line of departure for 116th Infantry was a line between the ravine at 1200 meters southeast of Brabant and Samogneux-Haumont Road, its right at this road, left at point (49.64) French map (24.6) map prepared by U. S. facing north, a front of 1600 meters.

MEUSE - ARGONNE OFFENSIVE

1st DIV. - A.E.F. Oct. 1st - 12th 1918



back immediately into the fight. The other method allows him to accomplish his purpose by avoiding the action of the day. If he can do this, tomorrow will find him straggling again.

Fog and condition of low visibility were of invaluable assistance to the Infantry in closing with the enemy. Infantry will often be forced to advance without returning the enemy's fire because of the latter's excellent concealment and long range machine gun fire. In this action it was providential that each attack was launched in a dense fog.

The use of reserves was timely. When battalions became exhausted, they were promptly passed and given an opportunity to reorganize. The last day of the fight finds every unit committed to action, every available rifle in the line and a reserve furnished by the corps.

No criticism can be offered of the Division Commander's plan or of its execution by the troops. The operation is a reflection of the former's military character and insight into the capabilities of his officers and men and the latter's aggressiveness and willingness to go forward.

The plan of maneuver was undoubtedly correctly drawn. When it failed to work the first day of the attack, the Division Commander realizing that it was still a correct plan, immediately pivoted on the left of the line and swinging the center and right forward worked it again and again until it succeeded.

The lessons which we may learn from this action are numerous. To mention them would be merely to reiterate the analysis in another form. Each point touched upon is in itself a lesson in success or failure under similar conditions.

However, there is one outstanding lesson which overshadows all others and concerns us vitally as Infantry officers of the staff or line, and it is this:

The progress of Infantry on the field of battle is a slow and painful process. In the map room we send our Infantry forward from the southern end of the map to the northern, following a series of road angles and coordinates. Artillery support is always perfect. If it is not available we go ahead regardless, supported by a lone trench mortar and a one pounder. We leave the roads at night and march in darkness over hill and valley, woods and plain, our riflemen squeeze the trigger at 300 yards and hit everytime. The word objective may slow down the rapidity of our attack so we delete it in horror from our military vocabulary. The blue pin moves forward and the red pin moves back.

The acid test of any operation is its success. The action I have tried to describe shows us that in the face of determined resistance even veteran Infantry must be closely supported in every possible way. It must not be pushed indefinitely without giving it forward rallying lines or objectives on which to reorganize before advancing again, if not, disorganization and loss of control is inevitable.

References:—Personal experience of the Author and statements made to him by other officers who were present during the action; History of the A. E. F., by Shipley; History of the 1st Division; History of the 26th Infantry; War Diary, 1st Division; War Diary, 1st Engineers; Casualty Records 1st Division; Personal Records 1st Division; History of the 18th Infantry; History of the 16th Infantry; History 2nd M. G. Battalion; Operations Report 32nd Division.

This operation was a slow process and lasted throughout the day.

On the night of October 10th the 1st Division was ordered to continue its attack in the same manner.

At 7:00 A. M., patrols were pushed out. These immediately came under heavy fire from the wired positions of the Kriemhilde Stellung line. It became evident that a specially prepared assault was necessary to take the position. Front line troops were ordered to hold their lines.

During the day of the 11th, advance parties of the 42nd Division entered the sector.

On the night of October 11th, 12th the First Division, less its artillery brigade, was relieved by the 42nd Division, marched out of the sector and reassembled in the Bois de Cheppy. No trucks were available to transport it to rest billets, so it started on a 75 kilometers march to the area of Vavincourt.

SUMMARY.

The 1st Division had written one of the brightest pages in its history. With its flanks exposed, it had advanced seven kilometers through the key points of the American front, flanking out the bluffs of the Aire and enabling the 77th to pursue the enemy now falling back rapidly in the Forest of Argonne. Elements of the following enemy divisions stubbornly resisted its advance. The 1st Prussian Guards, the 5th Prussian Guards, the 37th, 41st, 52nd, 45th, 28th and 115th Divisions. The Division Commander's report of the operations start off, "As per schedule". Colonel Frederick Palmer, famous war correspondence and an observer in the operation refers to this in his account of the action as the coldest prose he had ever read.

One thousand four hundred and seven prisoners were taken, 13 field pieces and numerous minnenwerfer, machine guns and rifles. The enemy losses in killed and wounded are not known.

The losses of the 1st Division testify to the stubbornness of the battle. Nine thousand officers and men in round numbers were the price of its victory.

On November 19th the Commander in Chief recognized this action by awarding the 1st Division in General Orders No. 201, the only single citation awarded an American Division. The closing paragraph of this order is the heritage of every man who ever wore the red one. "The Commander in Chief has noted in this Division a special pride of service and a high state of morale never broken by hardship or battle."

ANALYSIS AND CRITICISM.

An analysis of a successful operation is simple. A criticism is difficult. This is considered to be the model operation of the First Division and for this reason it is much less difficult to analyze than criticize. The Infantry showed fine maneuvering power and stamina for which it had already been noted. Its high morale made leadership comparatively simple.

The use of machine guns was intelligent. They were used for overhead fire and for covering gaps in the line. Some units were organized into groups for barrage fire.

Artillery support was always close and particularly successful. This may be attributed in large part to the fact that Infantry and artillery officers were known to each other personally and had mutual confidence in each others ability.

There is no opportunity to analyze the use of the accompanying gun. They were undoubtedly too far forward at the jump off, became excellent targets for the enemy artillery, and were promptly put out.

The 37 M. M. gun was effectively used and proved its practicability.

The three inch trench mortar could not be effectively supplied with ammunition.

Communication was excellent throughout the action, but resolved itself, as it always will when real resistance is encountered, to the telephone and the runner.

The tanks did excellent work while they lasted, but suffered from a well directed artillery fire.

The fighting was too close for the Cavalry to be of use.

The Air Service was hampered by the aggressiveness of the enemy's planes.

The 1st Division method of handling stragglers was entirely effective. A line of Infantry First Sergeants followed in the zone of advance of their units and promptly turned back any stragglers. Compared to straggler posts and military police this method has the overwhelming advantage of turning the straggler

The Cavalry was assigned to liaison duty, but, on account of heavy shelling and gas, could not function.

The morning of October 9th was marked by a dense fog. The 1st Battalion, 16th Infantry, "jumed off" on time. H hour was 8:30 A. M. It followed its barrage closely across the open ground to the base of Hill 272 and fought its way through a powerfully organized position to the crest of the hill. This successful assault paved the way for the rest of the attack and stands out as one of the most brilliant operations in the history of the division. A great number of machine guns and minnenwerfer were captured, and a few prisoners. The denseness of the fog made team work impossible. Small groups fought their way forward and kept boring through.

On its left the 2nd Battalion, 18th Infantry, ran into heavy machine gun fire from Hill 176. One company worked its way around the western slope and outflanked the position, enabling the battalion to reach its objective.

The 16th Infantry, on the left of the line, advanced its line to the 1st Objective, sustaining considerable losses.

On the right of the 1st Brigade, the 2nd Brigade, slipping over into its new zone of advance attacked northeast, the 1st Battalion, 26th on the right, the 3rd Battalion 28th on the left. Isolated machine guns and small enemy groups overcome and the objective reached on time.

While the 1st Battalion, 1st Engineers was forming up on the pivot, it was viciously counter attacked from the northeast and east. Two machine guns of the 1st Battalion 26th, which had been placed there on October 8th by the battalion commander were captured and the crews killed or wounded. The Engineers counter attacked promptly and recaptured the guns, and shortly after advanced to the 1st objective.

The 1st Battalion 28th passed the 3rd Battalion on the first objective and in liaison with the 2nd Battalion 26th advanced to the second objective. An enemy counter attack forming in the Bois de Romagne was caught by our artillery fire and dispersed.

The artillery now shifted to the front of the First Brigade which advanced successfully to the second objective and dug in .

During the afternoon of the 9th a battalion of the 361st Infantry cleared the eastern slopes of Hill 269, into which the enemy had again infiltrated. A battalion of the 362nd took position supporting it.

During the night of the 9th, the disorganization of the enemy in front of the 1st Division was beginning to show. A rolling kitchen full of cooked food came down an unimproved road on the eastern slope of the Cote de Maldah, looking for its company, which no longer existed, and was gratefully received by the 28th.

During the night, the 6th and 7th Field Artillery displaced forward along the line Fleville—Hill 272, where they could better support the attack.

EXPLOITATION.

On the night of October 9th, the First Division was ordered to exploit its successes to the line Sommerance Tuilliere Farm. Each regiment was to push out patrols in its zone of action at 7:00 A. M. Infiltrating forward they were to sieze and hold favorable ground. The assault battalions would maintain liaison, immediately advance and occupy the best defensive position. The 181st Brigade was relieved and attached to the 32nd Division.

The 2nd Battalion 26th infiltrated forward fighting its way through woods so dense that contact was almost impossible. The 3rd Battalion 26th in close support, threw two companies on the right flank to protect a gap between the 1st Division and the unit on its right. Night fall found it on the northern edge of the Bois de Romagne.

The 2nd Battalion 28th and remnants of the 1st Battalion 28th similarly filtered forward, using the same methods, to the line as indicated.

The 1st Battalion, 16th moved forward down the Cote de Maldah, against slight resistance, to the line indicated. During its progress a German colonel was captured. He stated that he had been cut off by the barrage of October 9th and unable to move from his dug out.

The 1st Battalion 18th pushed forward to the line indicated, patrolling into Sommerance. The 16th moved up as indicated.

The crest of the hill was cleared by dusk after close fighting in dense woods and brush and occupied for defense.

The period of semi stabilization—October 6th, 7th, and 8th had been a trying one. Machine gun artillery and minnenwerfer fire was increasing the already heavy casualty list. The wounded were so numerous that they could not be evacuated daily. Burial parties as far back as Montrebeau wood had to be discontinued.

The lines had been straightened out by constant plugging away. The artillery was displaced and moved forward to resume its close support. Everything was in readiness to advance, although the question of employment of the remaining troops presented a serious problem to the Division Commander in covering the broad front assigned.

All day and all night of October 8th the Field Artillery pounded Hill 272 with high explosive, shrapnel and non-persistent gas.

Orders for the attack reached all echelons in ample time. The mission of the Division, with the 181st Brigade attached, was to cover its front strongly north of Hill 240 and attack in the direction of the Petit Bois, assisting the 32nd Division by cleaning up the Petit Bois and the Bois de Romagne north of Hill 263. It involved the shifting of the zone of advance in close contact with the enemy, a critical maneuver.

Up to this time every infantry battalion except the 1st battalion 16th Infantry had been heavily engaged. The 1st Battalion 1st Engineers and all machine gun units had also been committed. The 1st Division was to make final effort.

The plan of attack was carefully drawn in every detail, involved the maximum use of artillery and auxiliary troops and showed the confidence of the Division Commander in the maneuvering ability of his regiments which the results of the operation proved was not misplaced.

THE ATTACK OF OCTOBER 9TH.

The operation was divided into three phases in order to obtain a maximum density of artillery fire:

The 1st Battalion 16th Infantry from division reserve was to take its place in the sector of the 28th Infantry before dawn. Operating under the commanding officer 18th Infantry, it was to attack and capture Hill 272, supported by a heavy artillery concentration and preceded by a rolling barrage. During its advance the 16th and 18th Infantry were to push their lines forward slightly and maintain liaison. For five minutes before the attack, Company "C" 1st Gas Regiment from Hill 240 was to smother Hill 176 with thermite.

At H plus 22 minutes, the 2nd Brigade using its least fatigued battalions was to swing to the right and attack Hill 263, with the Divisional Artillery rolling its barrage 200 meters in front of the assault waves, and work its way abreast of the 1st Battalion, 16th. It was to stop here and reorganize while the artillery pounded the hills to its front. At H plus three hours it was to advance behind a rolling barrage at the rate of 100 meters in six minutes to the second objective.

The 2nd Phase was to consist of the advance of the 1st Battalion 16th to the 2nd objective for 30 minutes before its advance, the artillery was to fire concentrations in the zone of action in its front. At H plus four hours and 50 minutes a rolling barrage was to precede it at the rate of 100 meters in six minutes, and it was to advance to the second objective, maintaining liaison on its flanks.

The 3rd Phase was to consist of the advance of the 1st Brigade to the second objective at H plus six hours and 20 minutes, following a rolling barrage at the rate of 100 meters in six minutes. Upon reaching the second objective all units were to organize and prepare to exploit their successes. Thirty minutes after the 1st Brigade reached the second objective the artillery would cease.

The First Engineers on Hill 269 were to form the pivot of the attack, cleaning up the Bois de Money in their zone of action.

The 361st Infantry (181st Brigade) on the right was to hold its position near the southern slope of Hill 269 and cover the right flank.

The 362nd Infantry, (18th Brigade), 2nd Battalion, 1st Engineers and 1st Battalion, 26th Infantry formed the Division reserve.

No tanks were assigned on account of the difficulty of the terrain.

Battalion, 26th, was repulsed with heavy losses, suffering converging fire from Hill 176 and Hill 272.

The 3rd Battalion of the 18th, showing splendid driving power, advanced to the northern slopes of Hill 240, where it too was definitely stopped.

The 16th Infantry, with the 3rd Battalion still in its forward echelon, although it had not advanced, suffered heavily during the operation. The 2nd Battalion, entrenched in close support, on the open plain south of Fleville, like the 3rd Battalion, caught the full force of the enfilade fire from the west.

Nightfall found the lines as indicated. Throughout a day of hard fighting, artillery and machine gun companies had given the closest support to assaulting battalions.

The nature of the terrain made it necessary to push machine gun companies well forward to commanding ground. Companies attached to the 1st Brigade were in position on Hill 240 and echeloned rearward.

The right brigade had its machine gun companies with assault units well forward, while the companies of its third line battalions organized for barrage fire near the Exermont ravine.

As soon as it was found that resistance was too stiff for troops to follow a barrage, the sixth and seventh field artillery passed to control of brigade and regimental commanders. Close liaison rendered its support practicable. Some single guns fired more than 1,000 rounds in 24 hours.

The howitzers of the 5th Field Artillery were being constantly called upon for counter battery and destructive fire.

Tanks were not used after the first day. The Brigade Commander of the tanks states that the tanks were available. I am unable to state why they were not used.

On the 6th of October no advance was ordered. Efforts were made to push patrols through the woods toward Hill 272. The 3rd Battalion, 26th, while attempting to infiltrate toward Hill 272 encountered an enemy force estimated to be a battalion, forming for counter attack in the ravine north of Hill 269. The battalion commander disposed his battalion to meet the enemy and the battalion opened fire promptly. The Regimental O. P. on Hill 212 had also observed this movement and, on its call, artillery, previously registered on this approach, dispersed the formation.

To go back a few hours, the patrol from the 1st Battalion 26th which had been pushed out to Hill 269 on October 5th reported that the enemy had evacuated the hill. A platoon was promptly sent to occupy the crest of the hill. The Platoon Leader unfortunately had no map and occupied the southern knoll thinking that he was on the crest. The occupation of Hill 269 was reported to the 5th Corps but the 32nd Division was constantly reporting fire from Hill 269.

Although in the zone of action of the 32nd Division, the 32nd could not advance directly against it because of fire in its front. The situation remained thus until October 8th.

On the night of October 6—7, the 82nd Division, which had taken over half of the sector of the 28th Division, entered the zone of action of the 1st Division. At daybreak it attacked due west of Chatel-Chehery. The 6th Field Artillery, supported the attack. Its success relieved the exposed flank of the 16th Infantry from a galling fire which it had borne for six days and nights.

Orders were received from the Army on October 7th transferring the 1st Division to the 5th Corps and attaching to it the 181st Brigade (91st Division). Its zone of action was extended to the northeast, the right boundary was Hill 269—Tuilliere Farm, the left boundary Fleville—Sommerance.

It now became necessary for the Division Commander to place the 1st Engineers in the line. During the night of October 7th—8th, the 1st Battalion, 1st Engineers, with one company of the 1st Machine Gun Battalion attached to relieve a detachment of the 32nd Division on Hill 269, which had in turn relieved, 24 hours before, the platoon of the 26th Infantry, which I referred to previously. Heavy shelling during the relief prevented its accomplishment until 5:30 A. M. The enemy was found to be holding the crest of the hill and the eastern slopes.

It was apparent that the crest of the hill must be cleared before the line of departure could be established for the next advance.

The 1st Battalion, 1st Engineers and a detachment of the 1st Battalion, 26th Infantry attacked at 4:00 P. M. The detachment of the 26th moved east up the slopes of 269. The Engineers attacked north. There was no supporting fire.

During the night the 1st Engineers sent detachments up to assist in "digging in" the 16th Infantry in order to relieve it in some measure in its exposed position in the Aire Valley.

THE ATTACK OF OCTOBER 5TH.

Orders for the renewal of the attack reached battalion Commanders about 3:30 A. M.

Reserve battalions furnished carrying details, who succeeded in getting food forward under great difficulties. It reached some units just before dawn. Men were putting away their mess kits when they formed up to attack.

The mission of the division remained unchanged. It was to continue its attack in its zone of action, as originally prescribed, to the corps objective. Pivoting on the 16th, the 18, 28th, and 26th were to swing abreast of that regiment and then the whole line could advance.

The order for the attack divided this into two phases. The first phase; the 2nd Brigade and 18th Infantry would advance to the 1st objective, a line running from the northern edge of the woods on Hill 212 to the crest of Hill 240 where it would halt for two hours and reorganize; then to the second objective a line extending from the right of the 16th infantry to the crest of Hill 272, halt for two hours and reorganize. The second phase: the line would then advance to a line north of Hill 272, extending from the Cote de Maldah through a point one kilometer north of Fleville.

During the advance to the second objective, the right flank regiment was entrusted with the difficult operation of attacking with one battalion at a right angle to the general line of advance. Its mission was to capture organized positions on the west slopes of Hill 269, securing the right flank of the Division.

At H 15 the divisional artillery was to put down heavy concentrations between the front line and the first objective. At H hour a rolling barrage was to fall 200 meters in front of the Infantry and advance at the rate of 100 meters in four minutes. During the two hour halt, heavy concentrations would be put down between the first objective and the second objective and shrapnel on the Bois de Money. The advance to the second objective was to be preceded by a rolling barrage at the rate of 100 meters in four minutes and the procedure from the second objective to the third objective was the same as the previous ones.

All available tanks were to go to the 2nd Brigade in front of which the terrain was most difficult. H hour was 6:30 A. M.

The 1st Battalion, 26th, which had led its regiment on the day previous, lead off again. It fought its way through a wired position on Hill 212, mopped up the woods and killed a number of the enemy who held their ground, and capturing a number of light and heavy machine guns.

The 1st Battalion, 28th, passed through the 3rd Battalion and advanced to the crest of Hill 240 in liaison with the 18th Infantry. In hand to hand fighting they took the hill.

The 3rd Battalion, 18th, which had assaulted on thhe 4th fought its way up the slopes of Hill 240 in close contact with the 28th suffering heavily from enfilade artillery fire from the western heights of the Aire.

As the barrage rolled forward to the second objective, the 3rd Battalion, 26th, leapfrogged the 1st Battalion and continued the assault. As the leading waves advanced from the slopes of Hill 212 they came under a strong enfilade fire from the Bois de Money, the woods to the north and field pieces on Hill 269. The leading waves were pinned to the ground a few yards in front of the woods on Hill 212, and practically annihilated. Seeing that he could not advance, the battalion commander ordered his battalion to dig in, called the regimental commander on the phone and requested artillery support. The Regimental Commander stopped the barrage and ordered a concentration on the points holding up the advance. He then ordered the 3rd Battalion to commence its advance again in two hours, under a new rolling barrage.

At about 2:00 P. M. the 3rd Battalion, 26th, advanced, captured Arietal Farm and reached a line running generally east and west through this position about 3:00 P. M. Here it was pinned to the ground by fire from Hill 272. Attempting a frontal attack on this formidable position under supporting fire of its machine gun company it was repulsed with very heavy losses and dug in on the line indicated.

The 2nd Battalion, 28th Infantry, which had been in Brigade Reserve, passed through the 1st Battalion and advanced to the northern slopes of Hill 240. It attacked in the direction of Hill 272 and like the 3rd

local concentration or standing barrage was put down in the vicinity of the southern edge of the woods. The fire seemed to have the characteristics of minenwerfer fire rather than artillery. The rate of fire was not rapid, about one shell per second, and little attention was paid to it at first. However, it was accurately placed and was continued for five hours without pause whatever. That would make a total of about 18,000 rounds. By some miracle the casualties of the Battalion were only two wounded. A counter attack was anticipated, following this barrage, but a little firing served to drive off what was probably a small reconnaissance patrol and no attack in force was made.

About 2:00 A. M. October 7th the Battalion was relieved and returned to its former location in the southern edge of the Bois de Briulles. The Battalion was still attached to the 8th Brigade and most of this brigade was being relieved with orders to move well back south of Cuisy for rest and reorganization. Orders from the C. G., 8th Brigade received through the D. M. G. O. directed the 10th Machine Gun Battalion also to withdraw well to the rear for rest.

After a hot breakfast, therefore, the Battalion marched to Septsarges where its transportation was waiting and was immediately on its way to rest and safety. However, just as the last of the trucks was disappearing over the hill south of Septsarges, the D. M. G. O. found the commanding officer of the Battalion who was still in Septsarges and notified him that the orders for relief of the Battalion had been cancelled by the Division Commander and that the Battalion was to return at once to its position in the southern edge of the Bois de Briulles. Before noon the Battalion was back in a place it had hoped never to see again. However, it was infinitely better than the Bois de Fays and the morale of the organization was still excellent. To say there was no grumbling would be going too far. The machine guns were overhauled and after a long night's sleep the men set about making themselves comfortable for the winter.

OPERATIONS OCTOBER 8TH — 19TH.

About this time the Battalion was fortunate in receiving new transportation in the shape of twenty-six new commerce machine gun trucks. The bodies of these trucks were similar to those used on the familiar White machine gun busses, each vehicle carrying one complete squad and its equipment. The manner in which these trucks were obtained may be of interest. On September 17th G—1 of the Division received a telegram to the effect that a consignment of 26 machine gun trucks for the Tenth Machine Gun Battalion was then enroute from the United States to the Port of Marseilles. An officer of the Battalion with a detail of drivers and mechanics immediately set out for Marseilles. On arriving they found the trucks crated and still aboard ship with no prospect of being unloaded within a reasonable time. Consequently this detail unloaded the twenty-six trucks on lighters, brought them ashore, uncrated and assembled them and drove the length of France, reaching the Division at Cuisy on the night of October 3rd-4th, only sixteen days since the detail had left on its mission.

These trucks and their drivers, not being immediately required by the Battalion, were placed at the disposal of G—1 and the Division Surgeon. At this time the number of ambulances was inadequate for the task of evacuating the thousands of wounded and about 2,500 of them were carried long distances to the rear in the machine trucks. The trucks returned to the Division well loaded with ammunition and other supplies.

Coming back to the front lines, we find that on October 6th the 80th Division on the left flank of the 4th Division had succeeded in taking the Bois de Ogons. On the 7th the 80th Division made a slight further advance and as a result of these gains the left flank of the 4th Division was not so greatly exposed, the distance being reduced from two kilometers to about one kilometer.

On October 10th and 11th units of the 7th Brigade with some attached troops fought desperately through the woods north of the Bois de Fays, making gains which totaled more than two kilometers. On October 13th, the 8th Brigade, including all machine gun units, was relieved and the Division boundary changed so that the front north of the Bois de Fays was taken over by elements of the 3d Division. The front lines of the 4th Division now faced Briulles and the Meuse. The six machine gun companies of the 7th Brigade had become so depleted that, during the fighting in the Bois de Foret, the remnants had been combined into a single company. The 2nd Battalion of the 47th Infantry was holding the eastern portion of the Bois de Fays and on the 13th a platoon

of Company B, 10th Machine Gun Battalion, went into position near the eastern edge of the woods in support of the Infantry.

About this time the Corps appeared to be apprehensive concerning possible counter attacks in force as it directed the establishment of an elaborate defensive system by what remained of the 4th Division. The main line of resistance was selected approximately on the line of the old Corps Objective along the northern edge of the Bois de Septsarges. The Commanding Officer 10th Machine Gun Battalion was directed to organize and establish the machine gun defense of this line also to support the troops in the Bois de Fays with one company in place of one platoon. This was done on Oct. 15th. Co. A proceeded to the Bois de Fays, relieving the platoon of Co. B, which had been suffering from enemy fire and exposure since the 13th. This left but one company of 8 guns for the line of resistance, so the two platoons of the 7th Brigade guns were attached and placed on the right of the line. Of the machine gun units covering this line, 25 percent of the personnel was required to be on duty at the guns constantly. In addition to their direct fire missions the guns in the open were laid to place an indirect barrage in front of the Bois de Briouilles in case of attack.

Conditions in the Bois de Fays were still extremely trying to the worn out troops so that on the night of the 17th the companies exchanged places, Company B relieving A in the Bois de Fays.

Finally, on the night of the 18th, genuine orders came for the relief of the 4th Division by the 3rd. The relief of the 10th Machine Gun Battalion was completed at 2:00 A. M. on the 19th and very soon thereafter the weary men were climbing into the machine gun busses at Septsarges. The enemy chose this moment for a heavy shelling of the town but, by a lively scattering of men and motors and a hurried exit to the south, the Battalion got away without loss.

By this time traffic conditions on the road were much better and Vigneville was reached in time for a hot breakfast. Later in the morning the entire Battalion had the delectable privilege of a hot shower bath in an old bath house which had been repaired and put in operation by the Headquarters rear echelon. It was their first bath for more than a month. The Battalion Supply Officer had obtained a complete change of clothing for the personnel of the Battalion, and, although the fit was not always perfect, no one declined to don the new uniform after his bath. The bivouac area assigned to the Battalion was in the Bois de Bethelainville near the village of that name. Here in spite of the rain, the men were well content to rest.

GENERAL COMMENTS AND TECHNICAL LESSONS

In this operation the 4th Division had penetrated to a depth of 13 kilometers breaking through the strongest defenses. It had captured 2,731 prisoners, 57 pieces of artillery and a great quantity of machine guns and minenwerfer. It had been stubbornly opposed by all or parts of nine German divisions, including the famous 28th Prussian Division. Valuable assistance was rendered the Division by attached artillery and by infantry units which were attached at times during the operation. The first of these was the 318th Infantry, 80th Division which entered the lines with the 8th Brigade on September 29th and served with the Division until October 2nd, one battalion remaining until October 5th. The second was 1 Battalion and Machine Gun Company, 132nd Infantry, 33rd Division, which rendered valuable service from October 9th to October 13th.

The casualties of the Division totalled 7,459 officers and men, including 45 officers and 1,120 enlisted men killed or who died of wounds. In the 10th Machine Gun Battalion 5 officers and 16 enlisted men were killed or died of wounds and 37 enlisted men were wounded, making a total of 58 casualties.

The Division had remained in action continuously for 24 days, the longest consecutive period that any American division was in action during the Meuse-Argonne Offensive. During over two thirds of this period the 10th Machine Gun Battalion was attached to the leading brigade and during the seven days in division reserve was never withdrawn beyond the most advanced brigade command post.

SUPPLY

The supply of a unit direct from railhead over thirty kilometers of road which was at first hopelessly congested was a difficult problem and would have been impossible without the liberal use of motor transportation. At times as many as seven relays of trucks were dispatched before the first was able to return with supplies.

After the first day and a half the supply system was in regular operation, both ammunition and rations being supplied as needed. At times tobacco and candy were obtained, by purchase if necessary, and distributed among the men. A small advance supply base was maintained in Septsarges by the transport officer of the Battalion so that supplies were always immediately available and no surplus was wasted.

The Battalion was not provided with rolling kitchens but used field ranges. These were first set up in the town of Septsarges and later moved to the vicinity of the companies in the southern edge of the Bois de Briuelles. Due to the impassable condition of the trails it would have been impossible to get a heavy trail-mobile kitchen so far forward at that time. When the troops were at a distance from the kitchens hot meals and coffee were placed in marmite cans and carried forward in light Ford trucks. When the trucks were unable to reach the troops because of enemy fire ration details carried the food forward the remaining distance. The marmite cans, however, were too heavy to be conveniently carried by hand and smaller squad containers of the type recommended by Captain Howard N. Merrill, Company Commanders Class, The Infantry School, 1921-1922, in his thesis would have been of great value to the Battalion. Two men carrying a marmite can or other large container on a pole make a conspicuous target and it impossible for them to hit the ground quickly without literally spilling the beans.

It may be said of the drivers of the Fords that they acted with great boldness in taking forward ammunition and rations. They frequently went forward under direct artillery fire from across the Meuse and their trucks were probably the first transportation of any kind to approach the Bois de Fays. Their speed and a zig-zag course generally enabled them to escaped unharmed only one truck being struck.

TRANSPORTATION

Under the most unfavorable conditions the motor transportation functioned well. At no time would it have been exchanged for mules. It was found that the light Ford trucks carrying moderate loads could be gotten practically anywhere. In the forward areas they travelled across country more than on the roads where the mud was from one to two feet deep. When, occasionally, they got stuck it was always possible for a few men to lift them out and help them reach firmer ground. They were less vulnerable to fire than mules. Being old, a good deal of repair work was necessary to keep them running but the mechanics, tools and parts needed to take down, repair and reassemble a Ford were available in the Battalion motor park at Septsarges. It is believed that the ideal transportation for such conditions would be a track laying vehicle with a removable track. This could carry heavy loads across country without becoming mired and could make speed over good roads without wearing out the track.

If, in the future, machine gun organizations are furnished with motor transportation similar to the 3-4 ton White machine gun truck they should generally be furnished with some form of light handcart that can be used to carry guns and ammunition to places which trucks of this character are unable to reach. The question is, of course, largely dependent upon the character of the country in which the unit is to operate.

COMMUNICATIONS

Motorcycle couriers, telephones and runners were the means used. They proved adequate except on two occasions, viz. September 25th when the Battalion was unable to get into communication with Division Headquarters and on the night of October 4th-5th, when liaison with Company A was lost. A message center was organized which took care of all means of communication. Because of the constant shelling no long wire lines were maintained by the Battalion. The practice was to run short lines to the nearest infantry switchboard. No lessons, except the necessity for carefully selected, well trained runners and plenty of them. In this operation the 8th Brigade, for instance, found it advisable, in spite of greatly reduced personnel to organize a company of one hundred runners to ensure reliable and prompt communication within the Brigade. This number, new-born of experience, contrasts strongly with the figure 3 found in the present tables of organization or even with the figure 14 which includes mounted couriers and bicyclists.

HEALTH OF THE COMMAND

The general health of the command up to October 4th was fairly good. After October 7th it was poor.

It is believed that this was due chiefly to extreme fatigue followed by exposure to cold wind and rain for several days and nights without blankets, overcoats or the possibility of building fires. These, too, were the very times when it was impossible to get up hot food promptly or regularly. Gas was responsible for some sickness although the Battalion had few gas casualties. No sick were evacuated so long as the surgeon believed they might regain sufficient strength to be of value at the front. This policy was not humane but only in this way could the effectiveness of the battalion be maintained. On the other hand a number of the men declined to be evacuated when so authorized and advised by the surgeon.

There are two possible remedies for the conditions which are believed to have been the chief cause of sickness. The first is more suitable clothing. All the men had rain coats and wore them practically all the time. These gave considerable protection from the rain and wind but very little against the cold. They were undoubtedly better than overcoats which would have soon become sodden and unbearably heavy. A trench coat of waterproof outer material with a lining for warmth would have been much better than either. Wet feet were the rule rather than the exception. The use of genuinely waterproof leather boots such as the lumberman's moccasin cruiser might have conserved the health of the command to a considerable degree and certainly would have lessened the discomfort of the men greatly.

The second possible means of avoiding undue exposure is by the use of a certain amount of track-laying transportation which will not be stopped on congested roads but which can reach the attacking troops on the evening of the attack bringing blankets or overcoats in addition to other supplies. The use of such transportation has, of course, many aspects. It is sufficient to point out here that its use would often have an important bearing on the health of the command.

TECHNICAL HANDLING OF THE GUNS

The gun squads were well trained in the care and operation of the guns which were kept in good condition throughout the three and a half weeks of the operation. The marksmanship of the gunners was very good. Whenever they engaged in machine gun duels with the enemy the guns of the latter were the ones to go out of action. Instances of this superiority occurred in both companies during the fighting on September 28th. Officers and men were well trained in the calculation and firing of indirect fire, including barrages. Goods maps were always available and the map method was used exclusively.

The men were prone to be careless about concealment and cover unless actually under fire, and camouflage was sometimes neglected or ineffectively used. The mental and physical fatigue of a long continued battle operates to make men indifferent to everything but the obvious essentials. The fine points or frills are certain to be neglected unless, through training, they have become matters of habit.

THE HOTCHKISS MACHINE GUN

The Hotchkiss proved to be a very accurate, effective and dependable weapon with superior ballistic qualities. However, it is believed that, with the adoption of the new long range machine gun ammunition, the Browning, because of its lighter weight, belt feed and certain other advantages it will be a more desirable gun and that the Hotchkiss will probably not be used in our service in the future.

ANALYSIS, CRITICISM AND TACTICAL LESSONS.

During the war the tactical principles governing the employment of divisional machine gun battalions were not covered in detail in official publications. These battalions were described as constituting a highly mobile reserve of great fire power at the disposal of the division commander. In addition, it was generally understood that the divisional battalions should also be used to support attacks by long range fire and generally render such assistance as they could to the infantry without becoming so involved or so depleted through casualties as to render them unavailable or ineffective for use as reserve fire power in emergencies.

Conditions in this operation of the 4th Division were unusual in several particulars. The brigades were not abreast but alternated in attack and reserve positions. Thus there was never any question as to which brigade might need the support of the divisional machine gun battalion. It was always the leading brigade and it was for this reason that the 10th Machine Gun Battalion was attached first to one brigade and then to the other, depending upon which brigade was holding the front at the time.

The Division sector was comparatively narrow. This made the feature of mobility by motor transportation relatively unimportant so long as the Battalion remained well forward. Furthermore its mobility was

greatly reduced by the scarcity of roads and the terrible condition of the few that existed. Because of the reduced importance of great mobility and the fact that, in the forward areas, the mobility of the motor equipped battalion was on a par with that of the mule drawn guns, there was no occasion for holding it out for special missions requiring great mobility. The infantry, at grips with the enemy for twenty-four days, were certainly entitled to all the machine gun support that it was possible to give. The extensive use of the divisional Battalion also made possible the rotation of machine gun units in the more exposed and trying positions.

The only possible argument against this extensive use of the Battalion was the danger that it might become so depleted as to be useless as a reserve in emergencies. It will be remembered that this occurred in the case of the 11th Machine Gun Battalion of the 7th Brigade. After the relief of the 8th Brigade on October 13th the 7th Brigade was holding the front with the equivalent of only one machine gun company remaining out of the six with which it started the action. Except for the 10th Machine Gun Battalion no other machine guns were in supporting distance and the machine gun support of the 7th Brigade would have been wholly telephonic communication with the headquarters of the 10th were still able to function efficiently with eight guns per company.

The obvious conclusion from the foregoing is that, while the method of employing the Battalion was exceptional, it was based on many sound reasons and the results proved the wisdom of the course followed.

Coordination among the machine gun units of the Division was arranged by the Division Machine Gun Officer who was generally well forward where he could keep in close touch with the situation and still be in telephonic communication with the headquarters of the Division and of the brigade holding the front at the time.

On September 26th and October 4th the 10th Machine Gun Battalion, in conjunction with other units, assisted the attack by firing overhead barrages which covered the whole front to be attacked. The present tendency is to substitute successive concentrations on important points for the barrage covering the entire front. One reason for this is that the number of machine guns in the brigade has been reduced from 72 to 48. A machine gun company must go forward with each assault battalion and this leaves insufficient guns to cover the whole front effectively with a barrage. On the dates mentioned above the attacking brigade had 96 machine guns (including the 10th M. G. Battalion) at its disposal and the 48 guns used for barrage were sufficient to effectively cover the front attacked. In both barrages it was necessary to lay the guns individually by compass at night. This method is less accurate than those which were generally used by day. The effect of this inaccuracy would have been greater in the case of local concentrations than it was in the frontal barrage where it was largely neutralized by increasing the amount of traverse per gun. The elevations, of course, can be put on as accurately by night as by day and these were very carefully checked. So far as is known no machine gun fire by units of the 4th Division ever fell short or otherwise endangered the infantry. The frontal barrage was properly used in these operations although support by successive concentrations should be the rule with our present organization.

In the advance through the fog and smoke on the 26th a squad column formation was used and this worked very well. The intervals between squads were kept well within the limits of visibility and no squads were lost. As the fog thinned, the intervals and distances were increased. The compass was used with entire success for the maintenance of direction and was the only method which could possibly have worked. The map was used for checking with the ground but, in a fog, and with no roads or similar feature to follow, the map alone is not enough.

One advantageous feature of indirect fire is that the guns can be placed on a reverse slope and yet, in this operation, we find the positions generally selected on forward slopes. These forward slope positions were usually selected in order to get the guns within 2,000 meters of the objective and to avoid the possibility of infantrymen wandering into the near end of the danger space in the darkness. Because of the artillery on the right flank across the Meuse reverse slope positions were not much safer than those on forward slopes and, as it turned out, the casualties suffered in the forward slope barrage positions were very slight.

In the close support of rifle units the procedure was usually as follows: the Battalion being already attached to one of the infantry brigades, a company of the Battalion would be assigned or attached (no

distinction in meaning) to one of the regiments of the brigade. The regimental commander would then attach this company to which ever battalion needed it most. The machine gun company commander retained command of his company but put it in action in accordance with the wishes of the battalion commander. Sometimes the infantry battalion commander would be a lieutenant who was considering for the first time the question of machine gun support along with many other problems. This was the case with the battalion of the 39th Infantry to which Company A was attached on September 28th. This battalion was originally a support or reserve battalion and the machine gun company was held back with it under artillery fire when it should have been forward assisting the advance of the assault battalion. The assault battalion had the support of the regimental machine gun company but there was opportunity for the employment of more guns.

When the two platoons of Company A went into action from the ridge west of the Bois de Briuelles they had a most excellent position and assisted the attack of the regiment as a whole. The platoon which was sent forward with, or close to, the Infantry battalion did not fire. This shows the wisdom of the present teaching that machine gun platoons or sections shall advance by bounds from one firing position to the next. In this case the platoon went forward before the infantry had reached the next suitable firing position and consequently had to wait in a position from which it could not fire effectively. Moreover, for the reasons that machine guns firing draw fire upon themselves, riflemen in the vicinity of the guns seldom care to have them fire except in case of counter attack. The guns on the ridge drew fire but this was an advantage rather than a disadvantage to the troops whom they were supporting since this fire was largely diverted from the infantry.

When supporting infantry in woods, machine guns were often used where now the same tasks would be assigned to automatic rifles. However, the only automatic rifle provided was the Chauchat which did not prove effective in the hands of the troops. This resulted in the placing of many machine guns in positions which did not give full play to their power. The worst feature of such a condition is the wasteful exposure of personnel. Eight men are required to suffer hardship and casualties to perform a mission which could be handled practically as well by one or two men and a good automatic or machine rifle.

The action of Company B on September 28th in firing a local barrage or concentration in preparation for the attack of units of the 47th Infantry was a good example of intelligent coordination of Infantry and machine guns and the result was very successful.

Let us now consider the action of the Battalion after firing the barrage on October 4th. It was directed by the D. M. G. O. to advance to a new barrage position fully three kilometers forward and on the extreme western edge of the Division sector in the Bois de Malaumont. The message also stated that the attack was progressing very successfully. Principally because of the fact that the proposed barrage position was on the Division boundary it was assumed that the troops on the left of the Division had been equally successful. This assumption was wrong as will be seen.

The Battalion followed some infantry across the fireswept valley to the Bois de Fays. The preliminary reconnaissance for this move consisted in careful observation of the movements of the infantry, study of the ground and of the manner in which the enemy artillery was searching the ground and the time consumed by it in adjusting on favorable targets. It was believed that the artillery fire was controlled from an observation balloon. No enemy machine guns were in evidence at this time. It was seen that by going a little to the left of the route followed by the infantry, the ground would afford some concealment from the artillery across the Meuse.

The machine gun companies moved in squad columns, B Company in the lead. The formation proved excellent for control in avoiding artillery fire which was done with entire success, the companies being maneuvered as easily and rapidly as on the drill field, so that the artillery was never able to catch up with, or outguess, the troops. However, on approaching the Bois de Fays, the Battalion came under machine gun fire from the Bois de Ogons on the left and from the front. The obvious thing to do was to put part of the guns in action to cover the advance of the rest. A few guns were set up but the most careful search with field glasses failed to reveal the location of the enemy guns and little firing was done. The advance was continued by one platoon at a time, the men rushing individually when the fire was elsewhere and taking full

advantage of all cover. The lesson is very old but perhaps it may be stated differently in this case. Lesson: When the available information indicates that there is probably no need of sending out any reconnaissance or covering groups to the front and flanks send them out anyway.

Just why it was that A Company advanced through the woods several hundred yards beyond B Company will never be known. Captain Keep knew the location of the proposed barrage position and, as the Battalion had been delayed somewhat in reaching the Bois de Fays, he probably felt that he must push on at once to be in position to support the infantry at the earliest possible moment. This would be in line with his character and previous conduct. As it happened, "A" Company stopped or was stopped in a position which afforded a most welcome strong point for the thin infantry line then withdrawing from the Bois de Malaumont to form a shorter and stronger salient which they could hold in the Bois de Fays.

The effort to find Company A should have been pushed with sufficient vigor to ensure success before dark. This would have required a number of men from the gun squads in addition to the runners and would probably have cost several lives but it should have been done.

It is not believed that a barrage mission should have been assigned as the primary mission of the Battalion in the Bois de Fays. Both troops and guns were in the woods and although the woods in front of the guns were quite thin it would have been difficult to fire a barrage which would be safe yet come down close enough to our lines to be effective. No better barrage position was available. Positions in the open near the Bois de Fays were untenable due to the fact that they were swept by fire either from the Bois des Ogons on the west or from the artillery across the Meuse. It is true that, from the map, it appears that the barrage position previously used in the Bois de Briuelles is in a wood, but in that locality practically all of the trees had been cut out leaving some low brush which furnished excellent concealment for the guns after daylight and was no hindrance in firing the barrage.

With regard to the action taken in moving the men to escape the friendly barrage on the afternoon of October 5th it is the unanimous opinion of the officers who were present that the action taken was correct. Incidentally the movement was made by order and was not initiated by any of the men. It will probably be the equally unanimous opinion of officers who were not present that the action was incorrect in that the guns were left in the position. In the first place it was believed that the enemy would make no advance in the face of the barrage and that, if they did they would be wiped out by it. After the barrage passed, our men could reach the position sooner than the enemy. Moreover, it appeared likely that the men might have to run and scramble for their lives through shattered and tangled woods. In that case, either the men would drop the guns in the woods or many of them might be killed while trying to carry the heavy equipment along. In short there was considerable danger that there would be very few guns available after the barrage unless they were left in the position. On the other hand it mattered little whether or not all the men returned to the position immediately.

In case of emergency the guns could have been operated by two men per squad. On the following morning a liaison agent from the 80th Division on the left visited the Battalion and gave the information that the barrage on October 5th had been fired by the artillery of the 80th Division re-enforced by that of two other divisions and had been intended to cover an attack by the 80th Division. He stated further that the attack on the 5th had been held up at the southern edge of the Bois des Ogons and that another attack with rolling barrage was to be made that afternoon, i. e., the 6th. Hearing of this the D. M. G. O. suggested that the Battalion be moved some distance in from the sector boundary but it was considered better to remain on the flank and have the artillery exercise more care in regard to the limits of their barrage. No further friendly artillery fire was encountered.

With respect to the machine gun dispositions for defense on the line of resistance (northern edge of the Bois de Septsarges) it may be said that the guns on the left of the line had good fields of fire while the field of fire of those in the woods was, of course limited to the enfilading of roads and trails. Only the approximate line of the guns on the right is shown on the map. Guns in the Bois de Fays and the vicinity of Cuisy provided depth.

The organization of machine gun companies into machine gun battalions worked well in this operation. It is believed that in so far as organization influenced the action of the companies, the advantage lay with

the machine gun battalions rather than with the regimental machine gun companies, particularly in matters of supply. At the same time this operation could not be cited as proof that the present plan of incorporating a machine gun company in each infantry battalion is not fundamentally correct. This question is a study in itself. The operation proved however, that a machine gun company must have more than eight guns at the beginning of a campaign if it is expected to give effective support throughout a long operation. Casualties in machine gun units will approximate those of the rifle companies.

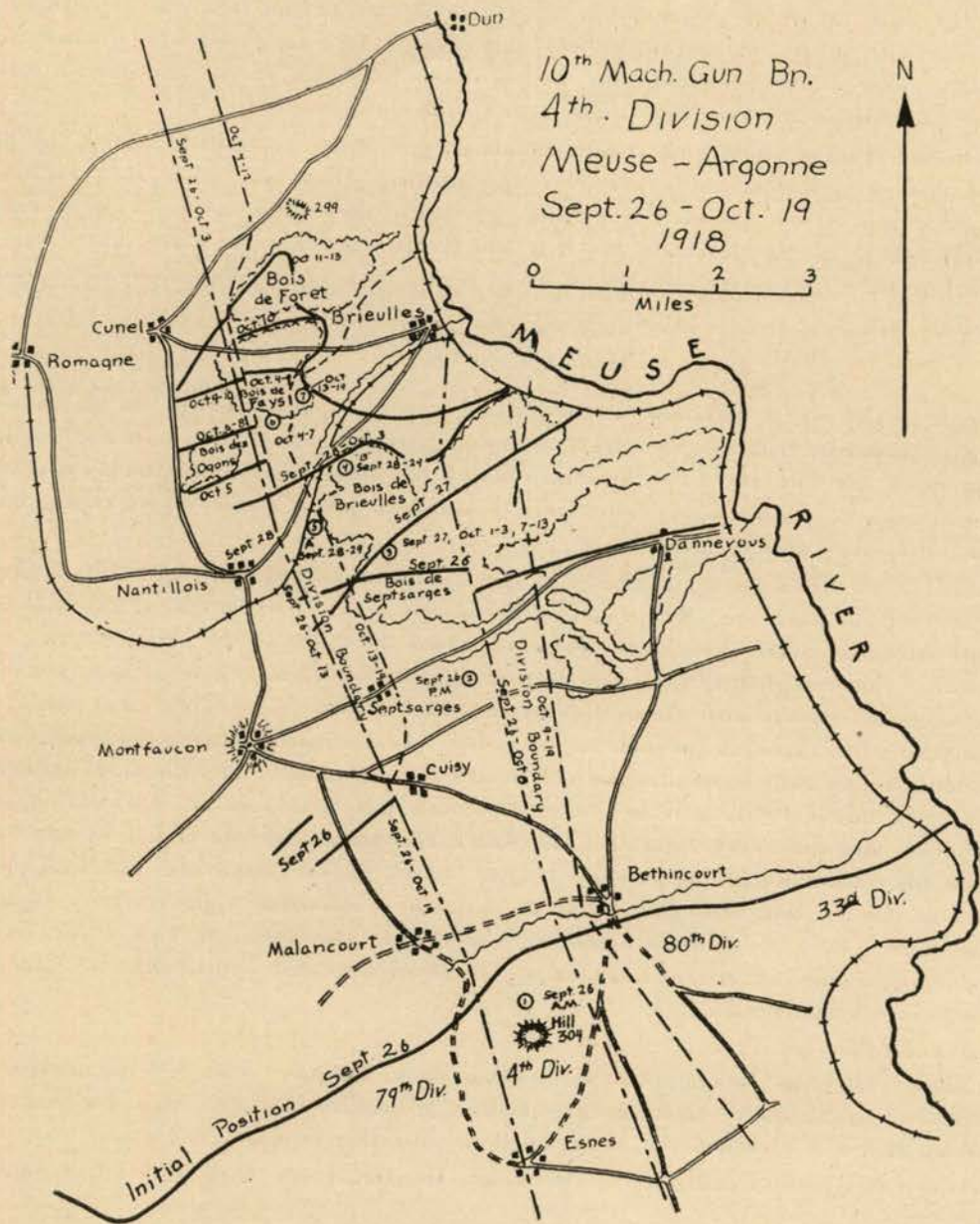
CONCLUSION.

Some wars can be won only by exhausting the reserves of the enemy. To do this it is necessary to conserve our own reserves to the greatest possible degree in order that they will outlast his. This means that divisions must be able to remain in action for relatively long periods. Such service is particularly severe on the infantry which must therefore, have the maximum support of their machine guns, not only at the beginning of an operation but clear through to the end when the rifle units are greatly depleted and exhausted.

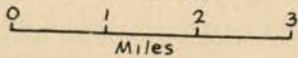
Such an effort can be expected only from troops who have a high and unselfish sense of duty and an unalterable determination to play the game through to the end. Captain Keep and three lieutenants of the Battalion, just prior to the attack, received orders to proceed to Langres for courses at the Army Schools. They were then free to go, yet each considered the question of duty for himself and all elected to remain. Of these officers, two were killed after nine days fighting, one remained until too sick to stand and the fourth commanded his platoon until the Division was relieved. The same spirit was evident in those men who, suffering from exhaustion, sickness and exposure, were still unwilling to leave the Battalion for the safety and comfort of a hospital. This spirit is inseparable from an intense pride in, and devotion to, one's organization and the division to which it belongs.

Training for battle is no more essential than the existence and development of such a spirit.

References:—Personal observation of the Author; The History of the 4th Division; History of the 10th Machine Gun Battalion; History of the 12th Machine Gun Battalion; History of the 39th Infantry; History of the 58th Infantry; Operations Reports, 10th Machine Gun Battalion, September 26th—October 19th.



10th Mach. Gun Bn.
 4th Division
 Meuse - Argonne
 Sept. 26 - Oct. 19
 1918



OPERATIONS OF THE FIRST DIVISION, NOVEMBER 6TH—11TH, 1918.

By
Major Carl L. Caphton, Infantry.
GEOGRAPHY.

In order to fully appreciate the severe task allotted the First American Division in the 3rd Phase of the Meuse-Argonne Offensive it is essential that we familiarize ourselves with its theatre of operations. The region lying between the Argonne Forest and the Meuse River was, from the beginning of the World War, considered one of the most favorable positions on the entire Western Front from the standpoint of a defender. The terrain, cut with deep and narrow ravines and covered with high and well wooded hills afforded dominating positions, cover and concealment for its possessors. A thick, heavy underbrush served to complete the defensive possibilities of this well nigh impregnable position.

An alert and highly trained enemy had taken advantage of every possibility offered by this natural bastion of defense and so well had he utilized his opportunities that our Allies for years had suffered him to retain without serious effort a position occupying practically the center of the Western Front. Had it been thought possible, there can be no doubt but that the British and French would have, long before the arrival of the American Army, put forth a serious effort to regain this highly important and dominating position.

THE NEW LINE.

The Meuse-Argonne Operation had now reached what is designated as the 3rd Phase. Starting from a line running slightly southwest from Regneville to a point approximately three kilometers north of Vienne-le-Chateau on September the 26th the First American Army had forced the enemy on November the 5th to a line running approximately, Villemonty—southwest to Letanne, thence northwest to Yoncq, thence to Bois du Mont Dieu, ten kilometers west of Stonne.

On October the 31st the Division again moved to the front and on November the 4th was in the Bois de Beval supporting the Second Division. While at this point and between the hours of two and three o'clock P. M. November the 5th orders were received by telephone from the Fifth Corps to relieve the 80th Division of the First Corps on a line established approximately along the Stonne-Beaumont Road, and directing the Division to attack to the northwest with Mouzon as its objective at 5:30 A. M. November 6th. The weather at that time was anything but favorable to such an operation. In addition to the geographical disadvantages previously mentioned a heavy rain was falling, which continued throughout the following night. The retreating enemy had naturally done everything in his power to handicap his pursuers. Roads were impassable, made so by enemy precaution and the heavy rainfall. The order also called for the relief of the 80th Division with no opportunity for reconnaissance of position and an attack before daybreak the following morning. Under such conditions the Division was called upon to perform a march of approximately 20 kilometers in order to effect the relief. In spite of these handicaps the march was begun at 4:00 P. M. November 5th, and the line of departure reached exactly 24 hours later. Its front extended approximately from Beaumont to LaBesace, a distance of 6 kilometers.

Sector boundaries as follows:

Eastern Boundary: The line Beaumont (excl.)—Bois de L' Hospice (incl.)—Villemonty.

Western Boundary: La Bagnolle—western edge of Bois d'Yoncq—Hill 297, Hill between Bois Ferfaux and Bois de Pourron, Hill 275 (1 kilometer N. W. of Pourronla Poucay Farm.

Boundary Between Brigades: Crossroads of the Yoncq-Mouzon Road with the La Bagnolle-Beaumont Road to Mouzon.

This placed Mouzon at the center of the objective line along the Meuse River.

With an impatience born of days of waiting the troops dashed forward. Yoncq was in the hands of the 18th Infantry by 7:00 A. M. The First Field Artillery Brigade, a unit of the Division which had been in support of the 2nd Division in its attack to the northwest, was in position near Nouart. This brigade rejoined its division on November 5th

Divisional orders placed the 2nd Infantry Brigade on the right, with the 2nd and 1st Battalions of the 26th Infantry in line from right to left and the 3rd Battalion in support. The 28th Infantry was in Brigade reserve. To the left of the 26th was the 18th Infantry with the 1st Battalion in line, 3rd Battalion in support, and the 2nd in divisional reserve. The left of the Division was entrusted to the 16th Infantry with the 1st Battalion in line, 2nd in support, and the 3rd in Brigade reserve. To each battalion the same Machine Gun Company was attached as had participated with it in previous operations.

In addition to the 2nd Battalion, the 18th Infantry, the 1st Machine Gun Battalion and the 1st Engineers were held in Divisional reserve. The First Field Artillery Brigade went into position to support the attack near Beaumont with the 7th Regiment on the right and the 6th on the left. The 5th Field Artillery Regiment covered the entire front of the Division. As was customary in the First Division, accompanying guns were designated for the assault Battalion.

THE ENEMY.

The magnificent German Army of 1914 had passed into history. The Allied counter-offensive launched on July 18th and continued without cessation had accomplished its purpose. The mighty Armies of Germany had begun to disintegrate and despite the efforts of Ludendorff and Von Hindenburg were but a shadow of their former greatness. Allied propaganda distributed in and over the German lines had taken root. The words of the American President had appealed to the tired, war worn German soldier and had caused him to think independently, perhaps for the first time in his life. In the Fatherland the Socialistic body, due to the long suffering of the civilian populace, was daily becoming more powerful, and its propaganda was finding a ready field, both in the hearts of civilians and soldiers. The German soldier fortunate enough to secure a furlough during this strenuous and trying period, upon returning to his home was immediately approached and in him was instilled that deadly poison to the fighting man, Socialism. Upon returning to his organization the Contaminated spread his poison with deadly results to the hopes of the Kaiser and the High Command. Such was the situation pervading the ranks of the enemy when the First Division reentered the line on November 6th.

THE OPERATION.

At the designated hour the Division jumped off and eagerly pressed forward. Here and there small detachments of the enemy were met, consisting chiefly of machine gunners, but this resistance was rapidly overcome and by noon of the same day the Division had obtained its objective along the banks of the Meuse. This advance covered a distance of a little more than six kilometers. It was apparent that the enemy at this time was engaged in what might justly be termed a disorderly retreat and the retreat was but slightly covered. The extent of the disorder prevailing in his ranks might be more clearly shown by stating that the First Division in its advance of that day met elements of the 31st, 53rd, 41st, 236th, 10th and 115th German Divisions. These elements no doubt were veterans of that loyal and devoted army of the Kaiser, organized and trained for the purpose of extending the power of the Hohenzollerns far beyond the borders of the Fatherland.

That portion of Mouzon on the west bank of the Meuse River was taken possession of and occupied by the 18th Infantry and patrols of the 26th Infantry after sharp fighting in the outskirts and streets of the city. As patrols were approaching the bridge spanning the river at this place it was destroyed by high explosives, in an effort by the enemy to prevent any attempted crossing. A determination to destroy the city, an act characteristic of the German Army, mines exploded in and about the town and on both sides of the river. This resulted in the destruction of the city by fire. Immediately upon occupying Mouzon the enemy from his position east of the river poured a deadly fire into the occupying troops. The 26th Infantry also met with severe fighting in occupying the town of Villemontry, just south of Mouzon. The advance of the day again demonstrated the fact that the Meuse-Argonne operation should not have been attempted west of the river with no assistance in clearing the enemy from the east bank. In occupying the towns of Mouzon and Villemontry troops of the First Division were subjected to a violent and continuous artillery and machine gun fire from the dominating heights of the east bank. Many casualties resulted which might have been avoided had the offensive been extended to a point a few kilometers to the east. So long as the enemy controlled the heights

to the east of the Meuse it was inevitable that he would inflict heavy casualties on troops advancing up the western side of the river. The offensive on the eastern side began too late to keep pace with that on the western side.

The rapidity of the advance of the Infantry severely taxed the Divisional Artillery and forced it to make unheard of advances over impassable roads and impenetrable forests. After the greatest exertion the 6th and 7th Field Artillery and the 1st Battalion of the 5th Field Artillery finally attained positions in the vicinity of Yoneq. Casualties suffered by the Division during the advance to the line of the river totalled 7 officers and 347 men.

THE ADVANCE CONTINUES.

At noon of November 6th Divisional Headquarters were established at La Gros Faux, an old prison camp. At the same time Major General Charles P. Summerall, commanding the 5th Corps, and former Commanding General of the First Division, arrived at Divisional Headquarters. General Summerall delivered to the Division Commander, Brigadier General Frank Parker, the following order:

From: Headquarters First American Army.
Memorandum: For Commanding General, 5th Corps.
Subject: Message from the Commander-in-Chief.

1. General Pershing desires that the honor of entering Sedan should fall to the First American Army. He has every confidence that the troops of the First Corps, assisted on their right by the 5th Corps, will enable him to realize this desire.

2. In transmitting the foregoing message, your attention is invited to the favorable opportunity now existing, for pressing our advantage throughout the night. Boundaries will not be considered binding.

By command of Lieutenant General Liggett.

General Summerall immediately issued a verbal order for the Division to at once move forward with Sedan as its objective. The enemy at this time was in full retreat along the entire western front. In his communique he had admitted that his boasted line was broken in front of the victorious First American Army.

SEDAN: ITS STRATEGIC IMPORTANCE.

The security of the entire German Army in northern France was dependent upon two great railway systems—one in the north passing through Liege, while the other in the south had as important terminals Carignan—Sedan—Mezieres. The Ardennes made the construction and operations of other railroad lines in this region impracticable. General Pershing in his final report states, "Should this southern system be cut by the Allies before the enemy could withdraw his forces through the narrow neck between Mezieres and the Dutch frontier, the ruin of his armies in France and Belgium would be complete".

Sedan, the nearest terminal of this vital enemy railway system, lay only approximately 12 kilometers from the front of the First Division. Its capture would mean that a defeated and rapidly retreating enemy would be deprived of his last chance of escape. In the face of a more determined enemy such an order, eliminating all boundaries, can hardly be imagined.

The Allied Commander-in-Chief, General Foch, appointed at Beauvais April 3rd, 1918, knew that the enemy had spent his power and he realized that a determined pursuit would result in an immediate surrender. Therefore the order above quoted, and the resultant disregard of the ordinary and heretofore adopted cautions. So hard pressed was the enemy that on this date he appealed for an armistice, realizing that an invasion of the Fartherland was inevitable unless the advance of the Allies could be stayed. The proud German Armies, after four years of fighting, had succumbed to superior numbers, discontent at home, and the realization that America, its latest enemy, possessed untold resources of men and money.

The High Command, with its wasted and expended armies, was utterly unable to withstand the simultaneous offensive operations of the British along the Somme, the French between the Oise and Aisne, and the Americans between the Meuse River and the Argonne Forest.

Immediately upon the departure of the Corps Commander the Division Commander assembled his Brigade Commanders.

Owing to the unusual situation prevailing he was confronted with the serious problem as to the formation to be adopted in the advance and the subsequent attack on the objective. It was realized that the condition of the ground made it essential that troops march along the roads, and even this route would call forth the limit of their endurance. A study of the terrain shows that the Division from its position might have moved by the left flank and followed the valley of the Meuse, and thus forced its way over a narrow front to the high ground southwest of Sedan. If this course were adopted both flanks of the Division would be exposed to enemy attack and if the occasion should demand quick deployment such would be out of the question owing to the narrowness of its front and the terrain. The other alternative lay in taking advantage of the last sentence of the order delivered by the Corps Commander and disregarding all boundaries. This would permit the columns to march on a wide front to the point southwest of the city and yet would not make rapid deployment impossible should the occasion arise. The latter course was adopted, even though it was realized that such a formation would mean the violation of sectors of other divisions. Immediately upon the making of the division orders in conformity thereto were transmitted to all subordinates. The march, or pursuit, as it should be correctly termed, was directed in five columns from east to west as follows:

Column 1: 1st Battalion, 16th Infantry, by the road Autrecourt-Remilly-Wadelincourt.

Column 2: 16th Infantry (less one battalion) and Company A, 1st Engineers, by the road Pourron-Autrecourt-Raucourt-Haracourt-Thelonne-Noyers.

Column 3. 18th Infantry (less one battalion) by the road Pourron-Autrecourt-Raucourt-Maisoncelle-Bulson-Chaumont, thence north.

Column 4: 28th Infantry and Company D, 1st Engineers, by the road Stonne-Chemery-Chehery-Frenois.

Column 5: 26th Infantry, by the road Stonne-Chemery-Omicourt-Hannagne-St. Martin.

Divisional reserves were designated as follows: 2nd Battalion, 18th Infantry, 1st Machine Gun Battalion and 1st Engineers, less two companies. The reserves were assigned to the Road, La Besace-Raucourt, and to follow the 2nd column at a distance of one kilometer. The 6th Field Artillery was directed to follow the 18th Infantry and the 7th Field Artillery the 28th Infantry. One Battalion of the 5th Field Artillery was to follow each of columns 2, 3 and 4.

The operation commenced between 7 and 8 o'clock P. M. of the same date. The rapidity of the previous advance had made impossible all means of communication other than by runners.

The rainy season had arrived and new and heavy downpours had only served to increase the burdens of the Division. Man and beast labored under that depression brought by rain; packs weighed almost double their normal weight. Hitherto impassable roads were classified as impossible but despite this handicap the columns trudged forward, fired with that unconquerable spirit of the disciplined American soldier. Fighting at close quarters ensued in the streets of the towns passed through, but this situation was met by leaving mopping up detachments to complete the work. The violent storm which later appeared proved advantageous to our troops in that it served to further demoralize the enemy and to make surprise attacks less difficult.

The 1st Battalion, 16th Infantry, encountered resistance from the jump-off. North of Remilly a heavy machine gun fire was received by this organization. Allicourt was reached at 3:30 A. M. of the 7th and violent street fighting followed in the town. Pont Maugis was taken at 4:30 A. M. with slight effort.

The 2nd column of the Regiment encountered severe machine gun fire on approaching Thelonne. This resistance was not overcome until 7:30 A. M., at which time the troops began to advance to Noyers, and upon arrival here connection was established with the 1st Battalion. The two battalions then coordinated in an assault on Hill 252, a few kilometers north of Noyers. In this attack our troops met with heavy machine gun and artillery fire, but this was soon overcome and by 11:00 A. M. of the same day the 16th Infantry was reorganized in the woods just north of the Hill. No American troops reached a position nearer to the common Franco-American goal, Sedan. Just as the attack on Hill 252 began advance units of the 42nd Division were observed approaching Thelonne from the southwest.

The 18th Infantry reached Bulson at 5:30 A. M. without encountering serious resistance. There it also met advance elements of the 42nd Division. The regiment halted just north of the town.

The 28th Infantry first encountered troops of the 42nd Division between the towns of Counage and Chehery. This Regiment arrived at the latter town at about 7:40 A. M. November 7th and here also met troops of the 42nd Division and advance elements of the Fourth French Army. After passing through the town the Third Battalion met with resistance in the form of enemy machine gun fire from Hill 297. The Battalion immediately deployed and attacked the hill and assisted by Company A, of the Regiment soon overcame the enemy.

Division Headquarters during the morning received positive information that the enemy still occupied his position on the heights to the east of the Meuse and that this position was heavily fortified with both artillery and machine guns. It was realized by the Divisional Staff that further efforts on the part of the Division to advance during the daylight hours would serve to make its troops targets for almost direct fire from the enemy occupying this commanding position. Divisional orders were immediately issued halting the attack and at 11:00 A. M. the 28th Infantry secured its position on the southern slope of Hill 297. As evidence of the fact that the enemy had not entirely abandoned his positions the Division Commander and Staff were subjected to a heavy fire while approaching Chehery. This fire came from the west side of the Bar River although Chehery was already in possession of our troops. Divisional Headquarters were immediately established in this town. Sometime before noon the 7th Field Artillery, rapidly advancing in its effort to keep pace with the Infantry, reached Chehery.

The 26th Infantry in its advance met with severe and extreme ground conditions, but despite this handicap arrived at Chemery in the early hours of November 7th. Here it came under enemy artillery fire and suffered a few casualties. Pressing forward this Regiment soon found itself before Omicourt, and discovered that the enemy occupied the heights about the town with both infantry and machine guns. The 3rd Battalion of the Regiment, which had previously been in support, was moved to the front and led the attack on this position. After a brief but brisk engagement the enemy was dislodged. The 1st Battalion then passed through the 3rd and began the attack on Saint Aignan; patrols passed around the town, which was being heavily shelled, and penetrated the woods to the north. Shortly before reaching this position contact was established with the 40th French Division, approaching from the southwest. The Divisional order halting the advance was received at this point about 5:30 P. M. and orders were issued for the troops to dig in. The mad race for the historic city was on. It was but natural that the French, remembering the disaster that overtook their armies in and about this city in 1870, desired above all else the honor of taking it from their ancient and most hated enemy. The same desire, but no doubt in a lesser degree, animated our troops.

About 2:00 P. M. November 7th the Commanding General, Fifth Corps, arrived at Headquarters of the First Division, and upon being informed that the 40th French and 42nd American Divisions were in our sector, he directed the First Division to turn to the east and to clear entirely the zone of the 42nd Division. Upon reaching the rear echelon of the First Division Headquarters at Chehery, about 3:00 P. M., the Corps Commander received a wireless message from Headquarters First American Army directing the First Division to withdraw from its advanced position to the approximate line, La Bésace-Autrecourt. The movement was immediately carried out and on the afternoon of November 7th Divisional Headquarters were established at Le Gros Faux. During the ensuing night the troops rested in the woods in the vicinity of Yoncq.

From 4:30 P. M. November 5th until midnight November 7th the First Division had been engaged in a continuous advance against an enemy with his back to the wall. During this period the tired, overwrought troops received no sleep or rest and but little food; they were troops of the First Division, and that fact sufficed to carry them, despite all physical and mental sufferings, through these weary, trying hours. The 16th Infantry covered a distance of 54 kilometers, the 18th Infantry, 53 kilometers, the 26th Infantry 71 kilometers, and the 28th Infantry 52 kilometers. In the operation 54 prisoners, 177 mm guns, two anti-Tank guns, and a large number of machine guns and other munitions were captured. The price of its victory was 10 officers and 496 men casualties.

ANALYSIS AND CRITICISMS.

With the limited data available at this time it must be admitted at the outset that no fair and just criticism of the operation of the First Division in the 3rd Phase of the Meuse-Argonne Offensive can properly be indulged in. Indeed, to do so under the circumstances cannot but appear presumptuous. Again it must be

borne in mind that the operation was entirely successful, and the Division accomplished its mission to the utmost satisfaction of G. H. Q. With these facts prevailing, it is with the greatest hesitancy that the writer enters upon this phase of his monograph.

Certain errors, however, stand out in the operation that are apparent to even an untrained eye. Subsequent events proved that the operation in which the Division moved by the left flank after the capture of Mouzon was a tactical error. From this point, if the Division was to move in the direction of Sedan, it meant a march into the sector and across the fronts of two other American and one French Divisions, the 77th American, 42nd American and 40th French. In addition to this fact the enemy still retained possession of the heights on the east bank of the River and from this advantageous position he could and did bring almost direct fire on the troops when they entered the race for Sedan. A study of the maps of the Meuse-Argonne Operation shows conclusively that the French and American Divisions previously mentioned occupied far more favorable positions for the move on the city.

It must be admitted that the French, through sentimental reasons if nothing more, had a clearer title to the honor of capturing Sedan than did the Americans, for as previously stated in this monograph it was here that the French suffered at the hands of the Germans what was perhaps the most humiliating disaster ever known to French Arms. Had not their Emperor, Napoleon the Third, been compelled to surrender to the Germans in this fateful city?

The second and perhaps greatest error of the operation lay in the last paragraph of the order delivered by the Corps Commander to the Division on November 6th, reading as follows:

"In transmitting the foregoing message your attention is invited to the favorable opportunity for pressing our advantage throughout the night. Boundaries will not be considered binding". Undoubtly when this order was drafted G. H. Q. never intended that any division would march at right angles to its previously designated sector, nor that any division would force its way directly across the front of other divisions. Nevertheless the order could have been fairly interpreted as permitting such a movement, and in its eager desire to gain the much sought honor of taking Sedan, the First Division took advantage of the latter interpretation, and did move by the left flank, across, and into the sectors heretofore assigned to two American and one French Divisions. It is little less than remarkable that troops of the First Division did not suffer severe casualties from mistaken fire delivered by the troops of these friendly divisions when their sectors were invaded.

Despite almost insurmountable handicaps of both terrain and weather the First Division accomplished all that was expected of it in the last phase of the Meuse-Argonne Operation. Its troops made almost impossible marches such as could only have been accomplished by highly trained and thoroughly disciplined men. The Division's plan of action for the final march on Sedan was well conceived, and almost perfectly executed, when taking into consideration all of the attending circumstances.

LESSONS TO BE LEARNED FROM THE OPERATION.

Perhaps the first and most important lesson to be derived from the operations of the First Division in the 3rd Phase of the Meuse-Argonne is that in the drafting of orders the greatest care should be exercised to make every paragraph and every sentence of the order clear, unambiguous and susceptible of but one interpretation. When sector boundaries are once defined in orders they should be held inviolate and should not be changed or disturbed except in the face of the gravest emergency. An order which disregards previously assigned sector boundaries may easily jeopardize the success of an entire operation and cause needless casualties to all troops involved.

The operation also demonstrated to a high degree the paramount importance of march discipline, especially as applied to night marching. There are troops considered well trained because of their ability to move rapidly and in perfect order by daylight, yet these same troops, if ordered to move over the same ground on a dark and rainy night become utterly lost and confused; their route is marked by numerous stragglers. There is a vast difference in marching by day and in marching by night and unless troops are trained to move in the darkness as well as in light they cannot and should not be termed well trained and disciplined troops. There is no greater test of the discipline of an organization than is called for by night march-

ing. Disciplined troops, though their enthusiasm may be reduced by physical exhaustion, will still move on because they have been ordered to do so.

The operation described by this monograph called for skillful leadership and the closest cooperation between officers and men. It demanded an esprit de corps that can only exist in an organization well supplied with brilliant and highly trained officers. Its leaders must have been men of initiative; men who could rise to any emergency, and meet the constant shifting fortunes of battle unhesitatingly and unafraid.

The rapidity of the maneuver emphasized the difficulty of maintaining communication. Naturally such a movement would bring into play every known means of communication and as the advance grew more rapid organizations were compelled to fall back on the runner system. The success of the operation indicates that the First Division was prepared for the emergencies that arose and the days spent in training men in the performance of this arduous and dangerous duty were not wasted.

The advance also brought a severe test to the supply branch of the Division. The problem of keeping the troops supplied with food and ammunition under the existing terrain and weather conditions cannot be exaggerated. The fact that the troops were, in spite of all these handicaps, even fairly well supplied with such necessities proves conclusively that training along this line had been thorough enough to meet any test. Without such training the operation could never have achieved any such degree of success.

The entire Meuse-Argonne operation, and especially the latter phase, emphasized to the highest degree the value and necessity of training for open warfare and woods fighting. An enemy, when drawn from his trenches and forced into the open, instinctively seeks the woods because of the cover and concealment afforded. When this situation presented itself in the Meuse-Argonne Offensive no troops were better equipped by training to meet the emergency than were those of the First Division. They met the enemy in open warfare and on heavily wooded terrain, yet never once did the Division fail to impose its will on his best troops.

References:—History of the First Division; History of the A. E. F., by Thomas; Our 110 Days Fighting, by Page; Out of My Life, by Von Hindenburg; America's Greatest Battle, by Palmer; the Great War, by Allen, Chadwick and others; Battlefields of the World War, by Johnson; Final Report of General Pershing.

OPERATIONS OF THE SECOND DIVISION (U. S.) DURING THE THIRD PHASE OF THE MEUSE—ARGONNE.

By

Captain Albert C. Wing, Infantry.

ORGANIZATION OF SECOND DIVISION

The Second Division was organized in France in the latter part of 1917 from units of the regular army then in France. It was commanded in November 1918 by Major General J. A. Lejeune of the Marine Corps. The units of the Division were:

3RD BRIGADE	4TH BRIGADE	2ND ARTILLERY BRIGADE
9th Infantry	5th Marines	12th Artillery Regiment
23rd Infantry	6th Marines	15th Artillery Regiment
5th Machine Gun Battalion	6th Machine Gun Battalion (Marine)	17th Artillery Regiment
4th Machine Gun Battalion, motorized (Divisional)		2nd Engineer Regiment
2nd Trench Mortar Battery		1st Field Signal Battalion
2nd Supply and 2nd Ammunition Train		2nd Sanitary Train
2nd Headquarters Train and Military Police.		

SITUATION ON NOVEMBER 1ST.

West of the Meuse on October 31st, (the day before the opening of the third phase) the line ran as follows: From just north of Grandpre on the left about one kilometer south of St. Georges between Cote de Chatillon and Landres et St. Georges, then north including Carres, south again and then north of Aincreville, thence east, south of Clery le Grand to a point about one kilometer from the Meuse river where the line turned south. This line roughly represented the Kreimhilde line, and was the last prepared position along this front. The German army fully realized that this line must be held. A break thru here would sever his valued line of communication. If it could not be held there was little hope of holding a position this side of the Meuse.

The condition of the German Army at this time was, on the whole, very poor. The high command knew that it was beaten and was desperately holding on for more favorable peace terms. The physical condition and morale of the army was at a low ebb. Hard work and constant defeats had taken full toll. The appearance of a fresh American army in front of them, when their officers had assured them that the Americans could not get into the fight, filled them with dismay. The people back home were leaning toward revolution and this spirit had come down into the army. Soldier councils were springing up. The last possible blow that could happen to an army had fallen, it has lost its discipline. Gloomy as this picture is, there is a brighter side from the German viewpoint. The old officer class held steadfast and fought until the last, even serving the guns. The Machine gunners and Artillerymen fought desperately until the last. These were the men that the American Army were to deal with in the last phase. The action from this time until the end was the action of the Machine Gunners and Artillerymen.

PLAN OF 1ST AMERICAN ARMY.

West of the Meuse the American 1st Army had three Corps in line from right to left, the 3rd with the 5th and 90th Divisions in line and the 32nd and 3rd Divisions in support, the 5th with the 89th and 2nd Divisions in line with the 42nd and 1st in support, the 1st with the 80th, 77th and 78th in line and the 82nd in support. The 42nd to go to the support of the 1st after the initial attack.

The mission of the 1st Army remained unchanged, the breaking of the Metz-Sedan-Mezieres railway and the closing of the southern gateway. Its more immediate task was the taking of the heights of Barricourt-Buzanzy and joining hands with the 4th French Army at Boult-aux-Bois. The plan was to drive a spearhead with the 5th Corps into the German position, later widen the gap and prepare for the final drive on Sedan.

Secrecy was no longer possible. Germany now knew where the attack would come. The American task was to bring up a superior force and push through. During the last days of the preceding (second) phase roads and railroads were built. Every available piece of Artillery was brought up close to the line. Divisions on being relieved from the line left their Artillery in place. Ammunition dumps were heavily stocked. Divisions which had been exhausted in the previous action were pulled out of the line and fresh divisions put in. Plans were carefully made and carefully coordinated.

SECOND DIVISION ENTERS THE LINE.

The Second Division was selected for the position of honor, the spearhead, and assigned the sector then held by the 42nd Division, in front of the strongly held position of St. Georges and Landres et St. Georges. During the preceding phase the Second Division had been with the 4th French army west of the Argonne forest. On October 21st it was in the reserve of the Army. On that day it was assigned to the 1st American Army and on the 22nd started its march to its position. The Artillery Brigade, Engineers and a part of its trains were still with the French and were not relieved until the 27th. They reached the Division in time to take part in the offensive. On October 30th the Second was in position behind the 42nd Division. On the night of October 30—31 it relieved the support and reserve battalions of the 42nd Division.

PLAN OF THE SECOND DIVISION.

The following sector was assigned the Division: Right—La Tiulerie Farm (exclusive)—Hazois Woods (inclusive)—La Bergerie Farm (exclusive)—Aviation Camp (exclusive)—Remonville (exclusive)—Arbre De Remonville (inclusive)—thence through Barricourt woods to Barricourt (exclusive)—Nouart (inclusive).

Left—Saint Georges (inclusive)—Imecourt (exclusive)—Sivry lez Buzanzy (exclusive)—Malmy (inclusive)—Parades Farm (inclusive)—Fosse (inclusive) (see map).

The jump off line was to be the line then held by the 42nd Division. A line starting on the right on the eastern slope of the Cote de Chatillon then west about one kilometer south of Landres et St. Georges to a point about one kilometer south of St. Georges.

The problem that now confronted the division was two fold. First, the breaking of a line that was strongly held from all indications. A line that the 42nd Division, by no means a secondary division, had failed to crush. This line was the last of the Kriemhilde positions and was the part of the line that had resisted every effort of the second phase of the Meuse Argonne offensive. The second problem was one of deep penetration to the heights of Barricourt.

The following objectives were assigned:

First: An east and west line about 400 meters south of Landresville.

Second: General line north edge of Arbre de Remonville—about 400 meters north of Bayonville et Chenery-Malny (inclusive).

Third: (days objective) La Fallarde-Magenta Farm—Hill 313—Farm des Parades.

Fourth: (exploitation line) Nouart-Fosse. D Day was to be November 1st, H Hour 5:30 A.M.

The following units were to assist the Division in its mission: The 1st and 67th Artillery Brigades were to assist the second Brigade in the standing barrage on targets in the sector and later in the rolling barrage. After gaining the 1st objective the 67th Artillery Brigade to revert to the 42nd Division and go with it.

The machine gun battalion of the 42nd Division were to assist the machine guns of the Second Division in thickening the barrage and pass to the 42nd Division on the taking of the first Objective.

Company D of the 1st Gas Regiment was to deluge woods and other positions in the front with gas. Also furnish platoons to go forward with the support Battalions in the attack to clean out any local obstacles.

All available tanks (sixteen) were to go forward with the assault and clear the wire and operate against local strong points in the attack.

The divisional plan of maneuver was as follows: The 4th Brigade was to make the attack with regiments in line. Regiments in column of battalions. One Battalion in attack, one in support and one in reserve. The 3rd Brigade to follow in support with the same formation. Deployment in depth to be carried down to the companies to provide for extreme penetration.

One Regiment of the 3rd Brigade was assigned a special mission of capturing and mopping up the formidable positions of Landres et St. Georges and the woods of Hazois and l'Epasse and were to pass to the support at the 1st objective, this Regiment to form with two Battalions in attack and one in support.

The Engineers were to assign groups to the attack Battalions for the purpose of cutting wire. Other groups to the tanks to assist them. The remainder of the Regiment to follow the attack closely repairing roads to assist the Artillery forward.

The 1st and 2nd Artillery Brigades were to be echeloned forward with the attack. The barrage was to move at the following rate:

100	meters	in	4	minutes	over	open	country.
100	"	"	6	"	"	steep	slopes.
100	"	"	8	"	"	in	woods.

It was to be under the direct control of the commanders of the leading or attacking battalions.

OPERATION OF 1ST DAY.

At 3:30 A. M. the greatest barrage the Division had ever had before it, opened. All types of Artillery and the Divisional Machine Gun battalions joined in to stun the enemy. At 5:30 the troops moved from the jump off position following the barrage. On the right the 23rd Infantry had the 1st and 3rd Battalions in line with the 2nd in support. Next to them came the 5th Marines in column of Battalions, the 1st Battalion leading with two companies in assault and two in support, the 2nd Battalion following at about 800 meters. After that Battalion came the 3rd at about the same distance. The support and reserve battalions advancing in line of combat group. On the left of the 5th Marines came the 6th Marines in practically the same formation and with the same distances. Following the 6th Marines the 9th Infantry marched in reserve following at about 1,000 meters in column of Battalions, Battalions with two companies in front line and two in support, with about 1,000 meters between Battalions.

Within one hour Landres et St. Georges and St. Georges were taken. On schedule time the advancing line reached the 1st Objective and the 23rd Infantry was pinched out of the line according to plan, and formed in column of Battalions behind the 5th Marines.

The Fourth (Marine) Brigade now held the divisional front. Still advancing on schedule time, leap frogging Battalions on objectives, the towns of Landresville and Bayonville et Chenery were captured. In the early afternoon the days objective was reached and strong patrols were being sent out to the exploitation line.

The 89th Division on the right had kept pace with the Division. On the left the 80th Division had a harder task and was not so fortunate. The right of the 80th Division had been stopped near Sivry Buzancy. This exposed the left flank of the 2nd Division. The 2nd Division was receiving damaging machine gun fire from the woods northeast of the town. Rear elements of the 6th Marines left the divisional sector and captured these woods.

During the afternoon and night plans were made to attack in a northwesterly direction on the following morning to assist the 80th Division. At the last hour these plans were changed. This change of plans had prevented the marines from more fully exploiting to the exploitation line as patrols had been pulled in. Germans were still in the Bois de Folie.

SECOND DAY.

No attempt was made to advance the line on the morning of the second day as the Division was ahead of the Division on the left. The 3rd Brigade was ordered to take over the line from the Marine Brigade in the afternoon and advance to the Nouart-Fosse line prepared to move forward against the enemy. A new sector was assigned the Division as follows:

Right: Remonville to 89—Nouart divided—Champy Haut 2nd Divisin—Champy Bas. 89 Division—thence to southeast end of the Jaulny forest.

Left: Buzancy to 80th Division—Vaux en Dieulet to 89—Beaumont to 2nd Division.

As the order was not received until late in the day, the 3rd Brigade decided to put into effect an old principle of tactics, a night march, against a disorganized enemy.

The 9th and 23rd Infantry formed on the road with advance guards and flank protection and silently passed to the exploitation line on the night of the 2nd-3rd. By daylight both regiments had reached the Fosse-Nouart road. The towns of Fosse and Nouart were mopped up and at 6:00 o'clock the brigade was ready to move forward in attack on the ridge running southeast from Vaux en Dieulet. The Marine Brigade had followed in close support. The Artillery was coming forward and would be in position in time for the attack.

OPERATIONS THIRD DAY.

At 6:00 A. M. November 3rd the division was formed in column of Brigades with the 3rd Brigade north of the Fosse-Nouart road, the 9th Infantry on the right, the 23rd on the left. The 5th Marines behind the 9th and the 6th Marines behind the 23rd Infantry. Field Order No. 46 of the 3rd Brigade issued at 1:25 A. M. directed the attack on the ridge running southeast from Vaux en Dieulet. It stated that the 1st and 2nd Artillery Brigades would support the attack and attached the 15th F. A. and one Battalion of the 17th F. A. to the Brigade. The Artillery Commander was directed to detail accompanying Batteries to each assault regiment and accompanying guns to each attack Battalion. At 6:00 A. M. the Brigade moved forward in the attack. Resistance was slight at first. The objective was reached at 9:00 A. M. Just as the Brigade reached its objective, the ridge just south of Belval forest heavy fire was received from the forest and from Belval. Heavy casualties were received. Both regiments dug in on the reverse slope of the ridge. The 15th F. A. took position north of Nouart and brought effective fire on the southern edge of the woods. The situation was reported to the Corps Commander and orders were received to advance on the woods and drive out the enemy. However there was some delay in getting the orders to the units and the advance was not made.

THE NIGHT MARCH OF 3RD—4TH.

The Division was, on the afternoon of November 3rd, dug in on the reverse slope of the ridge just south of Belval forest. The Division had received orders to advance to the heights south of Beaumont. Before the division lay a forest thru which it had to pass to accomplish its mission. From all indications the enemy intended to hold these woods until his troops in rear could get safely across the Meuse. The situation required quick action. A bold plan was decided upon—to make another night march. To get in rear of the enemy with the 3rd Brigade and build up a position before daylight. The plan was first to march by two roads, the ninth on the right, the 15th F. A. to furnish a battery of Artillery for the advance guard of the regiments. It was found that the road assigned to the 23rd Infantry was unsuited so the 9th Infantry led, both regiments using the road assigned to the 9th Infantry. The F. A. did not come up in time. At 4:30 in the afternoon under cover of darkness and further protected by a cold rain the column formed on the road with an advance guard of one Battalion of the 9th in the lead.

The Artillery was directed to fire on the southern edge of the woods. Then to fire on the right and left of the road where it leaves the forest on the north edge.

The column marched out slowly in column of twos. Whenever enemy resistance was met the leading troops hit the mud while patrols were sent around to clean up the enemy. Prisoners were captured all along the road. No serious resistance was encountered however, until the leading elements reached La Forge Farm. Here a body of German Infantry were found preparing the southern edge of the Bois de Vaux Dieulet for resistance. They were soon captured or dispersed and the march continued. During the march many machine gun and artillery positions were captured. The gun crews had sought shelter from the rain and were surrounded before they knew the enemy was in the vicinity. No attempt was made to mop up. The same enemy patrols were captured two or three times during the night. During the march enemy artillery on the right and left continued to fire on positions south of the woods. By 11:30 the Brigade had reached the northern edge of the Gerache woods and formed in the open.

OPERATIONS OF THE 4TH.

The third Brigade was in a position a little north of the Port Gerache woods. The 9th Infantry deployed

on the right of the road, the 23rd in support on the left of the road, the 2nd Battalion of the 5th Marines in woods about one kilometer south of the northern edge of the woods, one Battalion the 15th F. A. in the vicinity of La Forge Farm, the 4th Brigade (less one Battalion 5th Marines) and the remainder of the artillery in support on Vaux en Dieulet ridge. The right and left divisions had not come up. On the right the 89th was advancing rapidly and little trouble was expected from that flank. On the other flank, however, the 80th was far in the rear. In the morning the 80th had attacked and taken Vaux en Dieulet and was slowly advancing thru the Bois du Four but was making slow progress. In the meantime enemy machine guns in the Bois des Maurets were very effective and it was feared that a counter offensive would be launched from that direction. The Corps Commander sent one Regiment of the 1st Div., the 26th Infantry to the vicinity of the La Forge Farm-Beaumont road about one and a half kilometer north of the farm to protect this flank until the 80th could come up. The position now held by the brigade was an awkward one. Artillery had the range and was shelling the positions effectively from the front left flank, and from east of the Meuse. Machine guns on the left flank and on the ridges east and west of Beaumont were inflicting casualties. In order to relieve the situation the 9th Infantry was directed to advance supported by the 23rd Infantry. An advance of about one kilometer was made against stubborn resistance from Artillery, Machine guns and the bombing and machine gunning of low flying planes. However, the advance was stopped with the Third Brigade on the ridge running east and west through Beausejour and La Tuilerie Farms and north of the latter farm. The 9th Infantry in the line with the 23rd Infantry in close support. The losses in this movement were heavy. One Battalion of the 9th Infantry had only two officers remaining with the 4 companies. Preparations were now made for the bringing up of the reserves and the continuation of the attack at night.

FOURTH AND NIGHT OF 4TH—5TH.

On the night of the 4th—5th the 23rd Infantry passed thru the 9th Infantry toward the Meuse with the mission of capturing the ridge in the vicinity of Beaumont and mopping up the towns of Beaumont and Le Tanne thus clearing the west bank of the Meuse in this sector. One Battalion seized the heights east and south of Beaumont and at daylight mopped up the town and Beauregard Farm. Another Battalion seized the Vache woods and the trenches north of that town and at daylight mopped up Le Tanne. The enemy had withdrawn from both towns. The other Battalion remained in a reserve position near Belle Tour Farm.

During the day (5th) the 80th Division came up on the left near Beaumont and relieved pressure from that side. Contact had been gained with the 89th Division on the right the previous night (4th—5th) by sending the 2nd Battalion of the 5th Marines to a position near Belle Tour Farm.

During the 4th the 4th Brigade (less one Battalion 5th Marines) was ordered up to take over the right half of the divisional sector with the plan of establishing positions from which to throw brigades across the Meuse. During the night of 4th—5th it rested in the woods near Belle Tour Farm and sent out strong patrols toward the river. The 5th Marines now held the right half of the sector with Battalions in position in the woods around Belle Tour Farm. The 6th Marines supported the 5th Marines. The 5th Marines sent out strong patrols along the river to its front looking for a crossing place. On November 5th the 5th Marines sent one Battalion to operate with the 89th Division in mopping up Foret de Jaulnay.

HOLDING THE RIVER LINE (5 TO 10).

On the night of the 5th—6th information was received that the 1st Division had been ordered to take over the sector of the 80th on the left and to move on Mouzon. To assist in this movement and protect the right flank of the 1st Division the 2nd Division was ordered to seize and hold Bois de Hospice, Bois de Fond du Limon and Villemontry. By a night operation the 9th Infantry moved from its position in support of the 23rd and took the objectives without serious loss. It connected up with the 23rd on the right. The Division now held the river front from a point east of Bois de Vache to Villemontry.

During the 6th information was received that the 2nd would march on Sedan on the right of the 1st Division. Early on the morning of the 7th these plans were changed and the division was ordered to take over the line to the north as far as Faubourg (Mouzon). The 9th Infantry extended its front to include this new sector.

In preparation for the move on Sedan the 4th Brigade had been pulled out of the line and placed in reserve along the Beaumont-Somme Mauthe road about three kilometers southwest of Beaumont. On November 8th it was in this position. The 3rd Brigade was outpostting the river from Mouzont Le Tanne. The artillery was in position southwest of Beaumont (the 1st Artillery Brigade had been withdrawn at Nouart).

From the 8th to the night of 10th—11th the Division was busy reconnoitering the river front for crossing position, searching for bridge material and preparing bridge sections and locating positions for the support of the crossing by Artillery and other fire.

CROSSING THE MEUSE (10—11).

On the 9th plans were completed for the crossing of the Meuse at this point. At the same time the 89th Division was to cross further to the east. After crossing the river the heights were to be seized in preparation for further advance. In the Division sector the Commanding General of the 4th Brigade was assigned the task of crossing the river while the 3rd Brigade was to hold the line. The following additional troops were given to the Brigade Commander for the accomplishment of this mission:

4th Machine Gun Battalion	2 Companies of Engineers
Company D 1st Gas Regiment	The Divisional Artillery

All Signal troops.

The plan of crossing was for one Regiment to cross in the vicinity of Mouzon while one was to act in conjunction with one Battalion of the 89th Division and cross in the vicinity of Le Tanne. Artillery, the Machine guns and Company D 1st Gas Regiment were to protect the crossing. The artillery plan to be coordinated by the Corps Artillery Commander.

On the night of November 10th—11th, the engineers succeeded in throwing two foot bridges across the river in the vicinity of Bois de Hospice. The 1st and 3rd Battalions of the 5th Marines with attached machine gun companies had arrived in Bois de Hospice woods at 8:00 P. M. They were marched to the bridges immediately. Preceding the attempt to cross there was an Artillery barrage of one hour. Due to counter barrage and machine gun fire on the river front the 1st Battalion did not succeed in crossing until 10:30 P. M. Trouble developed with one of the bridges and the other Battalion of the Marines did not get over until 11:30 P. M. It was followed immediately by the Battalion from the 89th Division.

The attempt to cross at Mouzon was frustrated. Heavy Artillery fire on the river front prevented the placing of the bridge and the 6th Marines marched back to Bois de Fond du Limon before daybreak.

OPERATIONS EAST OF THE MEUSE.

At about daylight of the 11th the 9th Infantry, unwilling for the marines to have all the action, followed in support. A rapid push was made forward to take the high ground in the vicinity of Bois de Alma Sisors and Bois des Flaviers. The end of the war 11:00 o'clock November 11th, 1918 found this force well spread out east of the Meuse from Warmontern Farm on the north—thru Belle Fontaine Farm—then to Senegal Farm and from this point communication had been established with the 89th Division near Vignerons Farm.

During the operation the second Division had advanced about twenty-nine kilometers. Had captured 1,712 prisoners, 105 pieces of artillery, 17 trench mortars, 500 machine guns, and a vast sort of small arms, ammunition and equipment.

ANALYSIS AND CRITICISM.

The scope of the action of this Phase of the Meuse Argonne operation by the Second Division is very wide. It included almost every phase of tactics. The attack of a strongly held and well prepared position and the breaking of the line. The reversion to open warfare and maneuver on a less restricted scale. The pursuit of a defeated enemy and the action against a stubborn rear guard. A night march into enemy

territory. The advance under artillery preparation and without it. The crossing of a stream under fire of the enemy from a strong position. The lessons that might be learned from this operation are numerous. However, as accurate data is not available on which to go into all of these features, the discussion will touch briefly on certain phases and then in more detail on the one outstanding operation of the Division in the Meuse-Argonne offensive.

The retreat of the German Army was well executed. His morale was shaken. The soldiers were tired, both physically and tired of fighting. He had to withdraw and withdraw rapidly when it was found that the last of the Kreimhilde line would not hold. He had much material stored in this vicinity. It is true that the Americans captured large stores of it, but they by no means captured it all. Also the bulk of his army got away. It will always be a credit to the German Officers and the German soldier, particularly the machine gunners, and artillerymen, that they prevented this retreat from becoming a mad rout. However, this retreat was marred by one serious mistake on the part of the enemy. They allowed themselves to be surprised. Their communication failed and the Second Division got in rear of them without their knowledge. Small groups knew that the enemy was on the road within their line, but they were not able to communicate this knowledge to their organization in time to take advantage of it. The work of the General Staff of the American Army was remarkably good. The scene and conditions rapidly shifted. They had to change plans at a moments notice. The action of a number of Divisions all pushing forward pell mell had to be coordinated. It was well done.

The American soldier fully demonstrated in this phase that he could fight under all circumstances. That he was not dependent on all conditions being ideal. At times he lacked the support of his accompanying guns, his artillery barrage and even the lack of food and equipment, but he drove through with a grim determination to end the war. He had learned this soldiering game in a surprisingly short time.

The work of the Engineers stands out in the operations in a particularly favorable light. The success or failure of the rapid drive to the river depended largely on them. The roads at their best were bad. The Germans had not neglected to destroy them and to place all sorts of obstacles in the way. The final phase of the operation, the crossing of the river, depended almost entirely on the ingenuity, skill and bravery of the engineers. Bridges had to be improvised rapidly and put across in the face of determined resistance. The story of the crossing of the river is rightly the story of the Engineers.

The phase that has been selected for a more detailed discussion is the night march of the 3rd Brigade thru Belval Woods. An operation that has been both favorably and unfavorably criticised. The Division had been ordered forward against a ridge that was more than 8 kilometers away with woods intervening that had to be passed thru. These woods were held by the enemy Artillery and Machine gun units. No information was available as to his location in the woods, but from all indications he held them and held them in force. Any movement toward these woods had met with a determined fire from the edges.

The enemy had very good knowledge of our lines. His observation had been good. He had already registered on our position. He knew exactly that our general intention was to go forward rapidly and cut him off before he could cross the Meuse.

He had had some little time to prepare this position and site his guns. The terrain was all in his favor. Ideal for a stubborn resistance and he knew every foot of it. His roads were ample for the defense of the position and for a slow withdrawal. The enemy had only one feasible plan open to him. To stubbornly hold on to the woods until the last possible moment in order to cover the withdrawal of his forces.

The Division was held up in front of the woods and was under serious fire from the enemy guns. The men were more than willing to go forward. Morale was with the Division. The time element was important. If the Division remained here until more favorable conditions such as the advancing of the flanks the enemy would effect his escape. If the enemy was allowed to rest he would perfect his defenses and rally his badly shattered forces and in the end would inflict more serious casualties on the Division.

There were two plans open to the division commander; to attack in force with Artillery preparation, or to make a secret night march thru his lines. The first was out of the question because it would allow the enemy to carry out his plans of withdrawing his main forces and would allow him time to rally his troops. Also an attack against such a position was bound to result in many casualties. The Second was clearly the best.

Its disadvantage was in the chance that the troops would be cut off and defeated. But it did not allow the enemy time to collect his forces. It had a very good chance of being surprise on account of the weather and the condition of disorganization. Even if a vigorous fight was forced at the end of the march the chances were that the casualties would be lighter than in a protracted drive through the woods. It is believed that the plan, bold and unusual as it was, was the best possible plan for the time and place.

LESSONS.

In the pursuit of a demoralized army after a break thru speed and daring are the most desirable characteristics. The cautious tactics that would be absolutely required in the operations against a well organized force are out of place against an enemy after a break thru. Chances must be taken. Plans that would be sure to fail with the enemy before the break thru often offer the surest chances of success after the break thru.

Machine Guns and Artillery skillfully placed are invaluable in a retreat. No matter how badly defeated the force is, if these weapons can be gotten to function the forces can be drawn away without a complete breakdown.

Deployment in depth is as valuable for a vigorous pursuit as they are for deep penetration of prepared positions or for defense.

No matter how prescribed the sector of a force is, it is frequently necessary, not only to leave this zone for a flanking operation, but seize and hold positions outside this zone that are a menace to the safety to your force.

Every effort must be made to assure adequate communication in a rear guard action. The night marches of the Division would have failed if the enemy communications had not been deficient.

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THE OPERATIONS OF THE 5TH DIVISION DURING THE 3RD PHASE OF
THE MEUSE—ARGONNE.

By
Major Walton H. Walker, Infantry.

INTRODUCTION.

In the latter part of November, 1917, the Fifth Division was organized, on paper, for "immediate service overseas". Its units were individually equipped and trained in the United States, until the last of March, when embarkation orders were received and they proceeded to France.

The division was assembled in the Bar-sur-Aube sector the first of May, 1918. There it underwent a period of training and on the first of June it was hurried to the Vosges Mountains to relieve the Twenty-first French Division, which was needed on the Marne. It remained in the Vosges during the summer and on the 17th of August carried out its first operation of the war, when it attacked and seized the town of Frapelle in the St. Die sector.

During the St. Mihiel Offensive it was the center division of General Liggett's First Corps. It was relieved on the 17th of September and, after a few days rest, was sent to a point southwest of Verdun to take part in the great Meuse-Argonne Offensive.

It was assigned to the Third Corps in the early part of October and entered the line during the Second Phase of the battle. During this phase it suffered many losses. The division commander and two regimental commanders were relieved. The majority of the battalion commanders were either killed or wounded, and numbers of its best junior officers and enlisted men were sent to Corps and Army Schools, and even back to the United States as instructors. So that, though replacements of many officers and over three thousand enlisted men were received, the division was still far below strength in both officers and men.

The general situation at the end of October was very favorable to the Allies. On the extreme north the Belgian Army had regained Ostend, Lille, Douai and Bruges and had cleared the Belgian Coast. The Franco-British drive was sweeping forward. The Italians had been successful and Austria had sued for peace. On the 30th of October, an armistice was concluded with Turkey. Germany stood alone. Ludendorff had gone and the Supreme Command was out of commission. The mutterings of the storm of revolution were growing louder in Germany, and the morale of the German Army and nation was breaking down.

The Americans between the Meuse and the Adgonne had pushed forward through part of the Kreimhilde position and on the 31st of October the American Army held the line Grand Pre-Champigneulle-Landres et St. Georges-Aincreville, thence along the high ground south of the Andon creek to the Meuse, along the Meuse through Brieculles to the Bois Cote de la Lemont where it joined the 17th French Corps.

The Fifth Division was the right flank division of the American Army. The Ninetieth Division was on its left, the Fifteenth French Division on its right. The division, with the Ninth and Tenth Brigades in line from left to right, had been in its sector for five days, having relieved the Third Division on the 26th of October. These 5 days had been spent in making reconnaissances for the expected offensive and in exploiting the ground to the front. The division line ran from Aincreville eastward to the Meuse, then it turned southward following the Meuse to the Bois Cote de la Lemont on which its right rested.

Just in front of the northern arm of the line was the Andon, a little stream about four feet deep, winding through a wide muddy valley. Clery-le-Grand and Clery-le-Petit, two towns situated on this stream were still held by the Germans. About a kilometer north of Clery-Le-Petit is Hill 261 and a kilometer north of it is the little town of Doulcon. Just northwest of Doulcon is the Punch Bowl, a bowl like area from two to three kilometers in diameter with round topped Cote 216 in its center. It is completely shut in by high hills except on the east where it opens to the Meuse. On the heights of its northern edge is the Bois de Sassey, on the southwest is the Bois de Babiement, while on the south the steep rising slopes of Andon Creek which form the southern rim of the bowl, are but slightly wooded.

The southern arm of the line faced the Meuse River. Along this entire front the Meuse flows in a valley from 800 to 1500 meters in width. From the western edge of this valley the hills rise in a gradual

slope, bare of trees until the summits are reached. From the foot of these hills the plain of the Meuse stretches eastward, level as a billiard table, and slightly marshy. The plain is cut by two water obstacles: The Meuse River and the Canal de L'Est. The Meuse River is at this point a stream about eighty feet wide and from four to eight feet deep, with a light fringe of bushes lining the banks. The Canal lies from three to four hundred meters east of the river. It rises sharply about ten feet above the level of the plain, with its western bank bearing an occasional clump of bushes. The canal itself is about forty feet wide and ten feet deep. Its eastern bank rises abruptly for about twenty feet and then continues in a more gradual slope to the Heights of the Meuse. This slope is wooded and furnishes excellent cover for a defending force.

The Heights of the Meuse, in the sector opposite that occupied by the Fifth Division, consists of a range of steep wooded hills extending from the Meuse to the Woevre lowlands. Dun is the northernmost height of the range. From that eminence, in a line running eastward the Meuse Heights terminate in a series of serrated bluffs. This escarpment rises from sixty to a hundred and fifty meters above the river basin which, on the north, opens up into a broad rolling plain partly covered by the Woevre Forest. There is one northern outguard for these heights, for rising abruptly out of the plain a kilometer north of the escarpment and three kilometers east of the river, is Cote St. Germain, a saddle shaped ridge three kilometers long, sparsely dotted with woods.

In the drive which was to commence, on the 1st of November, the mission of the Third Corps was to advance in the general direction of Stenay and to assist the Seventeenth French Corps, on the right, in the prompt occupation of the Heights of the Meuse. The fifth Division was ordered to hold its line, protect the right flank of the Ninetieth Division, with which contact was to be maintained, and to make a reconnaissance along the Meuse River with a view to formulating plans for a crossing.

NARRATIVE.

At 5:30 A. M., November 1st, following the most dense protective barrage that had ever been put down on the front of the American Army, the seven front line divisions moved forward in the attack, and were successful all along the line.

Keeping in touch with the Ninetieth Division on its left, the Ninth Brigade attacked on its front with regiments abreast, Sixtieth Infantry on the right, Sixty-first Infantry (less one battalion, which was attached to the Ninetieth Division) on the left. The Sixtieth Infantry, attacking in a northerly direction with artillery support, took Clery-le-Grand, driving the enemy in disorder over hill 261 and effectively mopping up the town with phosphorus grenades. While the attack on Clery-Le-Grand was in progress a company of the Sixty-first Infantry with a platoon of machine guns moved forward against the Bois-de-Babimont. Covered by heavy overhead machine gun fire they forced their way to the edge of the woods. Here they were stopped and were forced to dig in.

In the afternoon, that part of the Sixtieth Infantry which had taken Clery-le-Grand, aided by machine gun barrages from the high ground south of the Andon, attacked and, about dark, succeeded in reaching the crest of Hill 261.

On the right of the sector, which was held by the Tenth Brigade, with the Sixth Infantry on the line and the Eleventh Infantry in reserve, there was no action. This brigade simply stood fast, keeping in touch with the troops on the right and left, and constantly making reconnaissances for the crossing of the river.

During the night of November 1st—2nd the Sixtieth Infantry had pushed forward under cover of the darkness and at daylight, following a short artillery preparation, took the town of Clery-le-Petit and the eastern slope of Hill 261. Immediately after the town was taken, the enemy barrage from the heights across the river, fell upon it and many casualties resulted. However, the troops dug in and remained in this position which was one of the key points to the crossing of the river.

During the morning the Sixty-first Infantry continued its attack on the Bois-de-Babimont. Overcoming scattered machine gun resistance, it took the woods and advanced to the rim of the Punchbowl. On account of flanking fire from the left it was unable to advance further so it dug in. The Fifth Division now held all of the high ground west of the Meuse within its sector.

The Tenth Brigade made no movement during the day of the 2nd of November. That night, however,

orders were received for the Sixth Infantry to send a patrol of not more than two companies across the river. About 3:00 A. M. two companies, with a detachment of engineers carrying the light pontoon bridge equipment, moved down to Briulles and started the laying of the first bridge across the Meuse. The bridge was completed at dawn and one rifle company with the engineers started across. At this instant the movement was discovered by the enemy and heavy machine gun fire was opened on the bridge. The engineers and the company then on the bridge, dashed forward across the open river bottom to the cover afforded by the canal bank. The other company took cover behind the railroad bank near the foot bridge.

On the 3rd of November Corps orders extended the division zone of action to include the Punchbowl and also returned the First Battalion of the Sixty-first Infantry, which had been attached to the Ninetieth Division. This battalion, advancing from the west mopped up the Punchbowl and captured the central mound and Doulecon. The front of the Division sector now faced the Meuse from one flank to the other.

In the afternoon orders came directing the division to turn eastward, force a crossing of the Meuse River, seize the heights beyond and establish a bridge head for the crossing of the rest of the Army. This order had been anticipated by the Division Commander when, on the preceding night, he ordered not more than two companies of the Sixth Infantry to cross. He now authorized the use of the entire battalion for the attempt.

During the day the company, under the canal bank, remained pinned to the ground, the troops west of the Meuse being unable to give them any assistance. As soon as darkness fell, a company was sent across the Meuse to reenforce them, another was put in position along the railroad bank near the foot bridge, while a third, with the machine gun company, was placed in Briulles. Engineers with more foot bridge material joined the companies at the canal bank and two small foot bridges were quietly and rapidly pushed across the canal at a point about two hundred meters north of the bridge across the river. The Germans permitted the work to go forward without interruption and not until one bridge was completed and the units had started across, did the German fire open up. Then it opened in earnest. Every machine gunner on the bank turned his weapon on the crossing. The range was exact and all of the men on the bridge were killed. It was out of the question to attempt to cross in the face of this fire. The men took cover along the canal bank and opened a heavy fire with rifles, automatic rifles and even with grenades, attempting to silence the machine guns. Our own machine guns and light mortars in Briulles combed the slopes of the hills opposite, but the Germans could not be silenced. Another attempt to cross later in the night proved equally futile, and day found the little group again clinging to the bank of the canal, not forty yards away from an overwhelmingly superior force of the enemy.

The bridge material for the Ninth Brigade did not arrive during the night of the 3rd—4th of November and no attempt was made by this brigade to cross. The equipment began to arrive after daylight on November 4th, but it was not until afternoon that sufficient material for the construction of a bridge had arrived. The enemy across from Clery-le-Petit was very quiet, patrols were sent along the river bank to feel him out and artillery and machine guns fired on possible enemy positions. No enemy fire could be drawn. As it appeared that the Germans had abandoned the hills on the other side, it was decided to cross in broad daylight.

At 4:00 P.M. the selected hour, a company of engineers carried forward canvas pontoons just north of the point where the river is joined by the canal. One battalion of the Sixtieth and one of the Sixty-first, took positions along the shore to protect the engineers, and to cross as soon as it was possible to do so. Our artillery and machine guns searched the slopes across the river to keep down possible enemy fire.

The enemy had not left! No sooner had the engineers started floating the pontoons than all kinds of hostile fire came down on the working parties and the protecting troops. As fast as the canvas boats were put into position, they were cut away and sunk by artillery and machine gun fire. Casualties were terrific. The commander of the protecting battalion from the Sixtieth Infantry was killed. By dark the supply of boats was exhausted and the forces had to desist until more pontoons arrived.

Up the river opposite Briulles the two companies of the Sixth with the detachment of engineers, crouching behind the canal bank, were unable to move. Throughout the day they remained there, while our artillery directed by an officer in the belfry tower in Briulles pounded the eastern bank of the canal.

Under cover of approaching darkness a platoon of machine guns was moved across the river to the canal, and the battalion again prepared to attack. Careful plans were made and detachments were placed at the ends of the bridges prepared to rush them. Suddenly the canal bank was manned, and a burst of fire was opened with all available weapons. Under cover of this fire, the detachments rushed across, being quickly followed by the rest of the men in the two companies on the bank. Firing as they advanced, the units deployed and pushed forward clearing up the ground to the front and to either flank. The machine gun nests were wiped out and a bridge head was established. We had gained our first foothold across the Meuse.

While the enemy's attention and fire was being drawn to the foot bridges, another battalion crossed the river and equipped with improvised rafts and telegraph poles, lashed together, it quietly crossed the canal about four hundred meters above the other crossing. Moving to the right it took up a position for an attack on Bois-de-Chatillon at daylight. The remainder of the Sixth, crossing at the foot bridges, was closely followed by the Eleventh and by daylight the entire Tenth Brigade had crossed and was established on the eastern side of the canal.

In the Ninth Brigade sector when darkness fell the battalions of the Sixtieth and Sixty-first, which had been so badly shot up in the afternoon, were relieved by fresh battalions of the two regiments and these were moved up the river about a kilometer to continue the attempt to cross. The Colonel of the Sixty-first was placed in direct command of these troops and was charged with the crossing. During the night more pontoons were sent to Clery-le-Petit and one bridge was thrown across the river and two were thrown across the canal.

The enemy was still present in force, and as soon as the engineers were discovered bridging the canal the whole area was drenched with fire from the heights. Between bursts of fire the engineers continued to work on the bridges and by dawn parts of two companies, one from the Sixtieth and one from the Sixty-first were across the canal, while a battalion of the Sixtieth and two companies from the Sixty-first were between the canal and the river in a very exposed position. Both bridges had been broken or sunk and there was no way to cross the canal. A captain of the Sixtieth Infantry, seeing the situation and observing a part of his company across the canal, called upon his men to follow him, jumped into the canal and swam across. He joined those of his men who were already across, and moved forward driving the enemy over Hill 260, while the men of the Sixty-first on the left advanced on Hill 292.

Thus the morning of November 5th found the division across the river attacking in a northeasterly direction. The regiments were abreast in the following order from right to left: Sixth, Eleventh, Sixtieth, and Sixty-first. During the day the Sixth Infantry attacked with one battalion through the Bois-de-Chatillon and overcoming machine gun resistance, took Cote 252 and Hill 228. The regiment reached the Liny-Vilosnes Road and there dug in, sending a strong combat patrol toward Vilosnes to cover the flank of the division.

The Eleventh Infantry, which had crossed behind the Sixth, advanced northeast on Liny and the town was enveloped and captured. The garrison of Liny, retiring over Hill 260 was followed up and the Eleventh connected up with the Sixtieth on the hill. At Liny the Colonel of the Eleventh Infantry received a message from the Brigade Commander directing him to disregard previous instructions and to take the stronghold of Dun which was the all important objective. It was not known, at the time the message was sent, that the Ninth Brigade had succeeded in its crossing. The regiment was immediately faced to the north and started toward Dun. It passed to the west of Bois-de-Bussy and Bois-de-Chenois. When it reached the vicinity of Dun it found the town occupied by the Sixty-first Infantry so it again faced to the east and started toward Murvaux. It did not proceed far however, as it was stopped about a kilometer east of Dun, by heavy machine gun fire, and was forced to dig in.

The battalion of the Sixtieth, which had driven the enemy eastward over Hill 260, remained in position on the hill throughout the day. It was joined in that position in the late afternoon by another battalion of the regiment.

One battalion of the Sixty-first attacked and took Hill 292, while another battalion of the regiment, passing to the west of the hill advanced on Dun and took the town about noon. After Dun was taken the Sixty-first continued its advance in a northeasterly direction across the wide, flat river bottom toward Milly. This advance was opposed by artillery and machine guns on Cote St. Germain and the hills to the east, but was continued, and before night Milly was taken.

The end of the first days fighting across the Meuse found the banks and the first series of heights secure to our troops from north of Dun to just above Vilosnes.

During the night of the 5th of November a heavy pontoon bridge, capable of supporting trucks and heavy artillery, was thrown across the river at Dun and by daylight was open for traffic.

At eight o'clock the following morning the attack was resumed. The direction of attack was northeast and the mission was to clear all the heights in the sector. The division was "going it alone", for the French on the right and the Ninetieth Division on the left, had not yet crossed the river. The one Hundred and Twenty-eight Infantry, of the Thirty-second Division, had been attached to the Fifth Division the night before. It was used to protect the right flank.

The Sixth Infantry, with the Liny-Vilosnes Road as the line of departure, attacked toward the Bois-de-Sartelle. In this attack, made by the First Battalion, excellent use of marching fire was made. This marching fire is not fire from the hip or fire executed while the firer advances, as many people erroneously believe, but is a method of fire in which the riflemen, after each round, takes about twenty steps forward, stops, aims, and fires. The attack progressed favorably and by noon, Bois-de-Sartelle and Hill 284 were taken. The battalion stopped on Hill 284 to reorganize, and a passage of lines was executed by the One Hundred and Twenty-eighth Infantry.

Vilosnes and the high ground to the east of it was a menace to the division, as it was strongly organized by the enemy which was opposing the French on the west of the Meuse. The Sixth therefore sent a detachment to the south to drive the enemy out of Vilosnes. Approaching the town from the northeast the detachment took the Germans in the rear and captured them. The French were now able to cross and Vilosnes was occupied.

The One Hundred and Twenty-eighth Infantry, which had passed through the Sixth at noon, encountered resistance from the north and the woods in the front. It made very slow progress until the advance of the Eleventh on the left drove the enemy from the woods. They were then able to advance through Bois-de-Sivry and before dark reached Hill 358.

On the left of the Sixth the Eleventh advanced on a three kilometer front with three battalions in the line. The line of departure was the Bois-de-Dun and the Bois-de-Chenois. This advance swept eastward, overcoming artillery and machine gun resistance and by night was on a line through Bois-de-Corrol and Bois-de-Fontaines. Though this regiment with a very wide front made exceptional gains, the resistance it was forced to overcome was by no means faint, as is shown by the fact that on this day it alone captured three six-inch guns, six seventy-sevens and over a hundred machine guns.

In the left part of the division sector the Sixtieth and Sixty-first attacked, each with one battalion in the line. The Sixtieth advanced toward Murvaux and the Sixty-first toward Lion. These regiments were to make a concerted attack on Cote St. Germain, which lies between the two towns. Aided by the direct overhead fire of machine guns, placed in Milly and on the heights east of Dun, these regiments advanced over the open plain to assault the hill. They were met by heavy machine gun and artillery fire, but continued forward, the Sixtieth Infantry advancing from the south and the Sixty-first from the west. This hill was well organized and was an extremely strong position. It would have probably held out for a considerable time had there not occurred one of those peculiar incidents which sometimes take place in battle.

A combat patrol of Company "B", Sixty-first Infantry lost its direction in the fog and ended up at the Camp des Romains at the extreme northern end of the hill. This seeming encircling movement caused consternation among the enemy, which withdrew to the north and permitted our assaulting troops to advance. The patrol was captured, but the assaulting battalions now had a foothold on the hill. They were unable to advance, however, past the narrow neck of the ridge where they were forced to dig in.

While the battalion of the Sixty-first was making its attack on Cote St. Germain one of its companies attacked toward Lion. Soon after this attack started the advance was stopped by light machine gun fire from Lion. This town was apparently held by a company of Infantry. While the attacking troops and machine guns from the vicinity of Milly poured in a heavy fire a rifle section was worked around to the right rear of the enemy and caused them to withdraw. This encircling movement by the section was made in rushes of about twenty-five yards over flat terrain.

A wounded prisoner later stated that the Germans were unable to stop the section because the men rose and moved so rapidly it was impossible to aim and fire.

After Lion was taken it was heavily shelled by the enemy. This caused the company which had captured it to withdraw to the edge of the town where it dug in for the night.

During the afternoon German aviators gave a great deal of trouble in attempting to bomb the heavy bridge across the river and in machine gunning the traffic on the roads. It was finally necessary to send the Divisional Machine Gun Battalion to Doulecon for anti-aircraft protection.

The task of clearing the heights continued on the 7th of November. The Sixth Infantry remained in reserve consolidating its position in the right rear of the division. The One Hundred and Twenty-eighth, which was opposed by fresh troops that had been brought up to stem the rush of the Americans, was able to advance about a kilometer when the machine gun resistance became so great that further advance could not be made and the regiment dug in. On its left the Eleventh, still on a perilously extended front fought through the southern edge of the Bois de Brandeville and the Bois du Corrol. When the northern edge of the Bois du Corrol was reached the battalions were reorganized and the attack continued, the left battalion attacking La Sentinelle. This battalion was unable to advance further than the ravine in front of La Sentinelle during the day. When night fell another battalion was moved up on the right for the attack the following morning.

The Sixtieth Infantry advanced up the valley southeast of Cote St. Germain driving the Germans into the Wœvre Forest.

The Sixty-first Infantry on Cote St. Germain attacked in a northeasterly direction. The enemy was driven off of the hill and it was organized for the defense of the front and left flank of the division.

On November 8th the Tenth Brigade completed its task of conquering the heights. The Sixth Infantry, covered by artillery moved forward on the right flank and took hills 388 and 378 overlooking Brandeville and organized the captured ground. The One Hundred and Twenty-eighth pushing forward on the left of the Sixth met heavy resistance on the heights west of Brandeville. This was overcome and the town occupied. The regiment then reverted to the reserve and the Sixth took over its part of the line.

The two battalions of the Eleventh Infantry which were facing La Sentinelle attacked straight forward. Machine guns which had been placed in the Bois du Corrol delivered overhead fire across the ravine onto the western slope of La Sentinelle. The Germans placed most of their strength against the right battalion and the left battalion covered by machine gun fire pushed across the ravine and took the height. The enemy resistance now slackened and while the left battalion pushed forward the right battalion swung to the south and connected with the Sixth Infantry on the eastern edge of the heights.

The Ninth Brigade spent this day in organizing its sector, extending its line to the river, and in sending patrols out on the left flank and into the Wœvre Forest. The patrols on the left established liaison with the Ninetieth Division, which had not yet crossed the river.

Reconnaissance on November 9th established the fact that the enemy on the right had withdrawn. Pursuit in the zone of action of the Tenth Brigade was immediately ordered. The Eleventh Infantry led the advance with the Sixth in support. The One Hundred and Twenty-eighth was ordered to rejoin its own division which was then relieving the French on the right.

Advancing rapidly the Eleventh encountered the rear guard of the enemy near the Bois de Moncel. About dark this was forced across the Loison River and Remoiville and Louppy were taken. The rear battalion of the Eleventh, swinging to the right at the road junction in the Bois de Remoiville proceeded toward Jametz. At about midnight, after forcing a crossing of the Loison in the face of resistance the town was taken.

In the Ninth Brigade sector the Sixty-first Infantry had been ordered to send a detachment from Milly northward along the Meuse to capture Mouzay and establish a bridge head for the Ninetieth Division. At daybreak two companies supported by a platoon of machine guns proceeded on this mission. No serious resistance was encountered until Chateau Charmois was reached. At this point the enemy resisted, but after a sharp fight was driven out and the advance continued. At Mouzay, the German position, which was

organized to prevent the crossing of the river and canal was taken in the flank and rear and the town was taken. The remainder of the battalion was sent to Mouzay at dusk and the town was organized to defend the bridge.

On the night of the 9th of November both regiments of the Ninth Brigade were directed to push forward through the Wœvre Forest. This forest proved to be a jungle of trees, heavy underbrush and swamps with all trails knee deep in mud.

The Sixtieth Infantry started forward about midnight. Throwing out a small advance guard, the entire regiment advanced in single file as fast as the muddy road would permit. At 8:00 A. M., November 10th the Sixtieth was at the junction of the forest road and the northern road through the woods. Patrols were sent to the right and left to establish liaison with the Eleventh and Sixty-first, but without result. The advance was continued until about noon, when at the edge of the clearing in the northeastern edge of the woods just west of Juvigny enemy resistance, probably on outguard, was encountered. A strong attack drove the Germans from the forest, but was unsuccessful in reaching the high ground in the vicinity of Juvigny it was necessary to pull back to the edge of the woods and dig in for the night.

On the left the Sixty-first had swung eastward from the Chateau Charmois toward Juvigny. On approaching the hills probably a quarter of the way from Chateau Charmois to Juvigny the advance troops were forced to halt by a murderous machine gun fire from the left front. At daylight the attempt to advance was continued and was successful after one battalion had deployed on the left, facing north on a line running east and west. With this protection the rest of the regiment was able to push on over the hills to the east. By night the line ran along the eastern edge of the Wœvre Forest, connecting up with the Sixtieth Infantry on the right.

The Tenth Brigade had made no attempt to advance during the day. A battalion of the Sixth had relieved the Eleventh in Jametz and was organizing the right of the sector while the Eleventh organized Remoiville and Louppy. Patrols sent out from each regiment found the Germans well organized north of the Loison.

November 11th found the Fifth Division in position along the line Jametz-Remoiville-Louppy and the eastern edge of the Wœvre Forest prepared to push forward toward Montmedy and Longuyon. This contemplated movement was never made for the Armistice was granted that morning.

ANALYSIS AND CRITICISM.

This was a highly successful operation, hence any criticism must necessarily be weak, for no one can say that it would have certainly been successful had it been conducted differently. However, during the study of the operation, certain features have impressed themselves on the mind.

It is difficult to understand just why higher command decided to attempt the crossing in this sector. For miles down the river from Dun and up the river from Vilosnes the eastern bank of the river is fairly open while between these two towns the terrain is excellent for defense, being covered with rugged hills and woods. It would seem that many lives would have been saved had the attempt been made in the French sector or that of the Ninetieth Division.

The general plan of the division was a good one. It delayed in attempting the crossing until its troops occupied all the high ground in the sector west of the Meuse. It planned to send over small detachments in several places and then to rush the rest of the division over protected by their fire. It planned to use its entire artillery supplemented by the borrowed artillery of the Ninetieth Division, to search out the enemy artillery and machine guns on the heights and to pin the enemy on the eastern bank to the ground. That this was not entirely successful, was due to the excellent defensive terrain rather than to lack of efficiency on the part of the artillery.

The technique of the crossing was not of the best. Probably no officer or man directly interested in the crossing had ever had one minute of training in the technique of river crossings. There was no time to take the men to the rear areas and train them as the Germans were able to do on the Marne. It was necessary to make the crossing at once, consequently methods of crossing had to be improvised.

When the Ninth Brigade committed two battalions to the crossing in broad daylight, it invited failure. It is true that all day the enemy had been baited with patrols and had refused to give its position away. However, it is not believed that the failure of the Germans to reply to fire during the day was sufficient evidence that they had withdrawn from the heights. The brigade could easily have delayed until darkness when it might have crossed with very few casualties.

The plan of the brigade to alternate battalions of each of its regiments in the crossing, and that of the Colonel of the Sixty-first, who was in direct control of the crossing to alternate the companies of these battalions caused confusion. It would seem that had the brigade followed the plan of the Tenth Brigade and crossed one regiment to cover the crossing of the other units it would have remained intact and no confusion would have resulted.

After the river was crossed, a regiment of artillery was attached to each brigade, and acted directly under the orders of the Brigade Commander. This disposition was sound, as it saved much time in getting fire put down when needed by any unit.

At the beginning of the operation an accompanying gun was attached to each infantry battalion. If the accompanying gun, as now used by us, is feasible this was an ideal operation for it, for the battalions, after they had crossed the river, were acting more or less alone. They were opposed by machine gun nests, minenwerfers, and single artillery pieces. The success of those guns was mediocre. Their horses were killed early in the action and they were left behind. Many of the battalions never saw their attached guns. This disposition decreased the fire power of the artillery by twelve guns or just one battalion of seventy-fives.

The machine guns were used correctly, though as was universal throughout the war, they probably did not fire enough. On account of the rugged ground direct overhead fire was practicable and it was used at every opportunity.

Attempts were made to use the light mortar, but the weight and bulk of the ammunition rendered it practically impossible to have the mortars deliver fire when it was needed.

The 37 mm guns were used, but with what success is unknown. They fired at vicinities suspected of containing machine guns, and as their range of burst is small, they probably accomplished little. German machine guns were always well concealed and were seldom seen at a distance greater than two hundred yards. When they were seen there was no time to wait on the 37 mm guns and they were knocked out by our machine gun and rifle fire.

The German failure to prevent the crossing cannot be explained. To a person standing on the heights in the vicinity of Dun it is hard to realize that troops could have forced a crossing at this point. It can only be attributed to the low morale of the Germans and the high morale of the Americans. However, after the river was forced the rear guard action of the Germans reflected credit on their wonderful army. Their method of using material such as machine guns and artillery, and in sacrificing it when necessary, in order to save the personnel is worthy of imitation. Every bit of ground they gave up was paid for in the lives of the attacking troops.

LESSONS.

There are many lessons to be drawn from this operation, but only the most important will be touched on here.

Technique of river crossings has always been ignored in our service. It is believed that all schedules of instruction should include sufficient time for thorough instruction in this very important phase of military operations. It is one of the most difficult operations in warfare, and there is seldom time to rehearse for it, as the Germans were able to do in some of their operations.

Lack of enemy fire does not necessarily signify that he has withdrawn. Before committing a large unit, in an exposed position, small units should thoroughly patrol all ground suspected of concealing the enemy.

The often repeated statement that the morale is to the physical as three is to one, is clearly vindicated in this case. The Germans, who were probably the best machine gunners on the face of the earth, held a seemingly impregnable position strongly organized with machine guns and artillery, but this position was forced in two days by the Americans. This was due, probably entirely, to morale.

In increasing the morale of a unit the personality of the commanders should be taken into consideration. Troop commanders from the platoon leader to the army commander should be a picked leader of men. Probably no organization ever reflected its commander more than did the Fifth Division during the third phase of the Meuse-Argonne. This division which two weeks before had been repulsed and practically shattered, had fifteen days later, after the change of commanders, executed an operation which in the words of the Corps Commander, "Turned the flank and caused the withdrawal of the German Army", and in the words of the Commander-in-Chief "was one of the most brilliant operations of the American Army in France".

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THE OPERATIONS OF THE 28TH U. S. INFANTRY, FIRST DIVISION,
FROM NOVEMBER 5TH TO NOVEMBER 11TH, 1918.

By

Captain William G. Livesay, Infantry.

NARRATIVE OF THE OPERATION.

On the 26th of September, 1918, the First American Army began its attack on the Meuse-Argonne front. The object of the operation was to break the main line of the Sedan-Mezieres railroad. This was a four track line and served as the main artery of supply for the German forces on the major part of the western front; it was also very important to the Germans for rapid strategical movements of troops.

The First Division which had been engaged in the line during the first part of October was again called into service as Corps Reserve of the Fifth Corps on November 1st. During the period that the Division was in reserve the advance of the assaulting troops was so rapid that the Division experienced great difficulty in keeping within supporting distance. The congested condition of the roads made it necessary that many of the marches be made across fields. The troops were therefore worn and tired when on November the 5th, the Division received orders from the 5th Corps to relieve the 80th Division of the First Corps along the Stonne-Beaumont road and to attack in the direction of Mouzon at 8:30 A. M. November 6th.

The 28th Infantry formed one of the regiments of the 2nd Brigade, 1st Division; the 26th Infantry formed the other regiment. During actual operations companies C and D, of the 3rd Machine Gun Battalion, were attached to the 2nd and 3rd Battalions, respectively, of the 28th Infantry, and the Regimental Machine Gun Company was attached to the 1st Battalion, thereby giving one machine gun company to each battalion.

On November 5th, the 28th Infantry, less Company E, was bivouacked in the southeastern edge of the Bois de la Folie, about three miles east of Buzancy. For protection from enemy air observation all units were under cover in the woods. Co. E, detached from the regiment on November 4th for duty at Brigade Headquarters, was bivouacked at Fosse.

About 2:30 P. M. November 5th the regiment received a warning notice stating that the Division would relieve the 80th Division in line that night, and that orders for the movement would be issued later. Accordingly, arrangements were made for the movement: troops were given a hot meal, packs were made up, and a tentative march order issued designating the order of march of the regiment. The Field and Combat Trains were ordered to remain in the Bois de la Folie during the night and move forward the next day. By 4:30 P. M. all arrangements were complete; the regiment was in readiness and awaiting receipt of the order giving the route of march.

At 5:00 P. M. the order, in the form of a written message, was received. The command was to march at once to the vicinity of Beaumont via Nouart-La Forge Farm- Beaumont. The Regimental Commander was directed to report to the Brigade Commander at La Forge Farm, as the regiment passed that place, for orders as to the exact destination and mission of the regiment. On receipt of the order the regiment was put in motion in a very few moments. No reconnaissance of routes was made.

The march proved to be exceedingly difficult. It had been raining for several days and the roads were very muddy and slippery. Difficulty was encountered in Nouart and some time was lost, owing to the narrow streets and the congestion of traffic, which was caused by units of the 2nd Division and the 80th Division also passing through the town. After Nouart was cleared the roads for some distance were fairly good and the traffic was not heavy. As the regiment neared La Forge Farm, however, the road again become congested with artillery and ammunition trains. It lead through thick woods and over low marshy ground. The shelling in this area had been particularly violent and the roadbed was filled with shell holes and fallen trees; in some places it hardly resembled a road. The soil was a clay formation and it had been churned to a mire; in many places the mud reached half way to the knees. The fields and ditches bordering the road were filled with water. The night was unusually dark, and when the woods were entered it was impossible to see more than a few feet. When the regiment entered the woods north of Nouart it was marching in the area of hostile shelling, but owing to the darkness of the night and the difficulty in keeping contact, the column of squads was maintained with practically no distance between units. Contact between units was

maintained by connecting files marching so close together that in reality they formed a column marching in single file. An effort was made to maintain the column of squads, but owing to the condition of the road the column automatically formed a column of twos in many places. It can easily be seen that the road space occupied by the regiment varied constantly, and at times stretched out almost indefinitely. Many halts were necessary on account of the congested traffic and for the column to close up. Therefore, the rest periods were few and a comparatively steady rate of march was maintained. The average rate of march was about one and one-third miles per hour.

When the regiment reached La Forge Farm orders were received to the effect that the 1st Division would attack in the direction of Mouzon on the morning of the 6th of November, the 2nd Brigade on the right, with the 28th Infantry in the assault echelon and the 28th Infantry in brigade reserve. The 28th Infantry was to occupy a position in the woods two miles west of Beaumont and south of the Beaumont-Stonne road. (See general map, Plate 1).

As the head of the column neared Beaumont it was found that a bridge in Beaumont over which the column would have to pass had been destroyed and that the exits of the village were being shelled by guns in position on the heights across the Meuse. It was evident that it would be difficult to get across the stream, and impossible to pass through the town without casualties. The column was halted with its head near Muasote Farm, about one mile south of Beaumont. Enemy observation from the line of hills across the river prohibited an exposed light to study the map. However, by sitting down and placing the map and a candle between the knees and then wrapping a blanket closely around (forming a tent of the blanket), it was possible to study the map at length without exposing a light and inviting enemy shell fire.

The map revealed that by marching across country in a northwesterly direction for two miles the regiment would reach the position prescribed. The Regimental Commander thus had two lines of action open to him. He could continue following the prescribed road and reach his position with practically no difficulty other than that to be encountered in passing through the village. Or, he could march across country and avoid the shell fire in the town. The main disadvantage of the second plan was that the movement of the column would be slower and marching much more difficult. However, as there was sufficient time, the second plan was adopted. Accordingly, a compass bearing was taken, and as a check on the distance, the map showed three unimproved roads running directly across the line of march. After the third road was crossed the regiment would be near its destination. The darkness of the night made it impossible to point out land marks to march on, so the compass bearing was given to each battalion commander in case the column became broken. The regiment left the road and started the march, following the compass bearing. The fields over which the column passed were wet and soggy; they had not been cultivated for some time and were filled with a small growth of weeds and brush; in addition to this, there were numerous ditches and shell holes to stumble into. Two or three wire fences had to be cut before the column could progress. After the regiment had marched about one mile dawn began to approach and visibility became better. The bodies of many dead Germans were found in the fields, mute evidence of the fierce struggle the day before. The enemy was shelling the area through which the column was passing at this time, and the distances between units were extended. However, only two men and one machine gun mule were killed while passing through the field.

At last the third road was reached and the Regimental Commander thought he should be very near the designated position. Dawn was breaking and ground forms were visible for some distance. The column was halted for a rest and a study of the map and terrain was made. They did not check, and it was impossible to determine the exact location of the column. As is always the case when you are in doubt as to your exact location, things become all the more indistinct and doubtful. A possibility presented itself of the wrong azimuth having been taken, resulting in the column marching in the wrong direction. The Colonel decided that the best thing to do was to halt in the present location until oriented. Accordingly, one of the officers of the regimental staff was sent to follow the road in the direction of Beaumont. He was unable to orient himself until he had almost reached the edge of the town. It was discovered that instead of the three roads shown on the map, there were four, a new one having been made by the Germans in taking supplies to the front. The regiment was marching in the right direction and had only a short distance further to go

before reaching the designated position. By the time the officer rejoined the column with the information gained it was daylight. Directly in the line of march was a large open hill under observation from the heights across the Meuse. It was possible to avoid this hill only by going some distance out of the way. However, as the hill was not being shelled at this time, and as it was nearing the hour for the regiment to be in position, it was decided to cross directly over the hill. In order to save time, it was decided to maintain the same formation with increased distance between platoons until compelled to extend.

The hill was crossed in column of squads with about 50 paces between platoons and 100 paces between companies. Strange to say, not a shell was fired at the column, and so far as it was possible to tell, the movement was not observed.

The march was continued and the approximate position of the regiment was reached at 7:00 A. M. The battalions took cover in the woods and a staff officer was dispatched to locate the command post of the 26th Infantry. Following a trail running due north through the woods for about 600 yards, he ran directly into the command post of that regiment. He reported to the Brigade Commander by the telephone at the 26th Infantry command post, that the regiment was in position.

The regiment had marched a total of 19 miles, 17 miles of which was over a very muddy and congested road through the pitch dark night, and the other two miles across country by compass bearing, and had arrived in position at the hour designated.

The Day of November 6th—The 26th Infantry advanced from a line of departure along the Beaumont Stonne road with two battalions in the assault and one in regimental reserve. It advanced to its objective, meeting very little resistance. By noon the two battalions were established on a defensive position in the woods west and south of Villemonty, with patrols exploiting the front. These patrols entered Mouzon and Villemonty on the banks of the Meuse. The 28th Infantry was not called on for any special mission, and remained in the woods west of Beaumont throughout the day as Brigade reserve. Brigade Headquarters was established at La Thibaudme farm during the morning.

Company E, 28th Infantry, which had been detached from the regiment at Bois de la Folie, left Fosse at 3:00 A. M., 6th November, and arrived in the woods west of Beaumont and joined its battalion about 3:00 P. M. that day.

Wire communication was established with the 26th Infantry soon after arrival in position, and arrangements were made to connect with the brigade through the 26th Infantry switchboard. When the command post of the 26th Infantry moved forward the 28th Infantry communications platoon took over the switchboard already established, transferring equipment to save trouble.

It rained at frequent intervals throughout the day, and by 3:00 P. M. it had developed into a slow, steady drizzle. Orders were sent to the field train to move forward to the woods south of Beaumont and send food on carts to the location of the regiment. On account of the condition of the roads it was thought that it would not be possible to get the ration carts forward very early that night. However, as a further advance was not expected, the 37mm and machine gun carts were sent to meet the ration carts to expedite the delivery of food forward to the troops. The men and officers arranged their bivouacs for the night, obtaining such shelter as was possible from the rain. A bed of leaves, even though wet, when heated by the warmth of the body makes a very comfortable place to rest and sleep, in time of war. Fires, of course, were prohibited throughout the advanced area, as at night any light would draw shell fire. The regimental command post was established at the base of a large tree, and after considerable trouble a place was arranged for the commander, and one or two of his staff officers, to have a light after nightfall to study any orders that might be received.

The regiment did not get to stay in its bivouac that night, for about 4:00 P. M., when they had just settled down for the night, a telephonic order came from the Brigade Commander. It was, in effect, as follows: "The Brigade is going on a long night march. March at once on the Beaumont-Stonne road towards Stonne. Report in person to me at the cross-roads at La Bagnell for orders. The 26th Infantry will be withdrawn and will follow you in column". The Brigade Commander was informed that the food for the regiment was within a very short distance at that time, and it was suggested that the men be fed before marching. The reply was, "March at once; disregard the food". So, when the ration carts arrived they

found only a man waiting to tell them that the regiment had moved on and it would be impossible to reach them with food that night.

The regiment was marching in a very few moments, marching without the expected cooked food, marching they knew not where. The 37mm and machine gun carts sent for food had not yet returned, so these weapons had to be carried by hand. The carts did not rejoin the regiment that night. The Colonel, accompanied by the Lieutenant Colonel of the regiment and two mounted orderlies, rode forward at once and reported to the Brigade Commander as directed.

La Bagnell was an old tavern situated at the crossroads about four and one-half miles west of Beaumont. In the center of the crossroads, in front of the building, a huge mine had been exploded, making a hole about thirty or forty feet across and half as many feet deep. The building was an old stone structure and was partially destroyed by the explosion of the mine. It made a suitable place for the Brigade Commander to issue his orders, as it was possible to have a light in the building.

The situation as explained by the Brigade Commander was, in effect, as follows: The Corps Commander had directed the Division to march on Sedan to assist in capturing that city the following morning. The plan of the Division Commander was to march on a wide front, arrive on the hills southwest of the city, and attack at daylight.

The Division order directed the march to be made in five columns as follows, from east to west: "Column one: 1st Battalion, 16th Infantry, by the road Autrecourt-Remilly-Wadelincourt. Column two: 16th Infantry (less one battalion) and Company A, 1st Engineers, by the road Pourron-Autrecourt-Raucourt-Haracourt-Thelonne-Noyers. Column three: 18th Infantry (less one battalion) by the road Pourron-Autrecourt-Raucourt-Maisoncelle-Bulson-Chaumont, thence north. Column four: 28th Infantry and Company D, 1st Engineers, by the road Stonne-Chemery-Chehery-Frenois. Column five: 26th Infantry, by the road Stonne-Chemery-Omicourt-Hannagne-St. Martin.

The 6th Field Artillery was ordered to follow the 18th Infantry; the 7th Field Artillery to follow the 28th Infantry; a battalion of the 5th Field Artillery to follow each of the columns 2, 3, and 4". No provision was made for contact between columns; they were to meet on the position southwest of Sedan.

Neither the exact location of the enemy, nor that of our own troops in the line of march was definitely known, but our own front line was believed to be generally about three miles north of the Beaumont-Stonne road. The plan of the Brigade Commander was to pass through the enemy line, marching in column of route with an advance guard, pushing through resistance with as little extension as possible, with the object of deploying on the heights about one mile southwest of Sedan and attacking that city at daybreak.

After the regimental commander received his orders he dispatched a messenger to the regimental operations officer with directions to report to him at the farm. When this officer arrived, the Colonel explained the situation and mission of the regiment and gave him instructions as follows: "The 3rd Battalion will form the advance guard for the regiment; the 1st and 2nd Battalions will form the main body. You will accompany the point of the advance guard, and see that the column follows the roads indicated. While the column is marching to this point make a very careful study of the map and fix it thoroughly in your mind, as all maps, orders, messages, etc. must be destroyed at this point. The regiment has 14 miles to march before dawn, and you will be responsible for the right roads being followed".

When the regiment arrived at the crossroad at about 8:00 P. M., the battalion commanders were assembled in the building, and orders based upon the above plan were issued. Immediately after the Colonel had issued his order, the battalion commander, 3rd Battalion, assembled his officers at the head of the column and issued his advance guard order. It was a very complete order, following the form of the five paragraph order prescribed in Field Service Regulations, and provided for a support and reserve. Company K formed the support. Owing to the unusual situation, the battalion commander issued the order in more detail than is usual with the ordinary advance guard order. He prescribed that the point should consist of one squad with two automatic riflemen attached. This gave the point three automatic rifles; the regiment was equipped with the French Chauchat rifle, and the regular organization gave one to each squad. The advance party (one platoon, less one squad) was to follow the point at about 100 yards. The support (one

company, less one platoon) was to follow at about 200 yards; the reserve to follow at about 300 yards. Double connecting files were provided between units, to march at about ten pace intervals. The main body was directed to follow the advance guard at about 300 yards. The advance guard formation was to be taken up at Stonne. It took about thirty minutes for the battalion commander to issue his orders and get the command in readiness to march.

The regimental commander, realizing the almost superhuman effort it would require to get the regiment into position, gave orders to the battalion commanders to inform, not only all officers but, as far as possible, all the enlisted men of the nature and object of the operation, and the effect it would have on the German Army if successful. The regimental commander rode along the column and told many of the men the object of the operation. It is believed that this materially helped the morale of the men.

The road to Stonne was a hard surface road, and was in good condition except for occasional shell and mine craters. The traffic was light. After leaving the main road, however, difficulties were encountered. The roads made of dirt, and were muddy and filled with water. The men were already worn physically and mentally; they were hungry; their rain-soaked packs began to feel unbearable on their backs, many of which were discarded by the roadside. The Headquarters Company threw away all their equipment except one 37mm gun. The entire company carried this gun; it was carried by two men at the head of the company until they became exhausted; it was then passed on to the next two men in rear and so on through the company until it reached the end, when it was again started at the head of the company. The machine gun companies carried their equipment in a similar manner. The men marched as in a dream and the instant the column halted they sank down in the mud and were instantly asleep.

Two bridges had been destroyed by mines, and this materially delayed the progress of march. At one of these bridges the entire regiment crossed the stream in single file over a narrow foot log. At the other it was possible to march in column of twos. A short distance north of Artaise the regiment halted for almost an hour waiting for the 26th Infantry to join the column.

When the point of the advance guard started down the long slope leading to the valley in which Chemery is located, a light was observed in the town and noise of considerable movement was heard. The point became tense, expecting to be challenged at any moment. The men looked over their rifles and adjusted their equipment for instant action; word was passed back that they were nearing what was thought to be the enemy position. The men had been fighting the mud in the road, their packs on their backs, and many intangible things that it would do no good to curse, but out there a short way was something upon which they could wreak their vengeance—something that would afford them the satisfaction of striking back. Unconsciously the pace was quickened; they were eager to close with the enemy. It is difficult to say whether it occasioned a sense of relief or disappointment when it was discovered that the lights and noises were made by units of the 42nd Division. The 28th Infantry column was marching west through Chemery and a column of artillery and ammunition trains of the 42nd Division was marching north through the town. Considerable difficulty was encountered in passing the columns through one another. An officer was stationed at the street intersection to supervise the crossing, but no systematic arrangement was worked out, the foot troops of the 28th Infantry filtering through as they could. At the northwestern exit of the village the road led up a very steep hill, at the foot of which a mine had been exploded, completely destroying the road. This necessitated leaving the road and finding a path around through the buildings. The advance guard passed about two miles beyond the town and halted for almost an hour to allow the rear elements of the column to close up. By the time the column cleared the town and was again on the march it was early in the morning of the 7th. The advance guard formation was maintained. Occasional bursts of rifle and machine gun fire could be heard in the front and directly on both flanks. From this it was known that at last the enemy positions were not far away.

At 7:00 A. M. the advance party emerged from the woods south of Chehery. Before it lay a long, comparatively narrow valley resembling a huge arena. The ground descended gradually from the edge of the woods to Chehery at the floor of the valley; the level ground was about 1,500 yards wide and extended north from Chehery about two miles to the village of Chevenges. North of Chevenges the ground ascended gradually to the heights overlooking Sedan, the city made famous in 1870. Except for the narrow passes at the en-

trance and exit of the stream which flowed north generally along the western edge, the valley was completely surrounded by wooded hills rising about 100 feet over the level of the stream. The Bois de la Marfee covered the hill at the northeastern end and furnished an excellent position for machine guns. The road ran generally along the center and was bordered on each side by rows of small trees. The valley was fertile and intensely cultivated. A number of the inhabitants were still in the villages and had placed white flags on the house-tops as a request that the troops not fire into the towns. These flags were respected by the Americans but not by the Germans.

When the advance party emerged from the woods it was fired upon by long range machine gun fire from the high ground east of Chehery and from a position near Chevenges. The advance halted just within the edge of the wood and the Regimental Commander, who was with the advance guard commander at this time, issued his order for the attack. The 3rd Battalion was ordered to attack with 2 companies in the assault echelon and two companies in support; the 2nd Battalion was to remain in reserve in the woods south of Chehery until ordered forward. The formation of the Battalion was: Companies I and K, from right to left, in the assault; L and M, from right to left, in support. The artillery was far in the rear and did not reach the area until about noon, and no artillery support was obtained. The rifle and the machine gun were the only infantry weapons employed in the attack. No tanks or chemical warfare troops supported the regiment.

The approach march was taken up and the advance elements of the battalion reached Chehery at 7:40 A. M. Company I advanced through the open fields on the right of the road in two lines, two platoons in the first line and two platoons in the second line, both lines in squad column. Company K advanced in column of platoons near the stream west of the road to within a very short distance of Chevenges before extending. The company commander preceded the company by 50 to 100 yards, locating the defilade areas through which the company could advance without being fired on. Thus he facilitated control and the rapid advance of his company. The support companies followed at about 400 yards. Company L sent out one section as a combat patrol to advance along the eastern edge of the valley, to cover the right of the battalion. This patrol was not aggressive and did not advance promptly enough to be of much value.

The battalion deployed about 400 yards south of Chevenges. The companies deployed with two platoons in the assault echelon and two in the support echelon, both echelons in two waves with about 50 yards between waves. For some reason which has not been determined, the advance halted soon after the deployment was made. Company I on the right apparently halted because Company K had halted. The company commander of Company K stated that he halted on orders from the battalion commander sent through the battalion adjutant, but this is believed to be erroneous. The halt, even though for a short space of time, gave the Germans an opportunity to send forward additional machine guns to strengthen their lines, which they promptly did. The action of the battalion was observed by the regimental commander and the Second-in-command was sent forward to start the battalion moving. The advance was resumed by the arm signal "forward" given by the battalion commander. No scouts were sent out in front of the companies as the location of the enemy was known; they could be clearly seen moving about their position.

Units of the 166th Infantry, 42nd Division, were found in Chevenges and dug in along the road running southeast. They were not advancing, and the 3rd Battalion passed through them. Company I encountered resistance from Hill 307 and Bois de la Marfee from the moment the advance was resumed. Company K on the left advanced under cover of Chevenges and did not encounter resistance until they emerged from the village. As the company entered the open field north of the town the company commander, who was in advance of his company about 50 yards leading it forward, observed five Germans running forward with a machine gun to a position about 150 yards to his front. It was evidently a detachment consisting of two machine gunners with three ordinary riflemen to protect the machine gun while going into action. The company commander had a corporal and two runners with him at this time. He had to decide upon a plan of action immediately, as it was imperative that the machine gun be destroyed before it opened fire on the company; its fire at that range would be annihilating. The officer, acting on the spur of the moment, directed the men with him to follow, and they started forward to capture the machine gun crew. A rifle duel ensued in which the company commander was severely wounded in the arm, one runner wounded and one runner killed. The machine gun did not go into action, but the command of the company had to be changed. When the line advanced

about 500 yards north of Chevenges it was halted by rifle and machine gun fire from hill 307 and the western edge of the Bois de Marfee. Some fire was received from the left front. Most of the casualties were caused by machine gun fire; some few casualties resulted from artillery fire, although the shelling was not severe. The machine gun emplacements were hidden and very difficult to locate; they were so placed as to enable them to obtain cross fire in their front. The number of casualties was greatly reduced owing to the fact that the height of the enemy position necessitated his using plunging fire.

Company M took cover along the wall of the cemetery east of Chevenges. This wall was enfiladed by machine gun fire. It also furnished an excellent target for artillery, and as a result, Company M suffered many casualties in that position. Company L, on the right, was deployed in an open field and suffered practically no casualties.

The right flank of the battalion was exposed to fire from the edge of the Bois de la Marfee, and the battalion commander ordered one platoon from Company L to attack in that direction to cover the flank of the battalion. The platoon advanced only a short distance before it was pinned to the ground by machine gun fire.

About 11:30 A. M. the regimental commander received orders from the Brigade to halt the advance and organize the ground gained for defense. Division Headquarters had learned that the enemy positions south of the Meuse were strongly fortified with artillery and machine guns, and it was decided not to pass the crests of the hills until night. The orders reached the battalion commander within a very few moments after they were received at the regimental headquarters. Accordingly, the advance was halted and the men began to dig in.

The position in which the battalion halted was exposed and the men suffered severely from machine gun and trench mortar fire coming from the western edge of the Bois de la Marfee and the crest of hill 307. The platoon which had been sent to clear this area had not succeeded. To send a company from the battalion reserve to clear the woods would necessitate withdrawing it some distance to the rear under fire, and then to attack along the edge of the valley. The 1st battalion had been halted in Chehery and upon the recommendation of the Second-in-command, who had been forward with the battalion commander, the Colonel sent Company A around the right to clear the western edge of the woods and cover the right flank of the battalion. The company advanced through the woods, overcoming stubborn resistance, reached its objective and connected with the right of the 3rd battalion. The enemy on hill 307 was then compelled to withdraw, and the line advanced to a position about 800 yards north of Chevenges and organized the position for defense.

The battalion commander had with him only his adjutant and runners from each company and regimental headquarters. During the approach march he advanced along the road abreast of the support platoon of the assault companies; during the attack his position was just in advance of the reserve companies. No difficulty was experienced in communicating with the companies and the regimental commander. Runners and arm signals were the only means of communication used. No elaborate message center was established, nor was one needed. The battalion aid station was established in Chevenges.

The regimental command post was established at the northwest corner of the cemetery at Chehery at about 7:30 A. M. From this point the entire area was in plain view. The actions of the assault battalion could be observed without difficulty. No wire communication was established, runners being the only means of communication. The Brigade Headquarters was in the southern edge of Chehery, as was also the Division Headquarters. The regimental commander was in personal contact with both headquarters. About noon the regimental command post moved back to a building near the center of Chehery. The 1st battalion, with the exception of Company A, did not advance beyond Chehery; the 2nd battalion remained in the initial position. In connection with this battalion it is interesting to note that Company E during the time from 3:00 A. M. November 6th until 9:00 A. M. November 7th, a total of 30 hours, was 28 of these hours actually in march, and during the other two hours was digging in.

The enemy shelled the area constantly during the day; stokes mortar, machine gun and rifle fire was incessant until late in the afternoon. Very effective use of an accompanying gun was made by the enemy. A field piece drawn by six horses came down the main road to within a few hundred yards of the front line

where it went into action and fired about thirty rounds with direct laying on the main street in Chehery. The horses were then hitched and the gun moved away over the hill unharmed. Only one American plane appeared during the day. It flew over the front at a very low altitude and was shot down, falling in the field north of Chehery.

In marching on Sedan the First Division had marched directly across the lines of communication of the 77th and 42nd Divisions. This made the supply of all three divisions difficult. About 3:00 P. M. the Corps Commander, Fifth Corps, who was then at the headquarters of the First Division at Chehery, received a wireless from the Headquarters of the First American Army directing that the First Division be withdrawn south of the line La Besace-Autrecourt. The honor of entering the historic city of Sedan was thus denied the Division. The orders were received by the regiment about 4:00 P. M. It was to assemble and march to the vicinity of La Besace, the movement to be made in two marches, the first march to end at Artaise. It was decided that the battalions would march independently to that place, and accordingly the 2nd and 1st Battalions, less Company A, began the march immediately. The 3rd Battalion and Company A remained in position until dark, at which time units of the 40th French Division marched through our line in column of squads and took up a position on top of the hill, proving that the 28th Infantry had driven the enemy from that position. As soon as the French had passed, the movement of the battalion began. It was assembled south of Chehery and marched from there as a unit. The Regimental Headquarters marched with the 3rd Battalion. Up to this time only one ambulance had been able to make its way forward as far as Chehery and it was therefore impossible to evacuate the wounded before the regiment left the area. The wounded were assembled at a collecting point in the village of Chehery before the regiment left the area and Medical Corps men were left with them to render such aid as was possible until they could be evacuated by the French or the 42nd Division.

The last units of the regiment arrived in the vicinity of Artaise about 11:00 P. M. and bivouacked in an open field north of the town. The rain had continued at intervals throughout the day and at nightfall developed into a steady downpour. The field in which the troops bivouacked was covered with about an inch of water. From the evening of November 5th no food had been available except the supply of reserve rations the men carried; these had been eaten long before this time. Some of the men had eaten raw turnips found in a barn in Chehery in an effort to appease the gnawing hunger; this caused many cases of cramps and the men who had eaten them were in a worse condition than before. Even though the field was covered with water it is needless to say that the men were glad to sink down in the mud and water and snatch a few hours of the much needed rest and sleep.

Orders had been sent about 3:00 P. M. November 7th to the Field Trains and Combat Trains, which had been left in the woods south of Beaumont, to move in the direction of Artaise.

At 6:00 A. M. November 8th, the regiment was again put in motion, marching on La Besace with orders to go into bivouac in the woods just south of that village. The knowledge that they would meet the kitchens sometime that morning increased the morale of the troops and made them more willing to march. The Regimental Supply Officer rode forward during the night of the 7th and found the regiment at Artaise. He returned to the trains, moved them to a position about one mile north of Stonne, established the kitchens in an open field and prepared all the food they could hold at one time.

The regiment arrived at the kitchens about 10:00 A. M. November 8th, and the men were fed a hot meal—the first one since leaving the Bois de la Folie on the evening of November 5th, a total of 66 hours. It is needless to say with what joy the hot and steaming kitchens were greeted. The regiment had marched 33 miles since their last cooked meal, had advanced about two miles in the face of the enemy, and had been under shell fire all the while.

By a series of marches, through mud of varying depth and stickiness, soaked to the skin by steady rain, and utterly worn out, the men of the 28th Infantry moved back from the front. At 11:00 A. M. November 11th, the hour the Armistice went into effect, the regiment was on the march with the head of the column at the road fork about one mile east of Fosse. An officer stood at the roadfork and announced the fact to the companies as they marched by. The announcement caused no demonstration in the ranks, only here and there weak cries of hurrah. That night in Bois de la Folie, the men came to the full realization of the fact

that there would be no more fighting; camp fires could be seen everywhere, the first exposed light at night of any kind the men had seen since landing in France.

ANALYSIS AND CRITICISMS.

Summary;—Between 5:00 P. M. November 5th and 11:00 P. M., November 7th, the regiment had marched or fought without food or sleep, during which time it had covered 33 miles; the operation consisted in a night march to the battle position, a march in pursuit with an advance guard, development, attack, transition from the offensive to the defensive, and a withdrawal.

The operations were made possible by the physical efficiency, the high state of morale, and the fighting spirit of the officers and men of the command. The regiment at last realized the necessity for the long-sustained marches and maneuvers in which it had been trained.

The Operations during the night, 5th—6th, November.—The Operations of the regiment the night of the 5th—6th, November consisted of a night march. The fact that the regiment successfully carried out its mission precludes criticisms of any magnitude. The trains of the regiment might have followed the column on the march and thus been nearer the regiment on the afternoon of the 6th. The disadvantage of this plan was the difficulty in moving the vehicles at night over the congested roads. It is believed that it would have been impossible to get them forward during the night; furthermore, had they been nearer the troops, it would have been of little advantage, as food could not be sent forward before nightfall. By waiting until the 6th the trains were able to move with greater ease and were still in a position to accomplish their mission had the regiment not made the unexpected move. It is believed that this is the reason the Colonel's decision was to move them forward during the day of the 6th.

Sending the 37mm and Machine Gun Carts to the rear.—Sending the 37mm and machine gun carts to the rear for food on the afternoon of the 6th resulted in the men having to carry the guns by hand during the entire night. From this we may draw the conclusion that machine gun carts should not be sent to the rear for food. They may be used to good advantage to carry food forward from their positions but they should not be sent to the rear. If they are sent forward they will still be in the area and possibly nearer their guns than before, and will thus be available to carry their equipment in case of an unexpected move.

Orders Received by the Regiment.—It is hardly within the scope of this monograph to criticise the orders issued by the Higher Command. However, the operation of the 7th illustrates the necessity for a very careful study and calculation being made before orders are issued. The Higher Headquarters should not order units to move from one place to another, unless it is fully realized what the effect of the orders will be to the man who has to carry his equipment and do the actual marching. The First Division was ordered to march directly across the line of advance of two Divisions by roads which their combat trains could not follow. The men had to undergo the hardships of a long night march carrying their equipment through rain and mud. This is the part the Infantryman plays in war, and he does it uncomplainingly; however, he should not be called upon to make unnecessary exertions. To my mind the lack of necessity of the operation on November 7th was proven by the Division being ordered to withdraw before an appreciable advance against the enemy had been made.

The Actions of the Headquarters Company.—I do not believe that any one who has undergone the rigors of a long night march under conditions similar to those encountered in this operation can justly criticise the actions of the Headquarters Company in throwing away their equipment. Men cannot be expected to carry bulky equipment in a war of maneuver where long night marches are made. Such equipment as Stokes Mortars and bulky communication material, while of the utmost value in a stabilized or semi-stabilized warfare, becomes of less value when the Army leaves the trenches and moves forward on a war of maneuver. The present tendency is to increase the equipment of the individual as well as that of the various headquarters. I believe the present equipment prescribed for number three of the rear rank is about one hundred and thirty pounds. How far can a man, who has not eaten for two days, be expected to carry a load of this kind through mud and rain? This leads to the discussion: Is it better for the men to arrive at the jump off line fresh and ready to meet with the enemy, without certain equipment, or is it better for him to reach his position with all the accessories of modern warfare, but in such an exhausted condition that

his aggressive spirit is gone? The actions of this company should be an object lesson and make us endeavor to lessen, rather than increase, the load carried by the men until the time arrives when the Infantry is equipped with something similar to a caterpillar tractor to carry equipment.

The Attack.—The mission of the regiment was to march through the enemy lines and deploy on the heights southwest of Sedan in preparation for an attack at daylight. The difficulties encountered during the night prevented the regiment reaching the position before daylight. The enemy lines were further north than had been expected and were not passed through during the night. The regiment had arrived in front of the heights on which it was to deploy and found the position occupied by the enemy. The question arose, what was to be done? Had the situation changed so as to change the mission? The mission called for the regiment to deploy on the ridge to the front; the fact that the enemy occupied the position did not change the mission. The Regimental Commander decided, therefore, that he would attack and drive the enemy from the hill and deploy as directed. The next question was, how should he attack? The location of the enemy was definitely known and it was reasonable to assume that his line was more or less continuous along the front. Previous actions of the enemy indicated that the line would be lightly held by machine guns and a few rifles. The orders of the Brigade Commander were to reach the position with as little extension as possible. The Regimental Commander did not know what would be required of the regiment after it reached the position. Any unit employed in the attack would be more or less disorganized and would require some time for reorganization before it could continue in pursuit of the enemy. If only one battalion was employed in the attack there would be two battalions remaining to continue the advance while the assault battalion reorganized. Hill 307 north of Chevenges was expected to cause the most difficulty. Bois de la Marfee was a heavy wood and did not offer suitable enemy positions except along the edge. Therefore it was thought unnecessary to attack through these woods. If resistance developed from the positions northwest of the village another battalion could be sent in on that flank later. It is believed that these conditions influenced the commander in attacking with one battalion in the assault echelon.

The next question was, in what formation should the battalion attack? By placing three companies in the assault echelon a wide front could be covered and there would still be one company left for maneuvering. In this method of attack control of the line would be difficult. Hill 307 was the objective of the battalion. With two companies in the assault echelon, after capture of hill 307, the reserve companies could exploit to the right and left and clear the ridge for the deployment of the regiment. These, I believe, were the determining factors in the decision to attack with two companies in the assault and two companies in reserve. No doubt the decision was influenced to a certain extent by the fact that this formation had been generally used in the regiment during previous attacks.

The formation of the companies with two platoons in the assault and two in reserve is primarily designed for attacks of penetration; with three platoons in the assault echelon the company commander would have had too wide a front to control with any degree of success. The platoons were not at full strength; by placing the three platoons with the greatest strength in the assault there would not have been a sufficient maneuvering force in support. For this reason and from the experiences of the past as discussed under the battalion, the companies attacked with two platoons in the assault and two in support.

Actions of the Battalion.—Had the battalion not halted immediately after deployment the capture of hill 307 could have been accomplished with comparative ease. This illustrates that during an engagement there is always more or less confusion, and orders for a halt frequently originate from sources other than the commander. It is believed that the reserve companies followed the assault at too short a distance; had they not been so close, the platoon sent to the right flank could have been maneuvered to better advantage. In this connection, it is believed that a company should have been sent for this work rather than a platoon.

The section sent to the right flank as a combat patrol in the initial stage of the attack was not large enough. Had a platoon or even a company from the reserve battalion been sent, as was done later, it is believed that the advance would have been facilitated.

The actions of the company commander of the left assault company illustrates two points. First, the company commander should not engage in a fire fight so long as he has maneuvering strength left in his company. The machine gun going into place offered an excellent problem for a squad or section leader

and it should have been given to one of these units to perform. The main point this incident brings out, however, is, that it clearly illustrates what can be expected from a corps of insufficiently trained officers. The actions of the company commander are to be commended as it was a very courageous thing to do, and I believe it is exactly what the average American will do on the spur of the moment. The American Officers in the World War certainly cannot be accused of lack of heroism and courage, but the most courageous thing is not always the best thing to further the scheme of the whole operation. And here is the value of the R. O. T. C., The Infantry School, and the correspondence courses sent out from the Infantry School. I venture to say that had this company commander solved several map problems here at the School, or in a correspondence course, which required him to maneuver a portion of his company in order to dislodge a machine gun, the first thought to enter his mind would have been to maneuver his company rather than go himself.

Company M took cover from the enemy fire behind a cemetery wall which was enfiladed by machine gun fire and situated in an area on which the enemy was placing concentrations of artillery fire. This illustrates the fact that men seek cover even though insufficient, in preference to staying out in the open, whereas the latter in many instances is safer.

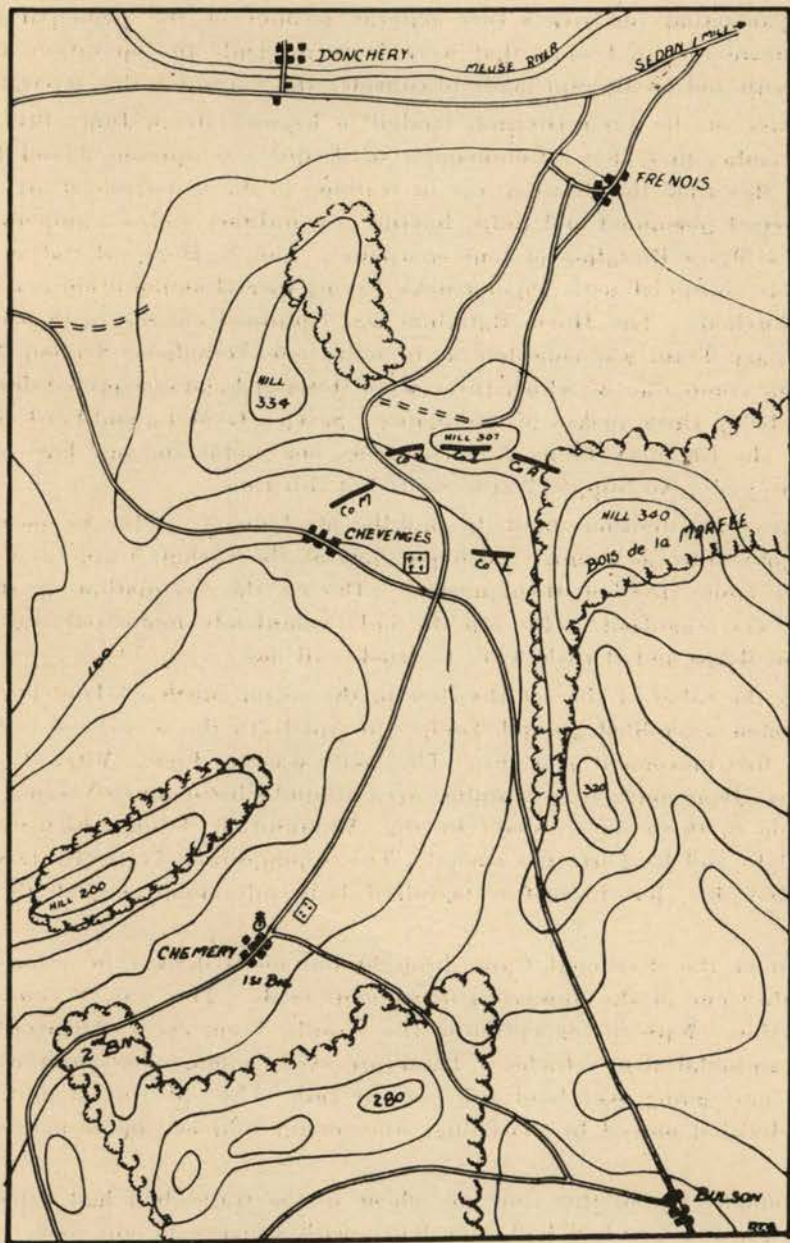
No mechanical means of communication were employed. The commanders of all echelons were well forward where they could observe and control their units. I believe, in open warfare situations where there is not a preponderance of artillery fire, the commanders should not be tied down to a command post but should be well forward where they can have direct personal control over their units.

LESSONS TO BE LEARNED.

1. Troops marching on the road in campaign occupy more roadspace than that prescribed for units under normal conditions.
2. Warning orders are of great value in that they permit troops to be prepared to move on short notice.
3. With the proper use of the compass, no difficulty will be encountered in the maintenance of proper lines of advance.
4. Maps of an area made before the occupation by the enemy cannot be depended upon explicitly.
5. During night marches distances between units of a column must be very short and enough connecting files provided to prevent the column becoming separated.
6. Carts provided for the transportation of certain specified equipment and munitions should not be sent to the rear for food.
7. A responsible officer with a good sense of direction should accompany the advanced element of a column on a night march in order to assure the correct route being taken.
8. Troops cannot be expected to carry bulky or heavy equipment on long marches.
9. Troops deployed and under fire suffer greatly when enfiladed.
10. An assaulting echelon can take care of its front, but its flanks are especially vulnerable to modern firearms. The moral effect of flanking fire is as great as the physical effect. Hence, combat patrols to give warning, or covering detachments to give security, are indispensable on exposed flanks.
11. During the approach march all covered lines of advance are so utilized that only indistinct and fleeting targets are presented to the enemy. The captain precedes his company, moving to points from which he can obtain the best available views and thus anticipate the course of action, without, however, losing control over his company.
12. Reserves are primarily maneuvering bodies whose role is that of outflanking points of resistance developed by the assaulting echelon.
13. The company commander should not engage in the fire fight, so long as he has a maneuvering unit left in his company.
14. Every means must be employed to develop a high standard of physical efficiency, and this standard must be maintained after it has been secured.

15. The rifleman is still capable of advancing under cover of his own firepower.

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28th INFANTRY SOUTHWEST OF SEDAN

SCALE
1:35,550



ORGANIZATION AND OPERATIONS OF THE DIVISION TRAINS,
FIRST DIVISION, FROM DECEMBER, 1917 TO JANUARY, 1919.

By

Captain Ralph E. McLain, Infantry.

A detailed treatment of this subject would require a large volume, therefore it will only be possible to touch briefly on the organization and give a very general account of the principal operations, with only sufficient detail to illustrate certain lessons that were learned. Only the operations under the Commander of Trains will be dealt with and no attempt made to consider the various trains separately.

Although the infantry of the First Division landed in France late in June, 1917, it was not until five months later, about December first, that a Commander of Trains was appointed and Division Trains Headquarters organized. At this time the division was in training in the Gondrecourt area. Train Headquarters was complete as to assigned personnel and units, having two military police companies. The Ammunition Train had all its units, a Motor Battalion of four companies, and a Horse Battalion of three companies. The Motor Battalion was equipped with Quad trucks having special ammunition bodies. It had no baggage trucks and no mobile kitchens. The Horse Battalion was equipped entirely with wagons and had no rolling kitchens. The Sanitary Train was complete as to units, one Ambulance Section and one Field Hospital Section, each having four companies of which three were Motorized and one animal-drawn. The motor equipment was varied, there being three makes of ambulances: Service, G. M. C., and Ford; and an old Packard and White baggage trucks. The Engineer Train of two sections, one motor and one horse-drawn, was completely organized and well equipped. No Supply Train existed at this time.

Upon the movement of the division about the middle of January, 1918, to occupy the sector north of Toul the trains did not move as a unit. Such portions of the various trains as were needed moved individually under orders from Division Headquarters. During the occupation of this sector the Supply Train of six companies was organized. This was the only completely motorized train in the division, and was equipped with 3-ton Riker and British A. E. C. trucks, all new.

On April 4th, 1918, the relief of the 1st Division in the sector north of Toul by the 26th Division was completed and the division assembled around Toul. On April 7th the motorized portions of the divisional trains commenced their first movement as a unit. The route was via Ligny, Vitry, Chalons, Epernay, Montmirail, La Ferte, Meaux, Beaumont, to a training area around Chaumont-en-Vixen. This was a distance of 310 miles and was made in three days, except by the Ammunition Train which required five. Chalons was reached the first night and La Ferte the second. The Ammunition Train, by travelling until midnight, reached Chalons the first day, but thereafter travelled daily only about one-half the distance made by the balance of the trains.

This first operation of the divisional trains brought out more defects in organization, personnel, and equipment than any other one of the numerous movements made. This was, of course, quite natural.

First as to organization. With the exception of the Supply Train every organization consisted partly of motor and partly of animal-drawn vehicles. Therefore every commander's unit was split as soon as the movement commenced, part going over land and part by rail. This splitting of units was true on every occasion even when the division moved by marching, since motor vehicles and animals could not march in the same column.

Second as to personnel. Up to this time no officer in the trains had had experience with so large a column of motor vehicles, and few had had experience with convoys of any size. Little study had been given the subject and many preliminary measures which would have decreased the difficulties were not thought of. In general, officers rode comfortably in their cars enjoying the scenery and permitted their trains to string out over an unbelievable amount of road space. Drivers were likewise inexperienced in handling their trucks in a long column. Losing distance while going up hill they would allow their trucks to coast rapidly down hill to catch up. Instead of having the desired result of closing up the column this ultimately had exactly the opposite result. Drivers also lacked the necessary skill and nerve to keep their trucks at a minimum distance from the one ahead, likewise leading to undue lengthening of the column.

Finally as to equipment. Counting passenger cars, there were in the trains at this time twelve makes of motor vehicles, constituting, as to normal speed, seven different types. The Ambulance Section, Sanitary Train was equipped with old Packards and Whites for baggage trucks, and with heavy Service and G. M. C., and light Ford ambulances. The old and heavily loaded baggage trucks, travelling immediately in rear of the ambulances of their respective companies, forced the Fords behind them to run in low speed for considerable distances, with consequent overheating and undue wear on transmissions. The Field Hospital Section, Sanitary Train, was also equipped with old Packard trucks, capable of good speed on level roads but very slow in climbing hills. This section continually over speeded downgrade in an effort to make up lost distance. The Supply Train, well equipped, as it was, would have been capable of maintaining a steady rate, but following in the rear of the Sanitary Train was held up on hills and lost distance on down grades, so that there was frequently a long gap between these trains. The Motor Battalion, Ammunition Train, was equipped entirely with Quad trucks having special ammunition bodies. The ammunition carried was prescribed by G-1, and the amount had been computed so as to load every truck with ammunition except one per company and one for battalion headquarters for baggage. Two important items had been overlooked. First, the weight and the space required for forty ammunition handlers per company, in addition to cooks, mechanics, and other special personnel, had not been considered. These men had to be distributed throughout the train, slightly overloading every truck. Second, the train had no mobile kitchen trailers, so that the amount of baggage must be in excess of that contemplated by tables of organization, and the narrow ammunition bodies did not provide sufficient space for the amount of baggage that would have loaded the trucks to weight capacity. This made it necessary to further overload certain trucks with portions of the baggage. This overloading, combined with the fact that the Quads, traveling in convoy, could not sustain an average speed of more than nine miles an hour, explains why the Ammunition Train required five days for this move.

The division remained in training until April 18th, when it commenced its movement, by marching toward the Montdidier Sector. The trains moved each day, starting generally at 1:00 or 2:00 P. M. In spite of these late starts the trains nearly always overtook the artillery before the end of the day's march and were delayed on the road so that billets were not reached until dark.

The occupation of the Montdidier Sector was begun April 22nd and the division remained in until July 4th. During the occupation of this sector the 2 ton Quad trucks in the Ammunition Train were replaced by 3 ton British A. E. C's, the number of trucks being reduced so as to leave the total tonnage the same. At the time of the preparations for the attack on Cantigny the Horse Battalion, Ammunition Train, was used for the first time to transport ammunition forward. Its work could have been as effectively and more easily performed by trucks, as was the case on each of the few occasions where this unit was called upon to perform its normal function. Up until June 5th the Supply Train was stationed in the town of Noyers St. Martin. This town, like many others in the rear area, was very frequently bombed at night by enemy aircraft. No anti-aircraft weapons could be provided for the town, so the Commanding Officer, Supply Train, secured authority to station six groups of eight riflemen each around the outskirts of the town, hoping by their fire to imitate machine gun fire closely enough to drive the enemy plane up. On the first and only night that these groups were placed in position, an enemy plane came over quite early in the evening. The rifle groups opened up as soon as it was apparent that the plane was hovering over the town. Unfortunately the rest of the command had not been warned of the experiment and in a very short time nearly every rifle in the town was blazing away. Far from being frightened into taking a higher level the Bochs swooped lower than ever, dropping all of his bombs, and in addition threw over about twenty hand grenades. Only when his ammunition was exhausted did he return to his own lines. This proved beyond a doubt that rifles are not effective against aircraft, certainly not at night. Needless to say this method of defense was not tried again.

On May 9th Mobile Veterinary Section No. 1, an attached unit of Division Train Headquarters, provided by tables of organization, reported to the Commander of Trains. The function of this section was the evacuation of the sick and wounded animals, and the securing and distribution of replacements. This section did much to improve the animal transport of the division and functioned effectively in all sectors and during all offensives of the division except the final one, when the rapid advance and early withdrawal of the division prevented its keeping up.

Upon being relieved in the Montdidier Sector on July 4th, the division was assembled in the area around Beauvais where it remained until July 12th. On that date the movement to the vicinity of Dammartin was begun, all movements being made at night. The Division Trains made their first night movement on the night of July 14th-15th. Much had been learned during and since the last march, and it was found possible to keep the trains well in hand and to travel at a steady rate. The placing of all baggage trucks of the Ambulance Section in rear of that section, the equipping of the Ammunition Trains with larger bodied, faster trucks, the grouping of each train into groups of five trucks each, and the increased skill of the drivers were all factors in the improvement over the last march. One unusual incident occurred. It was seen from a study of the map that the new billeting area of the Sanitary Train was beyond that of the Ammunition Train, so that, to avoid confusion, the Sanitary Train must precede the Ammunition Train in column. At this time the Sanitary Train was north of Beauvais, while the Ammunition Train was west of the town, so the order of the Commander of Trains directed that the Sanitary Train pass a given point in Beauvais at a stated time, and that the Ammunition Train pass it twenty minutes later. This order was not carried out, due to the fact that the Sanitary Train was late and the Commanding Officer, Motor Battalion, Ammunition Train, miscalculated the time his unit would require to travel from its billeting area to the designated point. Consequently the two trains formed in reverse order and it was necessary to put one train past the other on the road, a procedure strictly forbidden by French regulations governing the conduct of trains on national highways. It was decided to make the change at once while it was still twilight and the movement was successfully accomplished before any opposing traffic was met. While it was under way a Colonel of the French C. R.A. Service arrived on the scene and expostulated with the Commander of Trains, and the latter only avoided argument by keeping his interpreter out of sight and failing to understand French. The trains finally left Beauvais at about 8:00 P. M., were delayed enroute at two places by the passing of a portion of a French cavalry corps over parts of the same road, and arrived at their stations in the Dammartin area at 3:00 A. M., July 15th, travelling 60 miles.

During the day of July 15th it was generally supposed that the division was to rest in the Dammartin area and it was not until the morning of the 16th that it was known that the division was to participate in an offensive. The first movements were made on the night of July 16th-17th and the divisional trains were moved to the vicinity of Crepy. Every road in the area traversed was crowded with traffic and the trains, which left Dammartin at 10:00 P. M. did not reach their destinations until 2:00 A. M., although the distance was only 25 miles. During the night the enemy bombed Crepy and vicinity, but this was routine work and there was nothing to indicate that he suspected any unusual movement in the area.

On the morning of the 17th the trains were released from control of the Commander of Trains, preparatory to the advance of the division to the attack. On July 20th, after the division had been engaged for two days, its reserve had been committed to action. The formation of a new reserve battalion was directed, and for this purpose the greater portion of the Horse Battalion, Ammunition Train, was used as a nucleus. To this was added 180 replacements, one-half of a Military Police Company, and about thirty stragglers which had been rounded up by the military police near the Division C. P. This assemblage of troops was concentrated at Missy and organized into a battalion of three companies under the Commanding Officer of Military Police. It remained at Missy until the beginning of the relief of the division on July 23rd, when it was used to bury the dead and to salvage equipment.

On July 24th the division was withdrawn to the Dammartin area, where it remained until July 28th. On that date orders were put into effect for the return of the division to the vicinity of Toul. All of the motorized units of the Division Trains moved together and in addition the Division Machine Gun Battalion was attached. Having profited by previous experience the trains made their second long overland march much more easily and in better order than the first one. To avoid the difficulties due to differences in types of vehicles the Machine Gun Battalion led, followed immediately by the ambulances of the Sanitary Train. This permitted the Fords to travel at a speed more suited to their motive power, thus avoiding undue wear. The baggage trucks of the Ambulance Companies were grouped in rear of all ambulances, and were followed by the Field Hospital Section. The Ammunition Train and Supply Train followed, with the Engineer Train, which was equipped with Quad and FWD trucks, in rear. Thus no heavy, slow moving truck was placed in front of one capable of maintaining a fairly rapid rate. Gaps in the column due to differences in

type were closed by occasional halts, but gaps within units were practically eliminated by the adoption of this order of march. The grouping of trucks within companies into groups of five, and the distribution of officers throughout the column also did much to keep the trains in a uniform column. The movement to a billeting area east of Toul, a distance of 240 miles, was made in two and one-half days, nightly halts being made near Fere Champenois and Void. The route followed was via Meaux, Coloummiers, Vitry and Ligny.

From July 31st to August 5th the division remained near Toul. Then a quiet sector west of the Moselle was held until August 22nd. After a period of training in the vicinity of Vaucouleures from August 23rd to September 2nd, the division began its movement into and occupation of the position from which its attack was launched on September 12th. All of the movements during this period were so short that the various trains moved individually on orders direct from Division Headquarters. Just prior to the Saint Mihiel offensive one military police company was taken from the division as a result of the military police reorganization throughout the A. E. F.

Following its active participation in the Saint Mihiel offensive the division was reassembled in woods near Nonsard and on September 19th began its movement toward the new offensive which was to begin September 26th. The Infantry was moved on French truck trains, the animal drawn elements marched direct over secondary roads, and the motorized units traveled via main roads. The first movement was to an assembly area in the vicinity of Benoite-Vaux where the division remained in army reserve.

The motorized trains made their move on the night of September 19th-20th. This was the last march of the combined trains under command of the Commander of Trains prior to the Armistice and was the most successfully conducted of all its movements. This success was due principally to the experience gained by officers and men on previous movements. The individual organizations moved by converging routes to Gironville, where they were met by the Commander of Trains and the column formed with confusion or loss of time. The route followed was through Commercy, Ligny, Bar Le Duc, to the vicinity of Souilly, where the column was broken up as each unit moved to its billeting area. On this march an order to halt at five minutes before each hour for five minutes was adopted. This proved to be of great assistance in keeping the column closed up and it was found that five minutes was time enough for a messenger from the rear of the column to reach the Commander of Trains with a report as to the condition of the column. On no occasion did this halt serve to delay the movement of any other trains. The distance of about 80 miles was covered in 10 hours, from 7:00 P. M. to 3:00 A. M.

During the exciting days from Sept. 26th to November 11th the First Division made many movements and engaged in two offensives, or places, of the American drive in the Meuse-Argonne sector. In fact it seemed to those who had to do with transportation and traffic control that all divisions were continually moving forward or to the rear. All movements were short as to distance, and, as the division was always engaged, or on the verge of becoming engaged, in battle, the trains did not return to control of the Commander of Trains until November 14th.

On that date the division, which had been assembled in Rumagne Woods following its withdrawal from in front of Sedan, commenced its march to the vicinity of Verdun. It reached its area east of Verdun on November fifteenth where it awaited orders for the march into Germany, which could not begin, under the terms of the Armistice until the 17th. During the wait near Verdun the trains received some replacement trucks from other divisions and the two animal-drawn units of the Sanitary Train, one Field Hospital Company and one Ambulance Company, were motorized. The excessive strain to which transportation had been subjected during the operations in the Meuse-Argonne sector made replacements essential, but unfortunately the divisions from which these trucks were secured had also been engaged so that they were little, if any better than those already in use. In fact many of the replacements were towed into Verdun where they were received by the 1st Motor Repair Section. Consequently the motorized trains did not find themselves in the best condition to take up their first long march behind a marching division, at the same time supplying the troops, often at long distances from a railhead.

A detailed account of the march into Germany would be of no value here. It is sufficient to state that it took from November 17th to December 13th and that the route was from Verdun, through Audun Le Tiche, Esch, Bettenbourg, southeast of Luxembourg, through Gravenmacher, Trier, Wittlich, Zell, Treis, and

Coblenz to bridgehead positions around Montabaur. Motorized trains moved in bounds, covering in one day the distance marched by the balance of the division in the two or three preceding days.

It may be of interest to discuss some of the difficulties encountered. First as to the condition of equipment. During active operations lights had been prohibited and all lighting equipment had either been removed or permitted to become unserviceable. This proved a great handicap, particularly to the Supply Train which generally had trucks out at night, singly or in small convoys, delivering supplies. In many instances, due to dangerous hills and steep curves, it was necessary for trucks delivering supplies at night to wait until daylight before making the return trip, thus losing to the Supply Train the services of those trucks for several hours. In the Sanitary Train a serious shortage of trucks existed so that it was necessary to use the trucks of two Field Hospital companies to transport the equipment of one, thus doubling the mileage required of those trucks. The Ammunition Train, which had been re-equipped with special bodied Quads, likewise had difficulty in moving its required load and several trucks always had to make extra trips.

The distances at which troops had to be supplied and sick evacuated added to the troubles of the Supply and Sanitary Trains. These distances were frequently so great that a full 24 hours was required for trucks of the Supply Train to load, reach their destinations, unload and return to the train. Under such circumstances, of course, twice the normal number of trucks are required for supply. The fact that several divisions were supplied at the same railhead frequently delayed the loading of trucks until late in the day. Several infantry Commanders also caused difficulty by refusing to unload trucks which arrived late at night and keeping those trucks with them until the next day's halt. One item which was by no means small was the fact that every time Division Headquarters moved it was necessary to furnish fourteen trucks for the transportation of office equipment, personnel, and baggage.

The roads along the Moselle Valley had many steep, curving grades which severely tested the power of trucks and skill of the drivers. After dark and in rainy weather these presented positive dangers.

Immediately upon arrival in the bridgehead area every effort was made to place equipment in the best possible condition and improve its appearance. Strict discipline as to uniforms, which had necessarily somewhat relaxed during active operations, was enforced. Within a short time the trains reached and maintained a standard of discipline and efficiency equal the rest of the division, which was not to be surpassed by the troops of any nation.

ANALYSIS AND CRITICISM

As the operations discussed in this monograph were not tactical, it is rather difficult to analyse and criticize. Moreover all were successful, the only difference being that some were carried through more easily than others. Certain errors that were made, however, deserve some special comment.

Prior to the first movement of the combined motor trains no special study had been made by officers concerned as to the special requirements of such an operation. It is true that the loads to be carried and distances to be covered per day were prescribed by G-1 without consultation with the Commander of Trains, but had the latter been consulted it is doubtful whether he could have given any advice of value. To this is traceable most of the difficulties of that first movement, the long hours travelled each day, the falling behind of the Ammunition Train, the unusual amount of road space occupied by the Trains, and the undue strain which fell upon many of the vehicles.

On the occasion of the movement of the trains from Beauvais to Dammartin on the night of July 14th-15th, 1918, it will be recalled that two units formed on the road in reverse order, necessitating the passing of one by the other on a main route, a maneuver which might have caused serious delay, not only to the First Division Trains, but to others. This error was directly due to mistakes on the part of the two unit commanders concerned, but could not have happened had the assembly point been designated at the junction of converging routes north of Beauvais, instead of on a main route south of the city. At such a place the trains could have halted without danger of delaying other units leaving or entering a supply center.

Some criticism is due unit commanders for not having kept lighting equipment in repair so that it could have been used on the march into Germany. This failure is not to be too harshly commented on, however, in view of the fact that continual use and lack of spare parts made it difficult to keep trucks in service-

able condition at all. In fact the personnel of all trains is deserving of much praise for keeping them in constant operation in spite of the many difficulties encountered. It must be remembered that throughout all operations none of the trains were equipped with rolling kitchens; that some lacked proper baggage trucks; that no gasoline tank trucks were provided until after the armistice; and finally, that the animal-drawn sections proved of little or no value so that the motorized sections performed nearly all of the work for which the entire train was designed.

LESSONS

There are many lessons to be drawn from a study of the operations of these divisional trains. The first is the old one that to enter a war unprepared greatly increases the difficulties to be overcome by those who must win the battles. It is astonishing, but none the less true, that the nation which has always led the world in motor vehicle development sent its first divisions into action with its trains incomplete and inadequately equipped and maintained this division in Europe for more than two years without ever completing its train equipment.

Secondly, it is easily seen that the proper handling of trains requires experience and training. Officers who are to command divisional trains should be selected a sufficient time in advance to enable them to take some special training before entering active operations. Officers cannot be taken from the line, placed with trains, and expected to obtain immediate success.

Third, the matter of equipment must be constantly studied with a view of being prepared to send a division into the field with its trains equipped with a reasonably uniform type of motor vehicle. If this is not done it will be found that on those occasions when the trains must move in one column, and these occasions will arise, disorganization and confusion will result.

Finally, the experience of the 1st Division Trains shows that the placing of animal drawn transportation with motor transportation in divisional trains is not necessary and results in waste of personnel and animals, as well as disorganization. Wherever the animal drawn sections were used it was to supplement the motor transportation, never to replace it. The forward movement of supplies by truck was always successfully made to within easy reach of regimental field and combat trains. This was as true in the approach to open warfare conditions in November, 1918, as it was in quiet sectors. Wherever mined roads were encountered the craters proved nearly as much of an obstacle to wagons as to trucks, and whatever time was lost in making detours possible for trucks was soon made up by the increased speed of the trucks after the obstacle was passed. In fact the divisional trains were necessarily so far in rear at the opening of an attack, and were required to let artillery move forward ahead of them, that the engineers generally had the necessary repairs made before the trains arrived on their forward movement. It therefore appears to the writer that divisional train organization for completely motorized trains and for complete animal-drawn trains should be made, provisionally, and the decision made as to which type to adopt when it is known where the theater of operations is to be. If road conditions necessitate animal-drawn transport, the trains should be completely animal-drawn, and the division supplied at the limit of motor transportation by corps or army trains.

References—The only references used were a personal diary kept at that time, and notes made during the Spring of 1919. Therefore no other references appear.

THE A. E. F. IN SIBERIA.

By

Lieutenant Colonel Fred W. Bugbee, Infantry

I feel justified in saying that the object and mission of the American Expedition to Siberia was not generally known in the United States. There were also interested misrepresentations as to the expedition. The concealing of the real facts with reference to Siberia is detrimental to the commercial interests of our people. All wars and all expeditions are the results to a greater or less extent of commercial rivalry.

Siberia is an immense undeveloped country. The same reasons that induced us and the various governments to agree to the open door policy in China exists and has for some time existed in Siberia.

The differences that had arisen between nations as to the meaning of the words, phrases and sentences of the open door agreement naturally induced all nations to be cautious in agreeing to any step that might jeopardize their commercial interests in Siberia.

Every nation recognized that Siberia was bound up inextricably with the Far Eastern problem. All nations were anxious as to the effect the collapse of the Russian government in 1917 would have on their commercial interests as well as the outcome of the war.

Some nations undoubtedly hoped that the collapse of the Russian government would give them an opportunity for commercial and territorial expansion in the far east.

If only one nation were to send troops to Siberia to look out for the political and commercial interests of the other allies as well as their own, it would give this nation a great opportunity to secure commercial advantages over other nations. Therefore, it is probable that this caused the various nations to agree to make their action in Siberia a joint operation.

In July 1918 Major General William S. Graves, U. S. Army, then in command of the 8th Division at Camp Fremont, was directed by the War Department to proceed to Kansas City, Mo., for a conference with Mr. Baker, who was then Secretary of War. On arrival at Kansas City, General Graves was informed that he was to take command of an expeditionary force of U. S. troops for service in Siberia. At this time the following instructions, in the form of an Aide Memoire, were given him for his guidance.

"The whole heart of the people of the United States in the winning of this war. The controlling purpose of the Government of the United States is to do everything that is necessary and effective to win it. It wishes to cooperate in every practicable way with the allied governments and to cooperate ungrudgingly; for it had no ends of its own to serve and believes that the war can be won only by common counsel and intimate concert of action. It has sought to study every proposed policy or action in which its cooperation has been asked in this spirit, and states the following conclusions in the confidence that, if it finds itself obliged to decline participation in any undertaking or course of action, it will be understood that it does so only because it deems itself precluded from participating by imperative considerations either of policy or of fact.

It is the clear and fixed judgment of the Government of the United States, arrived at after repeated and very searching reconsiderations of the whole situation in Russia, that military intervention there would add to the present sad confusion in Russia rather than cure it, injure her rather than help her, and that it would be of no advantage in the prosecution of our main design, to win the war against Germany. It cannot, therefore, take part in such intervention or sanction it in principle. Military intervention would, in its judgement, even supposing it to be efficacious in its immediate avowed object of delivering an attack upon Germany from the east, be merely a method of making use of Russia not a method of serving her. Her people could not profit by it, if they profited by it at all, in time to save them from their present distresses, and their substance would be used to maintain foreign armies, not to constitute their own. Military action is admissible in Russia, as the Government of the United States sees the circumstances, only to help the Czech-Slavaks consolidate their forces and get into successful cooperation with their Slavic kinsmen and to steady any efforts at self-government or self-defense in which the Russians themselves may be willing to accept assistance. Whether from Vladivostok or from Murmansk and Archangel, the only legitimate object for which American or allied troops can be employed, it submits,

is to guard military stores which may subsequently be needed by Russian forces and to render such aid as may be acceptable to the Russians in the organization of their own self-defense. For helping the Czecho-Slovaks there is immediate necessity and sufficient justification. Recent developments have made it evident that this is in the interest of what the Russian people themselves desire, and the Government of the United States is glad to contribute the small force at its disposal for that purpose. But it owes it, to frank counsel to say that it can go no further than these modest and experimental plans. It is not in a position and has no expectation of being in a position, to take part in organized intervention in adequate force from Vladivostok. It feels that it ought to add, also, that it will feel at liberty to use the few troops it can spare only for the purpose here stated and shall feel obliged to withdraw these forces, in order to add to the forces at the western front, if the plans in whose execution it is now intended that they should develop into others inconsistent with the policy to which the Government of the United States feels constrained to restrict itself.

At the same time the Government of the United States wishes to say with the utmost cordiality and good will that none of the conclusions here stated is meant to bear the least color of criticism of what the other governments associated against Germany may think it wise to undertake. It wishes in no way to embarrass their choices of policy. All that is intended here is a perfectly frank and definite statement of the policy which the United States feels obliged to adopt for herself and in the use of her own military forces. The Government of the United States does not wish it to be understood that in so restricting its own activities it is seeking, even by implications, to set limits to the action or to define the policies of its Associates.

It hopes to carry out the plans for safeguarding the rear of the Czecho-Slovaks operating from Vladivostok in a way that will place it and keep it in close cooperation with a small military force like its own from Japan, and if necessary from the other allies, and that will assure it of the cordial accord of all the allied powers; and it proposes to ask all associated in this course of action to unite in assuring the people of Russia in the most public and solemn manner that none of the governments uniting in action either in Siberia or in northern Russia contemplates any interference of any kind with the political sovereignty of Russia, any intervention in her internal affairs, or any impairment of her territorial integrity either now or hereafter, but that each of the associated powers has the single object of affording such aid as shall be acceptable, and only such aid as shall be acceptable, to the Russian people in their endeavor to regain control of their own affairs, their own territory, and their own destiny".

It will be seen that these instructions are inconsistent with the too prevalent idea that American troops were sent to Siberia to fight Bolshevism.

The mission of the expedition, therefore, was to assist the withdrawal of the Czecho-Slovaks from Russia and to guard the military supplies in the vicinity of Vladivostok.

The Japanese statement as given out at the time, was as follows:

"The Japanese Government being anxious to fall in with the desires of the American Government and also to act in harmony with their allies in this expedition have decided to proceed at once to disposition of suitable forces for the proposed mission. In adopting this course they reaffirm their policy of respecting the territorial integrity of Russia and of abstaining from all interference in her internal politics. They further declare that upon the realization of the objects above indicated they will immediately withdraw all the Japanese troops from the Russian territories and will leave wholly unimpaired the sovereignty of Russia in all its phases."

Doubtless announcements were made by the other allied governments.

On August 3rd, 1918, the War Department, by cable, directed the Commanding General of the Philippine Department to send to Vladivostok, Siberia, the 27th and 31st Infantry, one Field Hospital, one Ambulance Company and one signal company provided with equipment "C" and including clothing for winter service or as much of it as was on hand in the Philippine Department.

On July 17th, 1918, General Graves, then in command of the 8th Division at Camp Fremont, received telegraphic orders from the War Department, worded about as follows: "Select and hold in readiness 5,000 Infantry, including 48 sergeants and 95 corporals of longest training, from your command, for service in Siberia; the men should be strong, hardy, fit for service intended and represent all parts of the United States. Although this is understood to be a sacrifice on the part of the 8th Division, military necessity de-

mands trained soldiers be sent to fill the regiments from the Philippines to maximum strength as immediate campaigning is in prospect. If movement is ordered you will probably sail to Nagasaki or direct to Vladivostok, troops will therefore need winter outfits".

In addition to the 5,000 enlisted men taken from the 8th Division about 80 line officers of the 8th Division and 20 staff officers, one Field Hospital, one Evacuation Hospital, one Medical Supply Depot, part of a bakery company, Detachment of Q. M. C., and certain additional medical officers, clerks, etc., were assigned to the expedition.

The troops assigned to the expedition from the Philippine Department sailed from Manila, P. I. on August 7th, and 14th, and consisted of 98 officers and 2,916 enlisted men. These troops were landed at Vladivostok on August 15th, 16th and 22nd, Colonel Styer, 27th Infantry, as ranking officer, assuming the command of the expedition pending the arrival of General Graves.

Major General Graves and staff, 36 other officers, and 1889 enlisted, sailed from San Francisco on August 14th and landed at Vladivostok September 2nd. On his arrival, General Graves at once took command of the expedition. Additional replacements were sent shortly afterwards so that by September 29th, 1918, we had a force of a little over 10,000 men in Siberia.

Before going further it is necessary to orient oneself as to the geography of Siberia.

GEOGRAPHY OF SIBERIA

Only such part of the geography of Siberia as is found along the Trans-Siberian Railroad and its branches will be considered in this monograph.

There are two routes to take from Vladivostok to Karamskaya, situated in the Trans-Baikal region. Both routes are the same to Nikolsk where the road forks, one, the main traveled one, runs across Manchuria, the other (built after the Japanese-Russian War) running north from Nikolsk and keeping entirely within Russian territory. These two lines which join again at Karamskaya. From Karamskaya west there is only one line until Omsk is reached, when the Trans-Siberian Railroad again forks.

The northern route was practically out of commission, as far as through travel was concerned, during the entire period that the A. E. F. was in Siberia.

GEOGRAPHY OF THE COUNTRY ALONG THE MAIN LINE OF THE TRANS—SIBERIAN RAILWAY.

Siberia being of such great extent naturally there are numerous varieties of terrain. From Vladivostok to Pogranichnaya on the Trans-Siberian Railway (town on border of Siberia and Manchuria) and from Pogranichnaya on Chinese Eastern Railway, to the vicinity of Harbin, a total distance of 483 miles from Vladivostok the region consists of low mountains and hills, a considerable portion of it being forested and except for population and improvements reminds one of the eastern part of the United States. From Harbin west the character of the terrain changes abruptly, the Chinese Eastern running across the Gobi Desert for about 270 miles where the foothills of the Khingan Mountains come into view and the railroad crosses the mountains at the Khingan Loop, altitude 3155 feet. After crossing the Khingan Mountains the country is rolling and sparsely covered with grass until Manchuria Station (on the Siberian-Manchurian border, 1064 miles from Vladivostok) is reached.

From Manchuria Station to the vicinity of Chita (distance of 300 miles from Manchuria Station) the country is still semi-arid, trees beginning to appear again in the vicinity of Chita.

The entire region from Manchuria Station to Irkutsk is called the Trans-Baikal Plateau. From Chita west to Irkutsk the country is very hilly and the mountains steeper with considerable timber. The railroad strikes Lake Baikal near Verkhne-Udensk and follows the shores of the lake practically to Irkutsk. This lake is 400 miles long and from 18 to 56 miles wide. Large pine and fir forests are encountered around the lake.

From Irkutsk (distance from Vladivostok 2,800 miles) to Krasnoyarsk, a distance of 672 miles, the country is still mountainous and hilly and well wooded. At Krasnoyarsk the great Siberian plain begins and settlements begin to get larger and before Novo Nikolayevst is reached the great wheat fields of central Siberia are en-

countered. The section from Novo Nikolayevsk to Omsk is the most populous and important part of Siberia. Distance Omsk to Vladivostok 3706 miles. At Omsk the railroad branches, one line running to Petrograd and the other to Moscow. The plain extends from Omsk to Cheliabinsk and to Ekaterinburg, at the eastern base of the Urals. Ekaterinburg is 558 miles from Omsk and 4264 miles from Vladivostok. Compare this with the distance from San Francisco to New York and you get some idea of distances in Siberia. It should also be born in mind that this distance is over the shortest route through Manchuria.

If you consider the route via the all Russian route via the Amur Railroad and Ussuri Railroad, instead of through Manchuria, the distance would be 4,824 miles.

On the northern, or all Russian Route, the country along the Ussuri Railroad is rolling and wooded as is also that along the Amur River. The river valleys crossed in following the Amur River valley (the road is generally at quite a distance from the river) are marshy and in summer are practically impassible and practically closes the road for traffic during a portion of the summer months.

A coal road runs to the mines at Suchan. This road running from Ugolnaya to Suchan is a 5-foot gauge as far as Kangouz (60 miles) and is a narrow gauge from Kangouz to Suchan (about 20 miles) with several cable stations distributed along the narrow gauge to pull cars over the hills. About 50 miles from Ugolnaya along the railroad on the Suchan end, the country is hilly and rugged, some of the hills being high enough to call mountains.

POPULATION

The population of Siberia is small even along the railroad until the great plains of Siberia are encountered. A considerable number of Mongols and Buriats are encountered in the Trans-Baikal region.

CLIMATE

The climate of Siberia can be compared to that of northern Minnesota except for the Trans-Baikal Plateau. The climate here is extremely cold. However, it is a dry cold and there is very little wind. This is a region of constantly frozen ground as the ground never entirely thaws out. The 27th Infantry at Verkhne-Undensk used holes dug down to frozen ground as refrigerators in the summer time.

RIVERS

The Amur is the only river of southern Siberia that flows into the Pacific Ocean, it forms the boundary line between Manchuria and Russia for several hundred miles and is navigable for river steamers for about 2,000 miles. At Habarosk one of the longest railway bridges in the world spans the Amur.

The Ussuri joins the Amur at Habarosk. From Harbin (in Manchuria) the Sungar River flows north and joins the Amur. This river is navigable for river boats from Harbin to its junction with the Amur. Other important rivers in Siberia all flowing north to the Arctic Ocean are the Irtish, Angora, Yenesei and Obi Rivers, all of which are navigable for river steamers.

WAGON ROADS

Wagon roads, except in the great Siberian plain, are scarce and poor. United States transportation will not track as these roads are used by the Russian telega which has a much narrower tread.

The sincerity and good faith of our government on the Siberian question as shown by the instructions given General Graves cannot be impugned. Nevertheless there is good reason to believe that certain departments in Washington thought that the mission of the A. E. F. in Siberia was to fight the Bolsheviks and assist the reactionary government at Omsk, headed by Admiral Kolchak who, through the help of certain of our allies, was put in power in Siberia with headquarters at Omsk, under the title of "Supreme Ruler" on October 18th, 1918.

The Bolshevik government of Siberia (the people of which were never decidedly Bolshevik) was overthrown just after the Czecho-Slovaks commenced fighting in 1918. The All Russian Constituent Assembly was formed at this time. It was a socialistic form of government but not extreme socialistic, the people of Siberia, that is, in the territory around Omsk and eastward from Omsk were not as extremely socialistic as

those in the vicinity of Samara and Ekaterinburg . Also a large number of refugees of the noble and monarchist class had gone to Siberia after the Bolsheviks got in power. This government was overthrown on November 18, 1918, as previously stated, and Kolchak was placed at the head of "The All Russian Government" under the title of "Supreme Ruler". The allies, that is Japan, England, France and the Czecho-Slovaks had a great deal to do with making Admiral Kolchak supreme ruler.

The Czechs, together with soldiers of the Omsk government, which later became Admiral Kolchak's government, established a line on the western front, i. e., in Eastern Russia, and fought the Bolsheviks. A Czech officer informed me that the allies had agreed to their being separated from Austria with an independent government, and that the allies would see that they were put on their feet in getting their government started. That in return for this the Czech Army was to fight the bolsheviks and prevent German and Austrian prisoners from returning to their country, that the allies would see that the Czech Army was supplied with clothing, arms, and equipment.

The Czechs fell in with this and fought the Bolsheviks. The telegram that started this was sent to Major Guinet, French Army, on June 24th, at Cheliabinsk, and was as follows, "The French Ambassador makes known to Commandant Guinet that he can thank the Czecho-Slovaks for their actions, this in the name of the allies. They, (the Allies) have decided to intervene the last of June, and the Czecho-Slovaks' Army, and the French mission forms the advance guard of the Allied army must come recommendations respecting the occupation and the organization of a double "point", "political and military". Perm 18, June.

About June 27th Major Guinet of the French Military Mission issued a statement through the Czech and Russian press, based on this telegram, stating that the allies were intervening in Russia at the end of June, and that the French were with the Czechs in this movement.

The Czech's offensive commenced immediately.

The Czech is very democratic but not Bolshevik and as long as the new Siberian government was democratic they desired to help it out as well as themselves. However, after the armistice between the Allies and the Central Powers and after the overthrow of the Siberian Government by Kolchak and his followers, it soon became apparent to them that they were helping to put a new Czar on the throne of Russia. The Czechs soon began to balk at this. They saw the high handed manner in which Kolchak and his followers were running things and shortly thereafter withdrew all their troops from the support of Kolchak.

In view of the fact that the first Czecho-Slovak Echelon (by Echelon I mean train) had arrived safely in Valdivostok in April 1918, and by July 1st nearly half of their forces had arrived, that the city of Valdivostok was completely in their control and that the remainder of the Czecho-Slovak troops were in no serious danger and the war prisoner menace had not assumed alarming proportions, it must be assumed that the object the President had in mind when troops were sent to Siberia bore some relation to the public declaration of America's readiness to stand by Russia. This announcement must have been made with special reference to one of the Allied powers. The President, as shown in the instructions given General Graves, was opposed to sending troops to Siberia. He said he was afraid it would result in using Russia instead of helping Russia but acquiesced in the movement because he did not want to insist upon his ideas when they ran counter to the ideas of so many military men upon a military problem.

As Japan and the United States were the only nations fighting Germany that were in a position to send any effective force to Siberia there was an agreement between the United States and Japan to send about ten thousand troops each to Valdivostok.

Japan approached the United States and asked on account of organizational reasons permission to increase her force to 12,000 men which was agreed to by the United States. Everyone who served in Siberia knows that Japan disregarded this agreement.

In October 1918, the Commanding General, A. E. F., Siberia, made an inspection of American troops and during this inspection saw so many Japanese and knew of so many more in the Trans-Baikal region that upon his return he reported to Washington that Japan had 60,000 troops in Siberia, a closer examination showed that they had 72,000 instead of 60,000 in Siberia and on the Chinese Eastern Railroad.

The plans of some of the Allied nations and the Czechs were to arm the Russian soldiers (anti-bolshevik)

and with these soldiers, U. S. troops, Czech and allied troops form an eastern front under the command of General Knox (an English General) and attack Germany from the east. As shown by the instructions of the President given previously in this monograph, the President had informed the various allied governments that the United States would not join such a movement and if the allied governments insisted upon such a step after arrival in Siberia the United States might consider it necessary to withdraw its few troops from Siberia.

Notwithstanding the President's positive statement, I do not believe there is any question but what the representatives of some of the allied governments expected and hoped that the American troops would proceed to western Siberia under the claim of extricating the Czechs and become involved in such a way that the United States would have to send more troops to Siberia.

General Knox had authority from the British Government to arm, clothe, and equip 100,000 Russians and if the conditions seemed to justify it he was informed that he could count upon arms and equipment for an additional 100,000.

I believe it is safe to say that even before the American troops arrived in Vladivostok with a view to carrying out the mission of our country it was evident that in so far as the execution of the mission coincided with the scope of the mission as publicly announced, it would differ from the actions and even intentions of some of the associated missions.

General Otani in command of the Japanese forces was the senior allied commander. Soon after the landing of allied troops at Vladivostok began, General Otani addressed the following communication to the commanders of the allied forces. "I have the honor to inform you that I have been appointed the commander of the Japanese Army at Vladivostok by His Majesty, the Emperor of Japan, and that I am entrusted unanimately by the Allied Powers with the command of their armies in the Russian territory of the Far East. I believe that this important mission will not be easy to fulfill on account of the present situation of Russia and of the Austro-German intrigues. Nevertheless I have no doubt that I shall be able to accomplish it perfectly through the agreement and coordination of the valiant Allied Armies. The cooperation and the friendship between our armies will easily permit, from the point of view of their command, of rapidity of action and of success without any difficulty. I hope with all my heart that our armies will work together for the common aim.

(Signed) General Otani,
Comander-in-Chief, Allied Armies."

This document which you will admit is a rather remarkable one, was sent out about two weeks before the arrival of General Graves at Vladivostok.

All seemed very anxious to learn how General Graves would react to this. Colonel Styer, who was senior officer with our troops, prior to the arrival of General Graves, wrote General Otani and told him that American troops were subject to his orders. Soon after he arrived General Graves together with Admiral Knight, went to call on General Otani and was asked almost immediately if he (General Graves) had orders that American troops would report to him (General Otani).

General Graves informed General Otani that he had no such orders, but on the contrary had limitations placed upon him as to the use of American troops which would make it necessary for him to give his personal orders before American troops could engage in any action against the Russians. No indication was ever seen of General Otani trying to command troops of any power except Japanese troops.

I do not believe that this remarkable communication was originated by the Japanese but was probably issued with the approval of some of the other allied representatives with the hope that the Americans would fall for it and that then our troops could and would be used contrary to the desires and instructions of the President, as after once having become involved it might become difficult for the United States to back out.

After the signing of the armistice the Commanding General, A. E. F., took the view that the United States had no enemy in Russia and that American troops could not be used against any part of the Russian people except in self-defense and in protection of property entrusted to our care.

Criticism was immediately directed against that policy not only by certain Russians, but it was evident that England, France and Japan did not approve of it.

The 27th Infantry participated with the Japanese in an advance on Habarovsk from Sviaginaon the Ussuri branch of the Trans-Siberian Railroad. This advance started on August 29th, and troops reached Habarovsk on September 5th. Practically no casualties were sustained by our forces. The reason given by General Otani, (the highest ranking allied officer in Siberia), for the advance to Habarovsk was the relief of Czecho-Slovak troops west of Irkutsk the idea being to take Habarovsk then march up along the Amur River and clear the northern branch of the Trans-Siberian Railroad of Bolsheviks, and thence west clearing the railroad and so extricating the Czechs.

American participation in allied operations in Siberia was commenced with the situation about as follows: a small force consisting of Czecho-Slovaks and Japanese detachments acting as a holding force awaiting the arrival of allied reinforcements to be gotten from troops arriving at Vladivostok had been handled rather severely along the Ussuri Railroad, and the 35th Japanese Infantry Brigade under Major General Oi had gone to their assistance. Shortly after this the advance on Habarovsk began.

A council of Allied Commanders was held on August 19th, 1918. Of this council Colonel Styer cabled the War Department as follows: "Lieutenant General Yuh, Chief of Staff, representing General Otani, gave in detail an estimate of situation and plan of operation. First take Habarovsk, 15,000 armed enemy in this sector, then advance west by Amur and Manchuria. General Otani stated that in his judgment to accomplish mission which was and remains solely the extrication of the Czechs west of Irkutsk between whom and us are 40,000 enemy forces and a long double line of communications to make secure. The Czechs west of Irkutsk have little ammunition left and are otherwise in pitiable plight so much so that their relief before winter is imperative if they are to survive. This can only be done in his opinion by a rapid campaign with augmented forces. He asked the Allied Commanders to so represent to their governments and that they themselves send all forces immediately available and request Japan to send troops at once in sufficient numbers to meet the situation, 5,000 Canadians are route. Japan has ready many troops. After asking each commander if and how many of his troops were ready to join in an advance on Habarovsk, he stated his intention of ordering an immediate concentration of all available forces for an attack.

In view of subsequent events it is not out of place to state that this estimate of the situation was erroneous. Either the Japanese military intelligence service was absolutely incompetent, their staff in utter ignorance of the real military situation in Siberia, particularly that of the Czechs, or their statements were aimed to satisfy what they presumed to be allied desires, by exaggerating the magnitude of the military problem and recommending heavy reinforcements, yet proceeding to show, by announcing an immediate offensive that the much needed increase of allied forces could be safely depended upon to arrive after the Japanese (with their startlingly inadequate strength) had carried out the campaign and securely possessed the fruits of victory.

The actual movement on Habarovsk was not a difficult one consisting of little more than a series of skirmishes. The total Japanese casualties were only 77 killed of all ranks.

As to the grave dangers menacing the Czechs "west of Irkutsk" and the threat of "40,000 enemies between us". It need only be said that by August 17th, 1918, the Czechs were in practically undisputed control of the Trans-Siberian Railroad from Ekaterinburg and Cheliabinsk eastward to a point beyond the tunnels at the southern end of Lake Baikal. On August 20th Verkhne-Udensk was captured by the Czechs, and the only enemy of any importance consisted of an uncertain number of Bolsheviks and armed war prisoners based on Habarovsk and operating toward Blagovestckensk on the west and Ussuri on the south.

The war prisoners menace turned out to be practically no menace at all as only a small proportion of German and Austrian prisoners of war joined the Bolsheviks and of those who joined practically all were communists who recognized no claim of their government on their services.

Germany issued instruction to her troops that were prisoners in Siberia that under no circumstances were they to join the Bolsheviks.

The total number of Czecho-Slovaks in Siberia was about 50,000. These numbers were given to me by General Chehek and I believe can be depended on as our intelligence service estimated the Czech forces as about the same.

During the winter of 1918—1919 the strength of the allied forces in Siberia were about as follows:

United States	10,000	Japanese	72,000
English-Canadians	8,000	French	800
Italians	2,000	Czecho-Slovaks	50,000
Chinese	one division approximately	Poles	one division strength unknown

Practically all of these troops were in the vicinity of Vladivostok except the Czechs, Japanese, Chinese and Poles.

During the winter of 1918—1919 the 27th Infantry was stationed at various points along the Ussuri River from Spasskoe to Habarovsk. The 31st Infantry at Vladivostok at various points along the Trans-Siberian Railroad between Vladivostok and Nikolsk and along the coal road from Ugolnya and at the Suchan mines, and two companies at Spasskoe. The 27th Infantry had more or less trouble with Kalmikoff's Cossacks, a more bloodthirsty man than Kalmikoff with the possible exception of Semienoff never lived. The cruelties and murders committed by these two cossacks are spoken of elsewhere in this monograph.

For political reasons (more to show that American troops were in Siberia than anything else), one company of the 31st Infantry was ordered to and took station at Harbin in March 1919, and was brought back to Vladivostok in July, 6th companies of the 27th Infantry were stationed from April 1919 to January 1920 (at which time this portion of the 27th Infantry was withdrawn and embarked for the Philippines in pursuance of the order withdrawing our troops from Siberia) along the Ussuri Railroad from Spasskoe to Ussuri. Other than one or two small skirmishes with partisans and considerable trouble but no fighting with the cossacks under Kalmikoff there were no active operations in this sector.

In April 1919, regimental headquarters and six companies of the 27th Infantry were moved from the vicinity of Harbarovsk to Verkhne-Udensk and took over the sector from Verkhne-Udensk, to Mysovia near Lake Baikal. Considerable trouble was experienced with Semienoff's troops but no actual fighting took place in this sector except for one engagement at Posalskaya in January 1920.

On this occasion one of Semienoff's armored trains decided to attack our forces at Posalkaya. This force consisted of about 35 men under command of a Lieutenant quartered in Russian box-cars. The Lieutenant had been warned by a telegraph operator that the commander of this armored train had stated that he was going to get the Lieutenant's command. This young officer had his men lie down on the floors of the cars. When the armored train came up it turned loose several machine guns on the box car camp. The men got out of the cars, surrounded the train, some jumping up in the engine, and disabling it by throwing hand grenades in the fire box, while others got in dead space and tossed grenades in the armored car. The entire train with a complement of about 75 men, several machine guns and two six-pounders were captured.

Late in May and the first part of June 1919, the partisans along the coal road from Ugolnya to Suchan (in 31st Infantry sector) became very active for the reason that they considered that by stopping shipments of coal they could tie up the Trans-Siberian Railroad and thus prevent supplies reaching Kolchak's forces from Vladivostok. A platoon of our troops camped at Romanovka was attacked in June, and thereafter, until late in the fall, various portions of the 31st Infantry had a number of skirmishes with these partisans at various points along the line between Ugolnya and Suchan. Very seldom did we have more than two companies engaged in an expedition or in any one action.

One Platoon, Company A, 31st Infantry mentioned in a previous paragraph, strength two officers and about 75 enlisted in a fight at Romanovka, against greatly superior numbers, had 24 enlisted killed and one officer and 25 enlisted men wounded but held their ground and stood off the enemy until the Platoon received reinforcements.

Our losses in other engagements were very small. During the months from June to December 1919, organizations of the 31st Infantry were engaged with partisans at various places in the vicinity of the coal road running from Ugolnya to Suchan as follows: two Platoons, Company M., at Novitskaya on June 22, 1919. one Platoon, Company A., at Romanovka June 25, one Platoon, Company A, at Novo Nezhino June 26, Company D, Company C. (less 9 squads), one Platoon, Machine Gun Company and a 37 mm. section of Headquarters Company, at Sitsa, June 26. Company C, (less one Platoon), Company M, one Platoon of

Machine Gun Company, and 37 mm. section of Headquarters Company, at Novitskaya, July 2. Company C, (less one Platoon) Company M, Company D, one Platoon Machine Gun Company 37 mm. section of Headquarters Company, at Kazanka, July 3.

Companies D, M, one Platoon Machine Gun Company, one 37 mm. section of Headquarters Company at Peryatina, July 5th., one section of Company H, at Novelitovskaya on August 8th. Various organizations participated in skirmishes at the following places during the month of July and August: Rechitsa, Dora Feiveka, Mamontova, Novo Vasilkovo, Burenka, Gordievka, Brovonichi, Krolovits, Shieovkaya and a few other small skirmishes.

In addition Company C was engaged in skirmishes on December 10th, 24th, 25th and 31st near Fanza and Sitza.

The advance guard formations used were similar to those in force for small bodies of troops before the world war and proved their worth.

In the fall of 1919, Lieutenant Ryan and 50 men of the 31st Infantry with four machine guns was sent as a guard with a trainload of rifles and ammunition for Kolchak with orders to turn them over to Kolchak's representative at Irkutsk and that under no circumstances was he to turn any of the rifles or ammunition over to anyone before reaching Irkutsk.

At this time we were having considerable trouble with Semienoff and the Commanding General did not care to turn rifles and ammunition over to anyone that might afterwards use them against our forces. When this munitions echelon reached Chita, Semienoff sent an officer with a reputed order from Kolchak to turn fifteen thousand rifles over to Semienoff. The Lieutenant informed the representative that it would be impossible to comply with the request as his orders prevented him from turning over any rifles or ammunition to anyone before he got to Irkutsk. Semienoff's representative went away and a few minutes later came back and informed the Lieutenant that if the arms were not turned over to Semienoff by 10:00 A. M. the next morning that he (Semienoff) would come and get them. The Lieutenant immediately wired A. E. F. Headquarters of the happenings that had taken place and took what steps he could to prepare his force for defense. At this time Semienoff's troops with troops of a certain other power numbered several thousand in Chita and immediate vicinity consisting of several regiments of infantry and at least two regiments of artillery, together with several armored trains. It had also been quite definitely proven that Semienoff was in the pay of this other power. A. E. F. Headquarters immediately got in touch with the representative of this other power who was told the facts in the case and that it was also well known that Semienoff would do what he (the representative) told him and requested that Semienoff be called off as otherwise to say the least the result would present a very grave situation. Suffice it to say that a few minutes before 10 the next morning one of Semienoff's staff came to the Lieutenant and informed him that he could leave whenever he wanted to and that it was all a joke.

The disintegration of Kolchak's forces, commencing in June 1919, took place rapidly in the fall and early part of December of that year, and early in November all allied troops had withdrawn from Siberia except the Japanese, Czechs, Americans, and Italians, the Czechs and Italians being prevented from leaving by a scarcity of transports. The disastrous failure of Kolchak in my opinion could have been avoided and his forces have put the Bolsheviki out of power if he had only adopted a democratic form of government with an able, human and conscientious staff around him. He did just the opposite, however, and was doomed to failure as anyone will see, when the actions of his followers are considered.

Ataman Semienoff and Ataman Kalmikoff at the head of cossacks in the Trans-Baikal and Ussuri regions respectively, though giving adherence to the Kolchak government and responsible for Kolchak's communications, obeyed Kolchak when it pleased them and did as they pleased at other times. Of stores going to Kolchak, Semienoff took what he wanted and sent the rest on to Kolchak.

Kalmikoff and his officers were very dissolute and ran things with a high hand. Open clashes with our forces at Habarosk during the winter of 1918—1919 were only narrowly averted. Whenever Kalmikoff needed money he proceeded to arrest and execute some rich merchant under the guise that the merchant was a Bolshevik and aiding and abetting Bolshevism and confiscated the merchant's money, goods and other property.

Armored trains pertaining to Kalmikoff's command destroyed towns under the guise that the inhabitants were bolsheviks, killing old men, women, and children even, when fleeing for their lives.

If a young man was drafted and ordered to report for duty and did not show up his father and mother and other members of the family were mistreated and murdered.

Semienoff was not any worse than Kalmikoff as that would be impossible, but as he was in a more populous section of the country and on the main line of the Trans-Siberian Railroad, his opportunities were greater. Nero himself could not have been worse than these two cossacks atamans. Colonel Morrow estimates that Semienoff's forces murdered at least forty thousand men, women and children in the Trans-Baikal region.

The entire region surrounding Tara was devastated, men driven off or killed and the women stolen by force by officers and men. This expedition was under a Colonel Manke and was not composed of cossacks but of regular Kolshak troops.

The Russian has been down-trodden for centuries by the Russian autocracy. He has also been down-trodden by the Bolsheviki, but not to the extent of the former Russian autocracy, under which he was compelled to work for a certain small stipulated sum, whether he wanted to or not and had to live in a certain locality, where even his home was not sacred against the nobles, and where the definition of good discipline in the army was not as our own but in which a soldier to be well disciplined had to submit to his officers knocking him down, or slapping him without just cause and to get up smiling. Very little attention was paid to his wants or to see that he was fed. I have seen Kolchak officers strike down soldiers merely for the whim of the thing and have seen conscripts being trained in athletics, the men being trained in jumping over wooden horses with a Lieutenant standing by the horse with a whip similar to a cat of nine tails whipping each man that failed to get over the horse. From my observation of the Russian officer, he spends most of his time in cabarets or other places filling up on vodka. In Vladivostok large numbers of Russian officers with apparently nothing to do seemed to spend all their time on the main streets of the town and generally having a good time when their services were undoubtedly needed with their organizations.

In my opinion the average Russian in Siberia, was not, in 1919, a Bolshevik, but most of all he was not a reactionary and wanted a good democratic form of government. Rather than have a reactionary form of government similar to that under the Czar he would join any party that had a show of success against it. As the Bolsheviki were the only ones that had any show he joined them so as to drive the Kolchak government from power and with the hope that the radicalness of the Bolsheviki could be curbed in time and that then the people could settle down to a good constitutional democratic form of government.

The following statement made by Colonel Wickham, head of the British Military Mission, show how the ideas of some of the allies changed during the winter of 1919—1920; "In supporting Kolchak, a year's time has been lost. The only good has been that we can now realize once for all that the old regimists are incapable of establishing a government. Siberia must go through Bolshevism and the sooner a beginning is made, the quicker will many of the irrational theories of the Bolsheviki be tried out and cast aside".

In conjunction with other allied troops the 31st Infantry preserved order in Vladivostok during the Gaida revolution which took place in November 1919 and the revolution which took place on January 31, 1920. The latter revolution was practically a bloodless affair. However, the so-called Gaida revolution that took place in November (considering the number that took part) was quite a bloody affair. General Gaida, a young man about 28 or 29 years old, was a Major General in the Czech Army in 1918, and through his natural ability was made a Lieutenant General shortly after. in the Russian Kolchak Army, and commanded the Kolchak forces in western Siberia and eastern Russia. In the late spring of 1919 he began to disagree with the Kolchak government over political matters. In other words he could not see his way clear to support a government as reactionary and tyrannical as the Kolchak government had become. He was relieved of command of the Russian forces in June, 1919.

Early in the fall, Gaida came to Vladivostok and was at the head of the revolution that took place in November. His forces, amounting to about 2,000, were recruited from Russian deserters and some Czechs. In my opinion, Gaida was entirely too obsessed with his own importance. He opened a recruiting office with-

in two blocks of the railroad station at Vladivostok, where he was attacked by the Kolchak forces, the fight lasting about 24 hours.

Gaida's troops were in an impossible situation and were easily defeated. Practically all prisoners, except Gaida, captured by the Kolchak forces were put to death within the next 24 hours, some five hundred being executed.

General Gaida was given up to the Czechs with the understanding that he would leave Siberia never to return. This was undoubtedly done to keep from having trouble with the Czechs.

The revolution in Vladivostok that took place on January 31st, 1920 was engineered by the social democrats under Krakavetsky and very shortly thereafter became closely allied with the Bolsheviks. Krakavetsky had previously been a member of Kolchak's cabinet and was one of Gaida's Chief Lieutenants in the revolution of November 1919.

About January 1st, 1920, orders were received for the withdrawal of the A. E. F., Siberia, the organizations of the A. E. F. being ordered to the Philippine Islands for station. About January 15th, 1920, that portion of the 27th Infantry which was stationed on the Ussuri Railroad was withdrawn to Vladivostok and sailed for Manila on the Great Northern about January 15th. That portion of the 31st Infantry stationed along the coal road was withdrawn to Vladivostok about the middle of January 1920. That portion of the 27th Infantry stationed at Verkhne-Udensk and the Trans-Baikal section commenced their withdrawal during January 1920. It took the echelons of the 27th Infantry an average of 28 days to make the trip from Verkhne-Udensk to Vladivostok. The sector from Vladivostok to Nikolsk Ussuriski was held by one battalion of the 31st Infantry with a machine gun platoon and one armored train attached, until all other American troops had passed enroute to Vladivostok and then was moved into Vladivostok.

General Graves with the last of the Expedition went on board the Transport Great Northern on March 31st, and sailed for Manila April 1st, 1920, thus terminating the A. E. F., Siberia.

In the fall and early winter of 1919—1920 replacements for the drafted men in the A. E. F., Siberia were received and the drafted men and those enlisted for the duration of the war were returned to the United States. About 95 percent of these recruits had had no prior service and had had no training whatever previous to their landing in Siberia. This created quite a problem for regimental and company commanders. These new men had to be given their basic training and least know some of the rudiments of marksmanship and given some range practice before they could be sent to the smaller out-lying stations. The situation in Siberia at this time was tense and it looked very much as though our troops would become engaged at any time. As a consequence our troops were engaged in elementary rifle practice during zero or near zero weather.

Only a portion of the drafted men were withdrawn at one time from an organization and new men sent to take their places. New men were given from three to four weeks training before being sent to out-lying stations though in some instances, due to force of circumstances, they were sent out with less.

CLOTHING.

The clothing issued the A. E. F., Siberia for winter wear was better suited to the climate than that issued by any other nation that had troops there, and was universally admitted by all allies to be the best and in my opinion could not be improved upon. The clothing issued individually for winter wear was as follows: Fur cap, fur mitts, wool gloves, heavy wool undershirts and drawers, O. D. shirts, O. D. coats and breeches, sheep-lined overcoat, over-shoes, heavy wool socks, lumberman's socks, shoe pacs, and parka. The lumberman's socks, parka and shoe pacs were seldom worn, the socks only being worn in the coldest weather, as at other times the feet sweat profusely in them.

The parka was only worn by German and Austrian prisoners of war, and only for a short time by our troops as experience proved that the fur cap and sheep-lined over-coat served the purpose better. Shoe pacs were not worn due to the fact that the soles of the pac were soft and the feet felt all the unevenness of the ground. Shoe pacs are probably good where the snow does not drift and where all the ground is covered with snow.

The fur cap with the adjustable front piece was an excellent protection against the lowest temperatures and strongest winds, the sheep-lined overcoat also gave protection against the lowest temperatures and the heavy wool drawers protected the legs below the over-coat.

The over-shoe was also excellent and stood the wear well, while the fur mittens when worn over wool gloves protected the hands.

SHELTER.

The majority of our troops were quartered in Russian barracks which are scattered all over Siberia in the larger towns. They are mostly substantial buildings made of brick and with good Russian stoves were quite comfortable. A portion of our troops were quartered in private buildings turned over to us for our use. A large number of our troops, who were guarding the railroad, were quartered in Russian box cars of a type called the double X. These cars were lined on the inside and were a much better car to live in, in the winter time, than either American box cars (of which there were a small number) or other makes of Russian box cars, none of which were lined. It became necessary, in sending out the double X cars to a point where a box car camp was to be established, to send a guard along to see that someone did not steal them. These cars when taken off their trucks and banked with earth or snow were quite comfortable, however, a fireman had to be detailed to replenish the fires at midnight and three A. M.

The Russian stove which you see in all Russian houses and barracks is built in the house and stands 8 to 10 feet high, is made of brick covered with sheet iron and takes about twenty four hours to get heated, hereafter, only a small amount of coal or wood is necessary to keep it going.

The stove in my room required only two scuttles full of coal a day, in the coldest weather and kept the room well heated.

Considerable trouble was experienced in keeping springs and wells open in the winter time. All commissaries going to small stations on the line were generally frozen. Along the narrow gauge railroad all supplies were invariably frozen when received. I always thought that potatoes when frozen become unfit for consumption, however, if frozen and not allowed to thaw out until they are used they are very palatable.

TRANSPORTATION.

Freight cars of the Trans-Siberian Railroad (except a few American box and gondolas) are similar to those in France. Wheel tracks on wagon roads are much narrower than those in the United States, due to the narrow tread of the Russian Telega. Our escort wagons are not suitable for these roads and for that reason we generally used the Russian wagons or sleds. The narrow gauge railroad mentioned heretofore in this monograph had four hills at different points on the line where the cars had to be hauled up by cable. The cable stations had been blown up and it was necessary for troops to fill two cars on the top of the hill with dirt and attach them to the cable in order to pull up the car loaded with supplies. Imagine the amount of work involved in getting a car that went all the way through, over four hills, requiring separate loadings with dirt and frozen dirt at that! However, after the cable stations were repaired there was no further trouble on this score.

CONCLUSIONS.

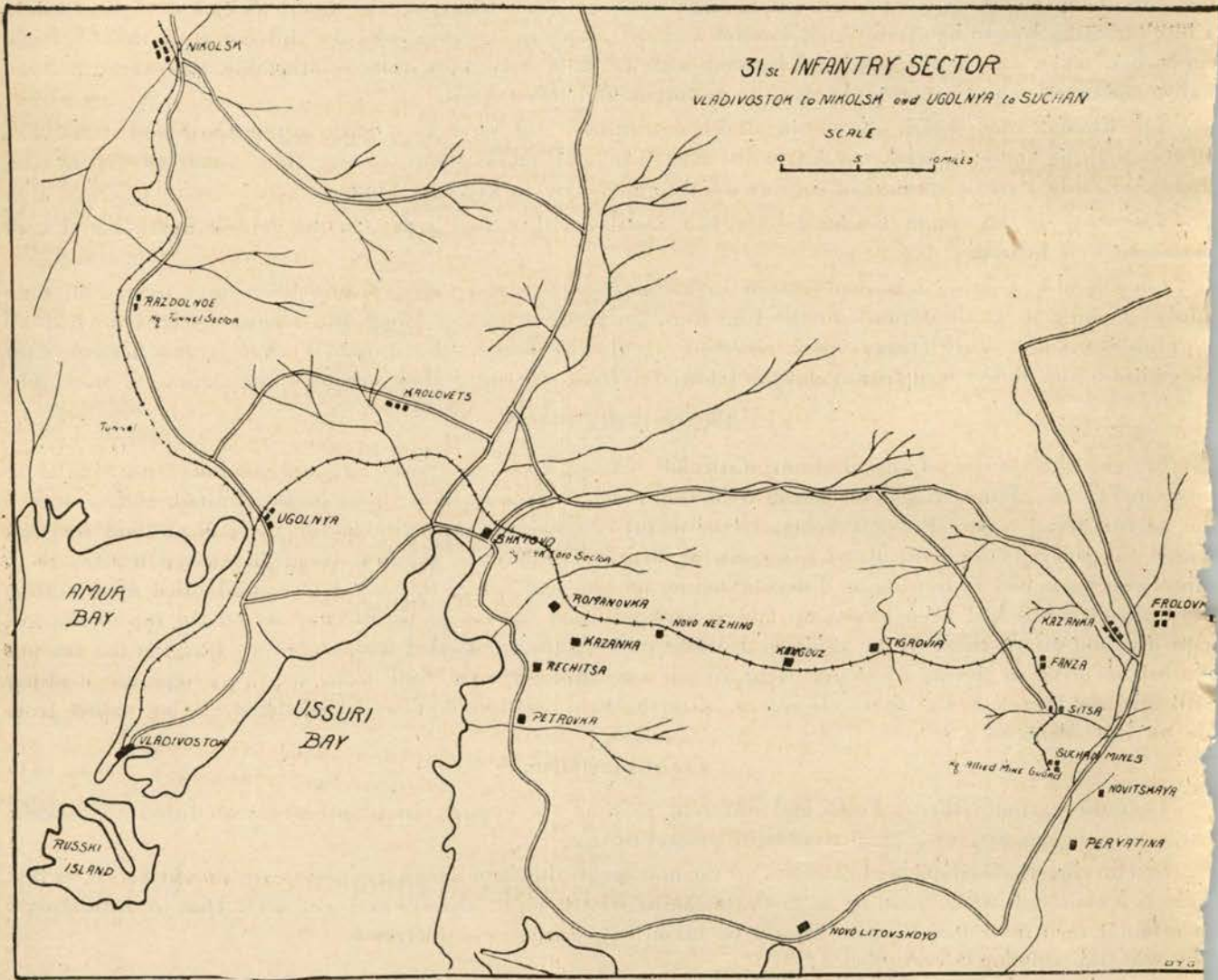
That the various allied nations had different reasons for joining in a military expedition to Siberia. These reasons can not, with propriety, be discussed by me.

In entering agreements with allies who do not speak the same language, great care should be taken that there is a thorough understanding as to the meaning of all words, phrases and sentences. That in dealing with an oriental race their peculiarities should be taken into careful consideration.

Was the mission accomplished?

Yes. The A. E. F. assisted the Czecho-Slovaks out of Siberia, no supplies fell into German hands, our troops did not become entangled with other governments, they did not interfere in the internal affairs of the Russian people and in my opinion prevented at least one foreign power from gaining a foothold in Siberia, thus allowing "The Open Door Policy" to continue in Siberia for our commercial interests to take advantage

In accomplishing his mission General Graves deserves the heartfelt thanks of his country. Beset by passions, interests, and individuals, trying to influence him to take a course contrary to the instructions given him, he paid no attention to them, did not swerve from his mission and carried it out in its entirety.



THE ADVANCE OF THE AMERICAN ARMY INTO GERMANY AND THE OCCUPATION OF THE COBLENZ BRIDGEHEAD.

By
Major Shields Warren, Infantry.

NARRATIVE

Under the terms of the Armistice the Allies were to occupy all German territory west of the Rhine, with bridgeheads of 30 kilometers radius at Cologne, Coblenz and Mayence. The Coblenz area was to be occupied by an American Army as was the district of Treves, with reserves held between the Moselle-Meuse Rivers and the Luxembourg frontiers.

Marshal Foch first issued instructions that one American division form part of the Mayence bridgehead force and that two French Infantry and one French cavalry division be added to the American sector. It was represented to Marshal Foch that each nation should have its well defined area to occupy and thus avoid misunderstandings. To this he agreed, but reduced the American sector and added the southern part of the Coblenz bridgehead to the French sector.

For various reasons it was not desired by the Commander-in-Chief to use either the 1st or 2nd Army as the Army of Occupation. The 3rd Army, which had been planned before the Armistice was therefore designated as such. It was composed of the 3rd and 4th Army Corps, less corps artillery and the 66th Field Artillery Brigade, to which the 7th Army Corps was later added. The 3rd Corps consisted of the 2nd, 32nd, and 42nd Divisions; the 4th of the 1st, 3rd and 4th Divisions; the 7th of the 5th, 89th and 90th Divisions.

The advance toward Germany began on November 17th and the Allied forces from the North Sea to the Swiss border followed, simultaneously, the withdrawing German Armies.

The 5th and 33rd Divisions were given the mission of guarding our lines of communication and occupied Luxembourg after the passage of the 3rd Army.

PREPARATION FOR THE ADVANCE INTO GERMANY

The corps assembled in the concentration areas preparatory to taking up the march to the Rhine.

The 4th Corps concentrated with the 3rd Division in the vicinity of Saint Maurice, the 1st Division about 4 kilometers east of Verdun, the 4th Division in the Commercy-Boucy area.

The 3rd Corps concentrated with the 32nd Division, Division Headquarters at Vilosnes-sur-Meuse; the 2nd in the vicinity of Stenay, the 42nd east of the Meuse with Division Headquarters at Brandeville.

The 7th Army Corps concentrated with the 90th Division in the Vezin, St. Jean, Marville district and the 89th Division in the vicinity of Virton.

The first bound of the 3rd and 4th Corps put them along the Moselle and Sauer River boundaries between Luxembourg and Germany; the front line divisions disposed from right to left as follows, waiting for December 1st, the day they were to cross into German territory; the 3rd Division from Schengen to Remich, the 1st Division with headquarters at Canich, the 32nd Division with headquarters at Condorf, the 2nd Division with headquarters at Fels. The 2nd line divisions followed the first wave at two day's march. The 4th Division assembled near Remich on December 1st and the 42nd in the vicinity of Merch. The 7th Corps left its area to arrive at the line Thiamont-Clemency-Sanem by December 1st.

THE ADVANCE INTO AND THROUGH GERMANY

On December 1st the leading divisions crossed into Germany in order from right to left, 3rd, 1st, 32nd, and 2nd.

THIRD DIVISION

This division crossed the Moselle at Schengen and Remich. It marched, as a rule, in two columns, an infantry brigade with attached artillery and other troops in each column. At times the artillery marched between the two infantry columns. The Engineers preceeded the remainder of the division and reconnoitered each day's march, making it possible to avoid many of the roads which had been badly damaged by the retreating German Army.

Its various headquarters are given to show the line of the division's advance—Saarburg, Morbach-Kirchberg-Simmern. Owing to a change in the plans for holding the bridgehead, the 3rd Division which was to have held the right of the sector was ordered on December 13th to remain west of the Rhine and north of the Moselle, and the line of march was turned down the Rhine from south of Coblenz to its new area, the Kreis of Mayen with headquarters at Andernach.

FIRST DIVISION

The 1st Division crossed the Moselle into German territory at Wormeldingen and Gravenmacher. This division also advanced in 2 columns, an infantry brigade with artillery and other troops forming each column. Its line of march was along the Moselle. It crossed the Rhine at Coblenz December 13th and took the southern part of the American sector of the Coblenz bridgehead, with headquarters at Montabauer.

THE 32ND DIVISION

This organization entered Germany by crossing the Sauer, extending the line of the 1st and 3rd Divisions to the left with a similar formation. The location of its headquarters shows that it advanced along the line Helenenburg-Speicher-Daun-Mullenbach-Mayen-Ochtnidung-Bassenheim. The 32nd crossed the Rhine at Engers on December 13th and 14th, and took the sector of the bridgehead to the left of the 1st Division and established headquarters at Sayn and later at Rengodorf.

THE 2ND DIVISION

This division was the left division of the front line of the army and extended the American lines to the British. Its route as indicated by its headquarters was Fels-Rittendorf-Prum-Gerolstein-Adenau. This division crossed the Rhine on the bridge at Remagen and the ferry at Andernach on December 14th, and occupied the right bank of the Rhine and the left of the American sector with headquarters at Heddesdorf.

THE 4TH DIVISION

The 4th Division entered Germany by crossing the Moselle at Remich and Schengen on December 3rd.

On December 6th the 2nd Battalion, 39th Infantry was sent to Coblenz at the request of the civil authorities of that city to preserve order after the departure of the German troops. On December 18th, the 3rd Battalion of the same regiment was also sent there. The march of the 4th Division was conducted in two columns along the Moselle.

It was planned that this Division would occupy a position on the Rhine south of Coblenz and it was marching on Boppard when its area was changed on December 13th due to the reduction of the American sector, and the direction of march turned north and the Division recrossed the Moselle at Tries and Alf. The 4th occupied the Kreises of Cochem and Adenau with its headquarters at Bertrich.

THE 42ND DIVISION

This division followed the axial road of the 32nd as far as the Rhine and occupied the territory between the 3rd Division and the British. The locations of its headquarters shows its route of advance as Merch-Consdorf-Helenenburg-Speicher-Birresborn-Dreis-Adenau. On reaching the Rhine it passed from the 3rd to the 4th Corps.

THE 7TH CORPS

The 90th and 89th Divisions advanced abreast, the 90th on the right, behind the 4th and 3rd Corps. The 90th marched in the usual two-column formation with the artillery and signal corps following as billeting conditions would permit. The engineers preceded the columns by one or two days and reconnoitered the best roads for the advance. The line was crossed into Germany at Wasserbillig, Remich and Gravenmacher on December 6th and 7th and on December 21st headquarters was established at Berncastel and the division settled down astride the Moselle and occupied the Kreises of Daun Wittlich and Berncastel.

THE 89TH DIVISION

This division used the bridge at Echternach to gain admission to Germany on the 5th of December, and

went to the area it was to occupy—the Kreises of Prum, Bittburg and Trier, less the city of Trier.

On December 1st, the 6th Infantry was sent to Trier to become the garrison of that city.

The American Army of Occupation, before any of it left for home, numbered 12,000 officers and 275,000 men and its cost was estimated at 269,000,000 francs per month.

COMMENT ON THE MARCH.

In the 3rd Army Corps, and no doubt in the others, the divisions were given boundaries on the right and left and assigned lines as objectives to be reached by certain days. Naturally you cannot take a small scale map and measure the distance from where the units began the march to the final station, or take a curve meter and measure a division's axial road and call this the distance it marched. Often a unit would have to march some distance off of the direct route to get to its billets. Again a 1:200000 map does not show the fullness of the curvature of the road and the actual distances will exceed the amount scaled on the map.

To show the difference between the most direct route and the route actually followed, let us consider a small unit, the 3rd Machine Gun Battalion. The final 240 kilometers of its march would have been 200 kilometers on the main and best road. Had it followed this road, at least, three very difficult hills would have been avoided at Temmels, Pierspont and Berncastel. Of the thirteen halts in Germany six were off of the most direct route, varying from six to eighteen kilometers out of the way. In one case a day's march only advanced the battalion four kilometers towards its final destination.

Orders reached battalion commanders at midnight or later—their maps then had to be studied and the day's march planned, and the orders issued.

The staff of higher units made some mistakes due to the small scale maps used and the human equation. To give concrete cases the same unit mentioned above will be referred to; one day's objective was to be given it on the march. It was, but was not given to the billeting party and the finding of quarters had to be done after dark and after a hard day's march. Another day its town was changed after it had billeted and got all set, because there was no bridge, altho there was a perfectly good ferry, to the road for its tommorrow's advance. This added eight kilometers to the day's hike—and most of which had been over steep hills in single file or column of twos. On arriving at their new town it was found to be occupied by another battalion whose commanding officers ranked that of the 3rd Machine Gun Battalion and refused him billets—but this was finally settled and no more changing was done that night. On another day this same outfit had orders to be at a certain point at 8:15 A. M. to take its place in column. This required first call at about 2:30 A. M. The battalion reached its town at 8:15 A. M. but waited until after 11:00 A. M. for the troops it was to follow to come along.

These things were largely unavoidable, because of the billeting accomodation, the necessity for dividing up the roads and the military situation.

The march of the Third Army was one of the most remarkable, if not the most remarkable in history. The roads had been terribly cut up by the retreating German Army, some were impassable and wide detours had to be made. The weather was cold and inclement; the troops had no opportunity to rest and equip themselves for the march after taking part in the final battle. The terrain was very rugged, especially in the last half of the advance. The Third Division encountered in the valley of the Saar, one way country roads, steep hills and men had to be detailed to help the wagons up the hills and tractors were used to help the trucks.

Sore feet were very prevalent, caused by ill fitting shoes or new English shoes which were issued just before beginning the march in the 4th Division, while in the 3rd Division, they failed to get any to issue before the beginning of the advance and men marched wearing shoes with practically no soles. The 4th Division evacuated about 2,000 to the hospital on the march, of whom about one-sixth were evacuated for foot trouble. The rifle and the full packs made the riflemen's burden very heavy and some fell out when they could not go any further and caught up somehow and some time. The machine gunners had no rifles and some of their blankets were on the machine gun carts and almost none dropped out of ranks.

SUPPLY.

Supply was a difficult problem. There is only one first-class railroad thru the area of the 3rd Army's advance into Germany, altho one branches off from it at Trier. From railhead on this line trucks carried the rations to distributing points where they were delivered to the field trains or organizations. On December 4th, Trier was railhead for the 3rd Division, the right of this division was at Nonnweiler, 36 kilometers distant over which the day's rations and forage had to be hauled; about 80,000 pounds for man and 150,000 pounds for animals.

It is not remarkable that there were times when some units did not get their rations. Some days recall could have been appropriately sounded after mess-call. These trains had to function at night over bad roads, in an alien country, where those in charge of them did not know the roads and often could not speak the language to inquire the way. In many cases the roads were actually dangerous at night.

BILLETING.

Billeting parties were sent ahead in order that the troops could go at once to their quarters upon arrival at their halting place for the night.

PLAN OF ACTION IN CASE OF HOSTILITIES BEING RESUMED.

The mission of the 4th Corps, with headquarters at Cochem, was to remain west of the Rhine and north of the Moselle in support of the 3rd Corps.

The 3rd Corps, with headquarters at Neuweid, had for its mission the holding of the American sector of the Coblenz bridgehead; to hold itself ready for offensive action in case of resumption of hostilities, and to cover the crossing of the Rhine by the 4th Corps, on December 28th.

The 1st Division held the right of the sector, the 32nd, the left with the 2nd in support. The 1st Division held its sector with regiments abreast and distributed in depth. The 2nd Division was in the same formation; its 3rd Brigade was in corps reserve and the Marine Brigade held the valleys of the Rhine and the Wied.

The areas held by each division are shown by the accompanying map.

The 3rd Army Corps on December 18, 1918 specified a plan of action to be followed in the case of the resumption of hostilities. Each division was given a specific mission. The 2nd Division was to be Corps reserves. The order contemplated that the 42nd and 3rd Divisions would pass from the 4th to the 3rd Army Corps and cross the Rhine.

The order provided for an outpost zone, zone of principle resistance, reserve zone and barrage zone. It gave the urgency of the work of organization as the (1) marking out of trenches, (2) marking out of wire belts on the line of resistance, (3) construction of wire obstacles, (4) the construction of trenches. This order also prescribed the method of distributing the troops within the zones, and the line of action to be followed in case of attack.

The attached map indicates the lines prescribed by Corps orders.

PLAN OF ACTION IN CASE GERMANY REFUSED TO SIGN THE PEACE TREATY.

The German representatives at the Peace Conference made counter-proposals, seeking better peace terms for themselves. On June 16th, 1919 the "Council of Four" replied, rejecting in the main, all of their pleas. The German was given five days in which to sign; this time was later extended by two days, which gave them until 6:49 P. M., (Paris time) June 23, 1919. The Allies made active preparations to renounce the Armistice and to advance into Germany in case of a refused to sign.

The plan for the American Army was to advance, in conjunction with her allies, and seize Kirchain and Frankenberg on the first day and separate northern from southern Germany, and from those positions seize the seat of government. These places are about 75 kilometers northeast from the outer perimeter of the bridgehead. The movement was to be made by one division in trucks, one division marching, and a French cavalry division covering the left of the American Army. The 3rd Division was to cross the Rhine on "D"

day and support the 3rd Corps. The First Division was to be the leading troops. Its plan was to advance in two columns, the 2nd Infantry Brigade, with attached artillery and engineers, on the right would follow the Montabauer-Limburg Road and parallel the railroad to Kircham. The 1st Infantry Brigade with attached troops would constitute the left column and advance via the Obersain-Hohn Road.

On D-3 days, the concentration of the troops to take part in the advance began in the vicinity of the roads on which they were to move.

Everything was set for the advance, but the Hun decided that he would rather sign than fight and indicated that such was his intention, so there was no necessity to resume hostilities.

THE HOMEGOING OF THE DIVISIONS.

The 42nd Division was the first to leave, in April, 1919. The 4th Division took over its area.

April 18th sees the beginning of the homeward move of the 32nd Division. Its area was taken over by the 1st and 2nd.

The 89th Division was turned over to the SOS in May to be shipped home and the 90th began leaving May 17th.

On July 9th the 4th Division began leaving for home and on July 16th the 2nd Division started back. The 1st Division took over the sector of the 2nd Division and held the whole of the American bridgehead sector.

The 3rd Division started for home August 5th.

The 1st Division began entraining for the port of embarkation August 15th.

THE END OF THE THIRD ARMY.

In July, 1919, the Third Army was dissolved and the troops remaining in occupied Germany became the American Forces in Germany. The A. F. G. held the American sector of the Coblenz Bridgehead and an area extending roughly 40 kilometers west of the Rhine and 50 kilometers north of the Moselle.

On the departure of the 1st Division the 8th Infantry, 2nd Battalion, 6th Field Artillery and the 7th Machine Gun Battalion with other minor organizations were the garrisoning forces. The 8th Infantry held the whole American Bridgehead sector, one battalion being used as perimeter guards.

Later a provisional brigade, composed of the 5th and 50th Infantry, which had been organized to go to Silesia was added to the American Forces in Germany. Our government decided not to send troops there, and this brigade was sent to Germany instead, and arrived in November, 1919.

The 50th Infantry became inactive in January, 1922 and the 5th returned to the United States in March, 1922. The newspapers tell us that all of the American troops are home from Germany, having been ordered back by President Harding in January, 1923.

MILITARY GOVERNMENT OF GERMANY AND RELATIONS WITH LUXEMBURG.

The dealings with the American Army of Occupation with the civil population divides itself into two phases.

1. The advance thru Luxemburg.
2. The advance thru and occupation of Germany.

THE ADVANCE THRU LUXEMBURG.

Eight divisions passed thru the Grand Duchy of Luxemburg and two billeted within its borders. The people and authorities of this little domain offered no opposition to this use of their territory and the civil authorities co-operated cordially with the American Army.

If an offense was committed against our army, the civil authorities arrested the offenders and tried and punished them in their courts.

The government of Luxemburg complied with every request made on it, except one. They had ordered a plebiscite to decide upon an economic alliance either with France or Belgium. The Allies did not desire

this action taken until the Peace terms had been agreed upon, but the Minister of State declined to postpone the voting until he was told that if he did not, the American Army would stop the election.

A proclamation was issued defining the policies of the American Army towards the inhabitants which was, of course, different from what it was to be in the German territory.

Civil affairs in the Grand Duchy were regulated by a representative of the Officer in Charge of Civil Affairs of G. H. Q.

In Luxemburg billeting and payment therefor were provided for by arrangement with the Government.

THE ADVANCE THRU AND OCCUPATION OF GERMANY.

The territory held by the American Army of Occupation had a population of about one million and an area of about 3,000 square miles. There are two large towns, Trier 45,000 and Coblenz 65,000. Most of the area was a rich agricultural and wine producing country, the people living in small towns and villages.

The inhabitants are law-abiding and conservative and are very largely of the Roman Catholic faith. The delegates from the Rhine Province in the Reichstag have always been conservative. The German respect for authority made the task of governing them easy. To illustrate: a Machine Gun Battalion commander on arriving at the little town of Zell on the Moselle, found that his animals were without hay. The Burgomaster was called upon for the amount needed. In a few minutes the town crier was on the job, ringing his bell and giving out orders to the inhabitants who gathered around. In a few more minutes the citizens began coming from all parts of the town with little bundles of hay. The clerk of the town checked off on a big book each person as he or she made delivery and the mules had hay for their evening meal.

General Pershing's Proclamation to the People of Germany stated that the Army of the U. S. would take possession of and would occupy its share of Germany assigned it by the Allied military authority; the military rule and authority would be strict and implicit obedience would be exacted, but no law-abiding citizen need have any fear. All persons who obey the rules laid down by the military authorities will be protected in their persons, homes, religion and property. The American Army will govern in strict accordance with international law and the rules and customs of war. So far as your attitude and conduct make it possible, your local courts and governing bodies will be continued in operation under supervision of the American Army, except where they affect its rights and security.

The military government of occupied Germany divides itself into two phases:

1. While the troops were advancing to their areas.
2. During the occupation there of permanent areas.

DURING THE ADVANCE.

Preliminary instructions for the American Army provided that:

In entering Germany security of the march will be provided for and halts in towns avoided. On stopping in a town for the night or longer, the Commanding Officer will send for the Burgomaster, Chief of Police and other prominent officials; hand them copies of the proclamation of Marshal Foch and the Commander-in-Chief, inform them that military government has been established in the town and surrounding district, that its principal object is the security and efficiency of the American Army, that so long as the inhabitants conduct themselves quietly and peaceably, their laws would be continued in force under their local authorities. Should an official refuse to serve or be absent, the Commanding Officer will see that a successor is provided. The Commanding Officer will obtain a map showing the location of the principal buildings and institutions and will inquire if added police protection is needed and provide extra guards, if necessary. He will direct the Burgomaster to tell his people to avoid assembling in crowds and to go about their affairs quietly. He will prohibit the sale of liquors except light wine and beer, and their sale will be permitted only between 9:00 A. M. and 9:00 P. M.

He will direct the Burgomaster to forbid the sale or carrying of firearms or deadly weapons, and direct him to furnish billets for his officers, men and animals and such supplies as may be needed.

The march thru the Moselle Valley to the outer perimeter of the Coblenz bridgehead was made under these instructions and not a single hostile act was committed.

MILITARY GOVERNMENT AFTER THE FORCES REACHED THEIR AREA.

The simple rules for military government during the period the troops were advancing thru Germany would not suffice after the troops reached their destination. Therefore, an Officer in Charge of Civil Affairs was named and he functioned as a representative of G. H. Q., A. E. F., with headquarters at Treves. On December 13th, 1918, this officer issued Order No. one, which prescribed the organization to handle the administration of civil affairs in the American Zone of occupied Germany. It provided that: Army Corps and Division Commanders will detail officers to have charge of civil affairs on their staffs. Division Commanders will be in charge of civil affairs in their districts and detail an officer to have charge of civil affairs of each town or canton occupied. Army and Corps Commanders will take similar action in case of territory occupied by Army and Corps troops. Cantons not occupied will be inspected and regulated by officers detailed by the Commanding General of the army, corps or division controlling the area. The office of the Officer in charge of the civil affairs will be organized with the following departments: Public Works and Utilities, Fiscal Affairs, Sanitation and Public Health, Schools and Charitable Institutions, Legal Department.

COURTS:

Army corps and division commanders are authorized to appoint military commissions to try inhabitants offending against the laws of war or military government.

No death sentence will be carried into execution unless approved by the Commander-in-Chief. Army, corps and division commanders will appoint a superior provost court to consist of one officer, preferably a field officer for the district occupied by their troops. The maximum penalty this court can impose is six month's imprisonment and a fine of five thousand marks or both.

Commanding officers of each city, town or canton will appoint an inferior court. The maximum punishment it can impose is imprisonment for three months or a fine of one thousand marks or both. Officers appointing provost courts shall have power to approve, disapprove or mitigate the sentences of such courts.

No member of the American or Allied forces will be tried by any military commission of provost court.

This order provided for requisitioning of billets, fuel, forage and straw and food, the latter only under exceptional cases. It also changed time from German to International time and fixed the value of the mark.

Five cases were tried by military commissions, nearly five thousand—4809—cases were tried by provost courts by the middle of May, 1919. Over one million francs were collected in fines and deposited to the credit of the United States.

One case of collective punishment was administered at Kell. On three consecutive nights rocks were thrown at American soldiers. The culprits could not be discovered so the next day the inhabitants were ordered to remain in their houses from 7 P. M. until daylight for a period of two weeks.

Censorship was maintained over the press, post office, telegraph and telephone lines and the opera. It was carried too far in at least one case. In Treves a very good opera company was playing but the censor would not allow Madame Butterfly sung because an American naval officer in it was represented as having two wives.

FRATERNIZING.

On November 28, 1918, G. H. Q., A. E. F. issued an order against fraternizing and calling attention of the army to the fact that the Boche was still our enemy.

GERMANS REQUIRED TO SALUTE.

All German officers, soldiers, policemen and railroad workers in uniform were required to salute American officers.

LESSONS TO BE LEARNED
FROM THE
STUDY OF THE ADVANCE INTO AND THE OCCUPATION OF GERMANY.

Roads and railroads control the advance of any body of men by marching; the larger the body, the more important they become. The line of communication must be guarded all the way.

Staff work should be efficient. A poorly planned march, or a mistake that causes counter-marching, causes needless fatigue, and if the men know they are victims of blunders their morale is very much reduced.

A unit once in billits should not be moved until it is ready to take up its next days march, and should not be given its destination after it has started, unless the necessity is very great therefor.

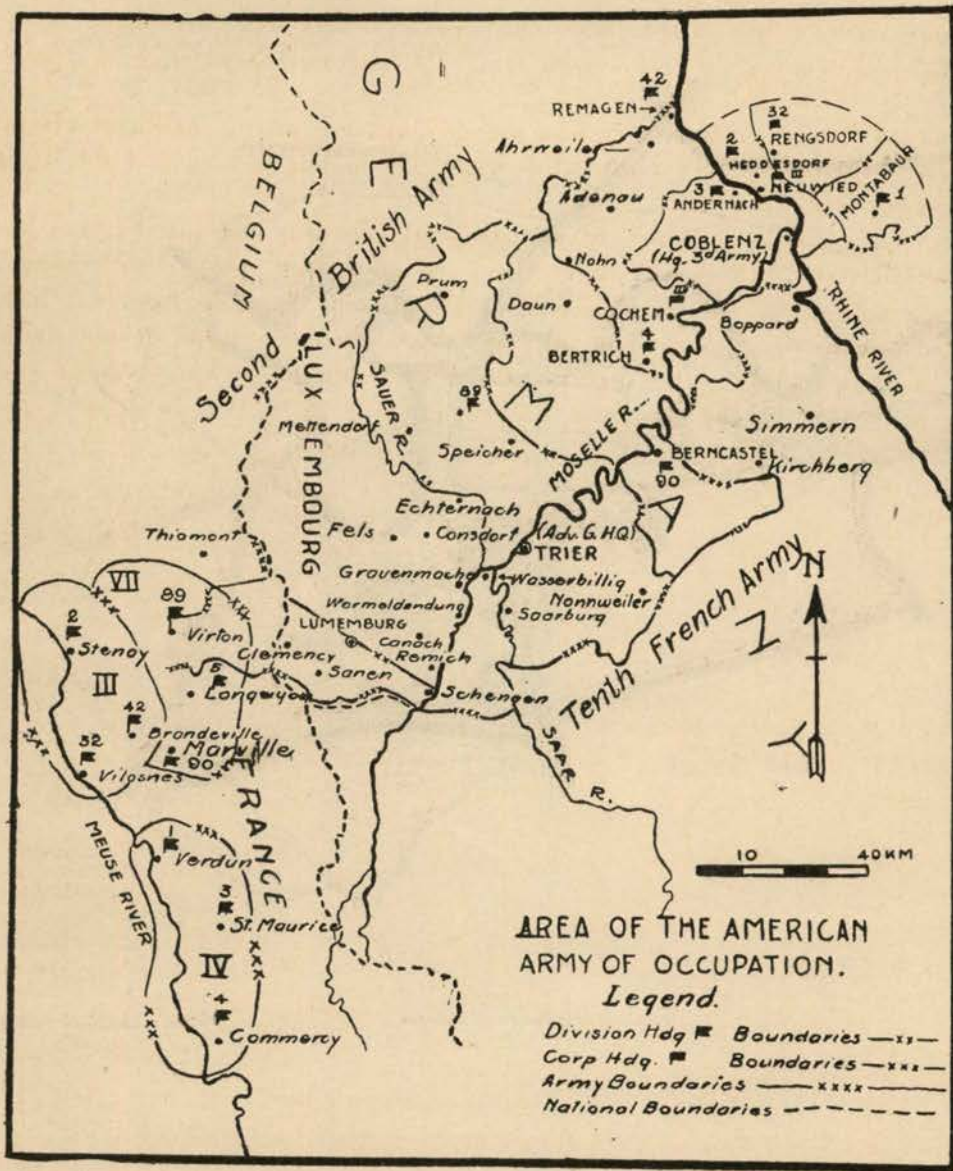
The marching man's foot deserves the best of treatment. He cannot go on indefinitely if they are not in good condition.

The full pack plus the rifle is too heavy for long marches without rests in inclement weather over bad roads, unless the necessity therefor is very great. Even where the morale is high and the discipline good, it will cause men to fall out from exhaustion.

The dealings with civil affairs in an occupied country should be firm and just but not harsh. Local governments should be interfered with as little as possible, and only when absolutely necessary.

The ridiculous must be avoided. If the American naval officer in "Madame Butterfly" had two wives, leave him to his fate and let the play go on. The army and the marines may learn, in time, from the Navy!

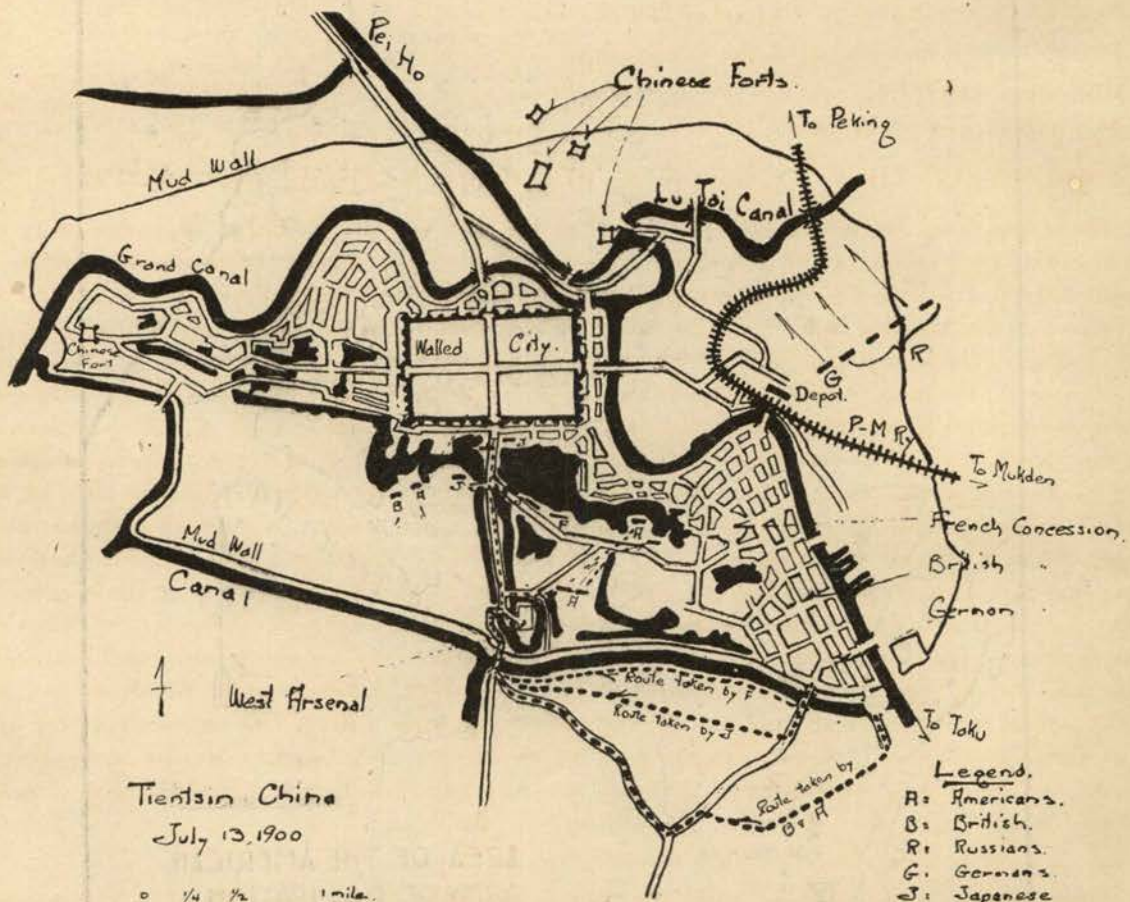
References:— Final Report of General Pershing; New York Times Current History, The European War; The History of the 3rd Division; History of the 1st Division; The 4th Division in the World War; The 32nd Division in the World War; History of the 89th Division; The 5th Division in the World War; History of the 7th Infantry Brigade, Personal experience of the Author.



AREA OF THE AMERICAN
ARMY OF OCCUPATION.

Legend.

- Division Hdq. Boundaries —■—
- Corp Hdq. Boundaries —■—
- Army Boundaries —xxx—
- National Boundaries ———



Tientsin China
July 13, 1900

0 1/4 1/2 1 mile.

From Japanese sources.

Legend.

- A: Americans.
- B: British.
- R: Russians.
- G: Germans.
- J: Japanese.
- F: French.

Heavy shading, water.

PART IV

ARTICLES OF SPECIAL INTEREST

THE CAUSES OF THE BOXER UPRISING AND THE BATTLE OF TIENTSIN.

By

Lieutenant Colonel Benjamin E. Pope, Infantry.

With respect to their sequence—for who may be so bold as to assert that this or that was the deciding factor—the specific causes of the Boxer Uprising in 1900 may be given as follows:

- a. Unscrupulous rapacity of European Nations and Capital.
- b. Ill-timed reforms proposed by the Emperor Kwang Su.
- c. Missionary activities.
- d. The influence of geography.

UNSCRUPULOUS RAPACITY OF EUROPEAN NATIONS AND CAPITAL.

The Boxer Uprising in 1900 had its beginning in the outcome of the Chino—Japanese War which terminated in 1895. Japan's easy victory over her ancient and decrepit master—ininitely her superior in population and potential resources—broadcasted the shameful condition to which China had sunk under the ruinous regime of the Manchu Dynasty. The flabby government in Peking under the dominance of the Dowager Empress—a glorified concubine—and her satellites—has never before or since been in such a deplorable state of administrative decay. All honesty, integrity, and patriotism were dead. The splendid government established by the Ming Dynasty on the ruins left by the Mongols in 1355—which in 1618 had been seized by the Manchus through an act of treachery—had been bloodsucked and milked dry, by a series of utterly incompetent and densely ignorant rulers. It speaks all the more highly of the splendid machine built by the Mings, that it ran for nearly three hundred years in spite of neglect and abuse. It seemed that the oft heralded (but none-the-less mythical) breaking up of China was at hand; and from 1895 to 1899 that side of the Pacific became a veritable Eldorado for concession seekers. The delirious scramble of these agents of European powers, and European capital, for railway and mining concessions, naval bases—anything and everything that had dirty dollars attached to it—was an edifying spectacle of foreign rapacity and unscrupulousness, to Chinese officials. It is to the everlasting credit of our government that we kept our hands in our own pockets. Our keeping out of this free for all, and our subsequent treatment of China, has endeared us for all time to Chinese of all classes. Not so the Europeans, for without distinction they lost face during those days of diplomatic rapine and commercial skullduggery, that may never be regained. Briefly, the major acts of violence perpetrated on China during this period are as follows:

1. The seizure of Formosa, Pescadores and Korea by Japan.
2. Russia acquired the right to build the Siberian Railway through Manchuria to Vladivostok. Japan finished it.
3. France secured a railway concession in Kwangsi.
4. Land concessions in treaty ports on the Yangtze and in Tientsin given to various powers.
5. England secured administrative control over the Peking Mukden Railway.
6. England was granted the leased territory of Weihaiwei.
7. Russia took Port Arthur.
8. Germany seized Kaiiochow in Shantung and obtained with it certain mining rights.
9. France and Belgium granted the Peking-Hankow Railway concession, construction only.
10. Germany granted the Tsingtao—Tsinanfu Railway concession.
11. France granted a lease on Kwangchow in Kwangtun.

Well-informed Chinese saw China parting with a large portion of her autonomy in these promiscuous

and comprehensive grants of concessions to foreigners. Ill-will was engendered by granting rights vested in private owners, where Chinese were already on the ground and had been at work for centuries; but the rightful owners were unceremoniously ousted either by dispossession, or by terms that left the Chinese no option but to sell. In all cases the Chinese mine operators and owners felt the competition very keenly, as foreigners worked their mines under total freedom from official extortion and oppression, which gave them a distinct advantage over Chinese concerns.

The doctrines of Confucius are for the literati of China more than a religion. They are the ethical system for all times and conditions—they are the basis of the state and the foundation of the government and society. His descendants who live now on the estates of the family near his tomb in Shantung receive the veneration if not the adoration of the Chinese, high and low. Their unbroken lineage can be traced back through more centuries than that of any monarch in the world. At Yu Chow-tu in Shantung, where Confucius lived and is buried, is the great family cemetery covering 600 acres, and containing the bones of the Confucian clan in all its branches for 2500 years. The Duke of Confucius—head of the family—holds rank and title more indisputable than that of any human being on earth. Through rebellions, revolutions, and changes of dynasty the Dukes of Confucius have continued to be venerated by the common people and honored by the rulers of China as the foremost subjects of the nation. Any encroachment upon their rights is sacrilege, and any failure of governmental respect to their illustrious progenitor an insult to all Chinese. German stupidity and grossness of intellect overlooked these factors in taking the leasehold on Shantung, and Japan, the Hun of the East, made the same mistake when she followed in the footsteps of the Hun of the West.

ILL-TIMED REFORMS OF THE EMPEROR KWANG HSU.

In the summer of 1898 the Emperor Kwang Hsu, who had previously left all governmental affairs to his aunt—the Dowager Empress—suddenly took over the running of governmental affairs. The Emperor was still a young man, well educated, and ambitious for his country's welfare; but he chose the worst possible moment to attempt to execute the plans he had in mind. He gathered about him the most radical reformers in the country, and for 100 days issued edict after edict which threw down established institutions and set up new ones. Manchu nobles were to be sent abroad to benefit by travel and such mental development as might be acquired thereby. Temples were to be replaced by schools in every district and prefect in which the learning of "Foreign Devils" was to be taught, and in the provincial cities universities were to be established. He instituted a governmental Bureau of Railways and one of Mines; an Intelligence Department; Patent Department; proposed extensive Army reforms; encouraged the publication of newspapers, which heretofore had been studiously repressed; and abolished all sinecures. The only regret is that China was to wholly unprepared for such sweeping reforms, and that they were never put into effect—but the nation paid him the compliment of being dumbfounded at his brilliant conception, and his courage in attempting the impossible. From a dispassionate point of view I advance the theory that these ideas were one part Kwang Hsu's and ten parts foreign diplomatic advice. However, the Dowager opposed and quietly but firmly took control. The Emperor was lead gently away to a nice secluded place where he died quite mysteriously. The reactionary group rallied to the Dowager, all the reform edicts were nullified, and many reformers were sent hastily to join their ancestors. A similar reaction took place in the provinces. Chagrin at the defeat by Japan had led to an increased interest in, and demand for, Western learning; and many societies had been formed for the purpose of translating Western books into Chinese. The change came with acts of aggression by the foreign powers, and originated in Shantung,

MISSIONARY ACTIVITIES.

I have spoken of the influence that the doctrines of Confucius have upon the educated Chinese, and to a lesser extent the other predominating cults of China (Buddhism and Taoism) have a strong hold on the masses. For this reason all classes have constantly opposed the introduction of Cristianity by missionaries, who were generally tactless, quite frequently uneducated, very often uncultured, and always aggressive and pushing. The classes saw in Christianity a menace to their revered system (Chinese have no religion), and the masses saw in it a conflict with their easy-going and unreasoned practices. Due to increased activity by the missionaries during the period in question (they saw the golden opportunity as quickly as did their more

sinister brethren) Christianity became identified in the popular mind of China with general foreign aggression, and was looked upon as an attack upon Chinese institutions in a most vital quarter.]

It is true that much ill feeling had been engendered through favors and preferences shown to Chinese converts to Christianity in law suits, through the meddling of missionaries; and it was equally true that many bad characters were admitted to the ranks of converts, unknowingly; but the Imperial edict issued in Peking in June 1900 assigning these two factors as the cause of the Boxer uprising is not wholly true, though the missionaries must accept a share of the responsibility for their aggressive and tactless activities. Thus the Germans set up a claim to have Shantung regarded as exclusively within their sphere of influence, and Bishop Anzer (Catholic) was used by the German Government to further its political ends. His first step was to urge upon the Pope that all German Catholics should be placed under German protection. The matter was left in Bishop Anzer's hands and he at once carried out the desired transfer. He then assumed an offensive and dictatorial attitude towards the government bureau of foreign affairs, and towards all district governors. Finally to put the climax to his proceedings he obtained permission to build a cathedral in Yu Chow-fu—where Confucius lived, where all the living members of the clan reside, and where their ancestors are buried. This cathedral was actually begun, and its building—never completed—led to the killing of two German missionaries—which in turn furnished the pretext for the seizure of Shantung by Germany.

THE INFLUENCE OF GEOGRAPHY

The coast line of China from Hangchow—the first large port south of Shanghai—to the mouth of the Pei Ho, which is the gateway from Peking to the sea, is convex; and the distance by this route is not far short of a thousand miles. Consider moreover that at certain seasons of the year every one of these thousand miles contains innumerable perils and hazards even for modern vessels of large tonnage. Back in the days when Athens was approaching the zenith of its glory, and Rome was beginning to appear on the horizon, the Chinese became aware of these geographical facts and looked about for a solution. They found it in the Grand Canal, one of the most marvelous conceptions of mankind, and an engineering feat of no inconsiderable size. Strictly speaking it is not—and was not—a canal, but a series of abandoned river beds, lakes and marshes connected by cuttings of no importance and fed by streams along its route. It extended almost due south from Peking through the heart of the Great Plains (a region as level as a billiard table) a little over 700 miles to its terminus (today) at Hangchow in Chekiang. In the Halcyon Days of China, when the Canal was in working order, there was uninterrupted communication by it from Peking to Canton, a distance of more than 1200 miles. The section between the Yangtze and the Yellor River was begun about 486 B. C.; a thousand years later the section south of the Yangtze was built; and in the 13th Century the northern section was completed.

It was built primarily for the reason given, but was used in the main to transport the tribute rice from the Yangtze valley (and the southern provinces) to Peking—thus ensuring safe and sure delivery. From this it derived its name of Yun Liang Ho, or Tribute Bearing River. Needless to say it was also used for commerce in general (in preference to the longer and more hazardous route by sea) until the advent of modern vessels, when it fell into neglect and disrepair. However it is still used in certain sections, and when China becomes a going concern again it will be repaired and regain its importance as a vital artery of interior trade. The plans have all been made, the capital is available—from foreign sources—and all that's needed is for China to clean house and behave.

Each provincial governor through whose territory the Canal passed was given certain sums for transportation, with the usual squeeze—money to prevent delays. In addition to this each governor was charged with the maintenance of the canal, and for this was given another allowance. Under the Manchu Dynasty this latter fact was largely the cause for the Canal not being kept in proper shape, since the provincial governors put most of the repair money into their pockets, instead of into the up-keep of the Canal. When the provincial officials, and those who handled the appropriations for the Canal in Peking, realized that with the passing of the Canal a handsome source of revenue to them would likewise go into a decline they arranged it so that the tribute shipments might still be carried on for many years, in theory. To convey this imaginary rice they constructed a fleet of imaginary boats, at government expense. Then not content with this they periodically destroyed their imaginary fleet and rebuilt it—for which the government likewise paid. Storms are frequent

and violent in North China at certain seasons, and I have no doubt that many a crooked poor man made his fortune over night in this manner. In any event it is certain that these practices added to the income of a large body of enterprising and poorly paid officials.

For the major portion of its course south from Tientsin the Grand Canal lies between two north and south lines of railway—the Peking-Hankow on the west and the Tientsin-Pukow on the east. From the latter there is a branch line running east from Tsinanfu to Tsingtao. Construction on the Kinhan (as the Peking-Hankow is called for brevity) was begun in 1898, for the Chinese Government by French and Belgians. A year later the Germans began constructing their road, the Shantung (for short), and the Tsinpu (Tientsin-Pukow) line was projected by English and German interests (combined) for the Chinese Government. These railway projects met with vast popular opposition on the part of boatmen on the rivers and canals, carters, coolie porters and burden bearers, and all others engaged in transportation. It took little intelligence to realize that they might easily be driven out of business by this iron horse who could draw in a single load, goods enough to keep them busy—by their primitive methods—for many weeks. Again, proud cities which owed their importance to facilities affording shipment by river or canal, found themselves on the verge of being reduced to insignificance by the diversion (to the adjacent railways) of all the traffic that had been the mainstay of their prosperity for centuries. The lower classes, and those most affected, were too ignorant to realize the full value of industrial improvements. The average Chinese—and this is especially true of the lower classes, who live hard and die hard—thinks only of self and what today holds for him. He is not at all concerned with his neighbor or the country at large, or with national or local issues that do not directly affect him; or with what may happen tomorrow. Hence it was not realized that wide areas which had struggled through centuries with limited advantages and primitive methods, would be immeasurably benefited by the coming of the iron horse of the “Foreign Devil”.

The foremost of the three great natural divisions into which China is ordinarily divided when considered geographically, is the basin of the Hoang Ho or Yellow River. The area of this basin is about 600,000 square miles, and the length of the river itself is approximately 2,500 miles. In this area there is a population of 100,000,000 people, and it is generally accepted as being the original home in Eastern Asia of the Chinese we know today. The Hoang Ho has been fittingly called China's Sorrow, for from time immemorial it has periodically broken its banks and devastated the surrounding country. It has another disconcerting and deplorable habit of wandering about, seeking a new outlet to the sea. Prior to 1194 the river flowed down what is now the Pei Ho, past Tientsin, and emptied into the Gulf of Chili. Then in the year mentioned it swung over 400 miles south and emptied into the Yellow Sea below Shantung. In 1852 it picked up its mouth and moved north 200 miles to its present channel, emptying again into the Gulf of Chili. Nine times has it executed this shift since 600 B. C., and always with terrific loss of life and property in the region over which it wanders. It may be of interest to state that foreign engineers and scientists (who have made a study of this river) assert that another change of course is about due. This shifting and overflowing, or breaking the banks is in the main due to the enormous amount of silt carried by the river—the amount being so large that it raises the river bed above the level of the surrounding country, and any increase in the volume of water spills it over on the Great Plains.

Enormous sums of money have been spent in the construction of dykes, and the natural banks have been reenforced with stone for mile after mile, but all to no purpose as the floods occur every few years, leaving death and devastation throughout the low region it traverses. I ask you to ponder a moment on the mental status, the indomitable courage and perseverance, of a people who for forty-odd centuries have measured their strength against such a Titan racing past their homes, at times ten or fifteen feet above the level of their fields—and confined only by walls of their own construction. While they have not always succeeded in controlling the river, they have never failed to try again. Literally millions of lives and billions of dollars worth of property have been sacrificed to the whims of this ravenous, monstrous, vagrant; and this condition will continue until proper measures of conservancy and afforestation have been applied.

At this point—to lend emphasis to what will follow—let me sum up briefly what has been presented so far as showing the causes of the Boxer outbreak:

Great Taiping Rebellion

1. The loss of the Pescadores, Formosa, and Korea to Japan—as the result of wholly unnecessary conflict brought on purely for purpose of conquest by the Japanese.

2. The aggressive policy of England, Russia, and Germany (in the main) and their nationals, in obtaining concessions, China being compelled to acquiesce by threats. This leading those in control of China's government to recognize that any further advance of the foreigner would cause complete subjection of China. Naturally then the governing class connived at the Boxer movement—but half heartedly, as is shown by fact that Legations in Peking could have been wiped out any time; and further by the cessation of hostilities by Chinese frequently to send in presents of ice, fruit, and fresh vegetables to the besieged.

3. Friction and unrest among the lower classes caused by introduction of railways, and granting concessions to syndicates in violation of rights of lawful owners.

4. The ill-timed reforms proposed by the Emperor, which were entirely too radical and which only added fuel to the flames. Also gave reactionaries a distinct rallying point and resulted in their assuming control of affairs.

5. The anti-missionary feeling, partly from ignorance, and partly from the fault of the missionaries.

6. The influence of geography.

In a previous paragraph I spoke of several cults that pass (one might say) for religious beliefs among the Chinese, but I left out another cult that has a powerful hold not only on Chinese but on all humans, in some form or other—and that is necromancy. When a wealthy Chinese builds a house he chooses a site not because it is sheltered, or amid attractive surroundings, but because a necromancer tells him that there the Feng Shui will be propitious or properly compensated. Feng Shui literally means wind and water, but in Chinese necromancy it is applied to any two factors that tend to balance or compensate each other—as male and female, night and day, north and south. If the Feng Shui is not propitious it means that one or the other is going to dominate and the result may be good or bad—no one can tell beforehand. There is one saving thing and that is that evil Feng Shui can only proceed in a straight line and that is why you find screens in front of Chinese doorways or entrances to courtyards, made of mud or brick. The evil spirit cannot turn the corner of the screen and so cannot enter. You will hear of many instances where Feng Shui plays a part in Chinese life and customs, and all will seem vastly amusing and inconsequential until you consider it from another angle. We know it to be literal truth that geography plays an immensely important part in the destiny of human beings, either as individuals or as nations. An educated Chinese then, hearing a lecture on The Influence of Geography on the World War, might very well from his point of view call it nice, high-grade necromancy, and I myself cannot see where he is far off the track. Thus we may say that Feng Shui, the Grand Canal, and the Yellow River just about caused the Boxer uprising. For on top of all that I have recounted, in 1898 the Yellow River ripped through its banks northeast of Tsinanfu, swept away 1500 villages completely and then worked still greater havoc in the region to the southwest. Prior to this there had been poor harvests for several seasons and this final calamity made the winter of 1898—99, and the year that followed, a period of intense misery for the inhabitants of southern Chili and western Shantung. The uprising that followed was in its inception anti-dynastic and anti-bureaucratic; was fostered by organizations making capital of the misery and distress of the populace; and was actuated originally by identically the same motives that finally brought on the revolution in 1912 which overthrew the Manchu Dynasty and established the present Republic. The officials in 1898 however succeeded in diverting it against the foreigner, and from anti-dynastic it became anti-foreign, raging unchecked until it got hopelessly beyond the control of the authorities.

The society mainly responsible for spreading the movement was called the I'ho Ch'uan, meaning the Righteous Harmony Fist, or Fist of Equality. Europeans gave its members the name of Boxers from the use of the word fist, and from the gymnastic exercises they practiced. They were for a long time treated with ridicule and contempt by most foreigners, who failed to see how dangerous they might become. Membership in this society was gained by undergoing initiation, and thereafter one was supposed to be invulnerable, and demonstrations (carefully arranged) were frequently given to prove this. In the event that something miscarried and the subject of the demonstration was killed, it was very conveniently announced that he was wanting in faith. They also indulged in dances and incantations while attacking. All this was for the purpose

of arousing the masses to action in spite of their dense ignorance and lack of national spirit. This movement had its beginning, as I have said, in Shantung, the scene of the grossest acts of transgression, committed by Germany. It might be well to add here that the most prominent foreigners killed during the siege of the Legations in Peking were the German Minister and the Chancellor of the Japanese Legation—some slight compensation for one who chooses to view it in that light.

THE BOXER UPRISING.

Early in 1900 missionaries reported the seriousness of the situation to their Legations in Peking, but the warnings went unheeded until too late. After the abdication of the Emperor in January the son of Prince Tuan was appointed in his stead. Prince Tuan was the real leader of the Boxer party, and since his son was an infant this placed him in the position of chief adviser to the Dowager who held control throughout. Her purpose was to use Tuan for what he was worth, as she would profit whether the movement was successful or not. From this moment the rebellion spread like wildfire and Boxers drilled openly in the streets of Peking and Tientsin; and regular Chinese troops allied themselves with the Boxers. At this time Russia was parlying to keep off all cooperation by foreign powers, so that she could step in herself and save the situation single handed, and then put over her scheme of dominance in Manchuria and Mongolia. This policy turned the advisers of the Dowager in favor of anything (Boxers or what not) to block Russia.

In spite of the reports of the missionaries—and because of Russia's actions—there was an aversion on the part of the powers towards making a show of force, or of bringing troops to Peking to guard the Legations. However, action was forced by the destruction of railway property and the homes of foreigners at Paotingfu, by Boxers, on May 27th, 1900—together with the murder of a number of foreigners. This was a signal that could not be overlooked and the foreign Legations asked to be allowed to bring Marines from the 20 allied war vessels at Taku, to protect the Legations. When the Chinese government objected it was decided to bring them anyhow. Admiral Kempff, in command of our ships, sent a mixed force of 114 marines and sailors with two machine guns, and one field piece to Tientsin on May 29th. These were the first foreign troops to arrive in Tientsin. Next day a guard from the ships of five nations arrived, and permission was asked to send a suitable force selected from this command to Peking. The government consented to each nation sending thirty men, but the following number was sent: seventy-five British, Russians and French, fifty-two Americans, thirty Italians and thirty Japanese—guards of similar strength being left in Tientsin. The Dowager at this display of force tried to suppress the Boxers with regular troops but was blocked in this by the efforts of Prince Tuan, indicating a series lack of harmony among those in control of the government.

On June 4th and 5th the railway was torn up between Peking and Tientsin—though the telegraph line was left untouched—and Fengtai only four miles from Peking (and the junction of the Peking-Mukden and Peking-Hankow Railways) was captured and the railway property destroyed. Messages were sent by the foreign Ministers to their consuls at Tientsin asking for immediate assistance, as the Legations were now virtually besieged and all communication cut off. Between May 30th and June 6th the allies had sent the following troops to Tientsin—of which approximately 400 had gone to Peking before the railway was cut: 206 British, 175 Americans, 150 Russians, 140 French, 412 Germans, 100 Japanese, 31 Austrians and 60 Cossacks.

The message of the Ministers in Peking was not received at Tientsin until the 10th, and at a meeting of the Consular Body it was decided that the help asked for should be sent without delay. This was against the advice of the Russian and French Consuls who wished to await the arrival of 2,000 Russians from Port Arthur (then on the way) but they were out-voted, and Admiral Seymore of the British Navy, in Command of the allied fleet at Taku, was asked to send as many men as he could spare. Admiral Seymore acted at once and arrived in Tientsin on the morning of the 11th with 500 British sailors and Marines, under command of Captain Jellicoe. The relief expedition was organized and left Tientsin that same day in three trains with material and railway engineers to reconstruct the road. The force was composed of 900 British, 200 Germans, 200 Russians, 200 French, 200 Japanese, 120 Americans, 100 Italians, and 25 Austrians, under the command of Admiral Seymour. They took rations for one week as it was supposed they would reach Peking in two days at the most. They had eight machine guns, six field guns and one six pounder. The day after they left the telegraph lines were cut, but during that day and most of the next they met slight opposition.

Finally on arriving at Lang Fang—about half way to Peking—the road was found to be torn up and they were attacked by Imperial troops with modern arms. They were compelled to retreat towards Tientsin, fighting night and day. On the 19th they abandoned the railway and took to junks on the river, as the bridge over the Pei Ho at Yangtsun had been destroyed. The reason for this disastrous turn of affairs will be briefly stated.

On June 6th a force of 7,000 foreign-drilled Chinese Imperial troops, with 60 guns, were ordered from Lutai to the Taku Forts, overland. On learning of the expected arrival of this force the British second in Command of the allied vessels of Taku notified the Commander of the Chinese troops that they be not allowed to enter the forts. On this notice being ignored the forts were bombarded by the allied fleet and captured on the 15th. Admiral Kempff commanding the American vessels wisely decided that as we were not at war with China such action was not justified. The reasons given for this attack were that it was feared that the Chinese were about to march on Tientsin, that they had ravaged Tongku, and were mining the mouth of the harbor. As against this it must be stated that the Chinese at Taku remained absolutely passive while troops and guns were being sent up to Tientsin; also that the commander of the powerful Peisang Forts intimated that he would take no action as long as he was not attacked, and this compact was carefully observed. Viewed in the light of subsequent events the action of Admiral Kempff appears to have been dictated by rare judgment, though he was relieved from command as a result of it. There is also no doubt that if we could obtain an accurate understanding of the circumstances in which the Chinese government was placed, it is not unlikely that in the precipitate action of the allied fleet commanders would be found the main factor in bringing to a head the terrible outbreak which immediately followed. It is a fact that on the night of June 16th when the Boxers attacked the Tientsin railway station the regular troops held themselves aloof, but on the afternoon of the 17th (after the fall of Taku) the Chinese field guns opened fire from the city, and from that time onward the troops and Boxers worked together.

President McKinley in a Message to Congress subsequently vindicated Admiral Kempff by stating that he took no part in the attack on the ground that we were not at war with China, and that a hostile demonstration might consolidate the anti-foreign elements, and strengthen the Boxers to oppose the Seymour Expedition. Which in fact it did. The troops that escaped from Taku, together with the 7,000 foreign-trained forces from Lutai, went immediately to Tientsin. On June 19th the Chinese government learning of the capture of Taku looked upon this as an act of war and called upon all the foreign representatives to leave Peking within twenty-four hours. The representatives asked for a delay and an interview, both of which were granted. While proceeding to this interview the German Minister was killed, whereupon the other Ministers gave up the proposed interview and decided to remain in Peking. That afternoon the Chinese opened fire on the Legations and the siege began.

The effect produced by the Taku attack was only what might have been expected, and one of the Consuls in Tientsin (hearing in advance of the proposal) said, that if Taku was taken it would sign the death warrant of every foreigner in the interior. This was near the literal truth, for the terrible series of massacres in the interior did not begin until after June 17th. The Chinese government in a decree dated June 29th stated "a war had thus been commenced which was none of our choosing, for if China should, regardless of her own power rush into war, was it likely that she would of her own accord elect to fight all the powers at once?" This overlooks the fact that the forts opened fire first, but not until notice had been sent that they would be taken by force, if they did not surrender at a given time. It may of course be said on the other side, that it was doubtful now how long the regular troops would have resisted the temptation to join the Boxers. Had they done so, and had the Taku Forts not been taken when they were, they (the forts) would undoubtedly have been strongly reenforced; the river communication intercepted; and all access to Tientsin severed. In that case not only would Admiral Seymour's column have been destroyed, but Tientsin must have fallen, and its destruction would have entailed that of the Legations in Peking, and might even have endangered Shanghai. It was a difficult question to decide and the admirals acted (as they deemed at the time) for the best, and they may have acted wisely. Still the difficulties in which the Chinese government was placed by this action should be recognized, and allowances made for the resulting consequences.

On the night of June 15th the Boxers besieged the foreign concessions in Tientsin, and two days later they were joined by the foreign drilled troops that had been at Lutai, and by those who escaped from the

Taku Forts. This made a total Chinese force of about 10,000 men with over sixty guns of various sizes, many of them large caliber Krupps of the newest and best model. Most of these guns were placed in the Yamen Fort, inside the Chinese City, but all were so placed that the foreign settlement was exposed to a constant cross-fire from at least seven different angles. The foreign concessions are contiguous to each other and separate from the Chinese city (but adjoining same) and the entire city was enclosed by a mud wall. The foreign force consisted in the main of the Russian Troops that had arrived from Port Arthur, together with a mixed force of about 700 allied troops. Had the Chinese known a little more of the science of war, or had they really fought in earnest, this allied force could have easily been defeated and the entire settlement wiped out; but they were the same old Chinese who in 1860 complained that the allies began operations so early that they could not get any sleep. In this present instance they would stop all firing for several hours at midday, for tiffin; and at night seldom fired after 10 o'clock nor before 4 o'clock in the morning.

On June 18th Major Waller with seven officers and 132 men of the Marine Corps arrived at Taku from Manila, and was ordered to join a force of 400 Russians who were then only twelve miles from Tientsin, preparing to advance to the relief of the foreigners in that city. On arriving at this point with his force—by using the railway, which had to be repaired as they advanced—a conference was held and it was decided to remain where they were and await the arrival of additional Russian and British troops. Early in the morning of June 21st the Russian Commander notified Major Waller that he had decided not to wait, and was going to advance that morning. The latter objected, thinking it unwise to proceed with so small a force, but he was over-ruled and reluctantly accompanied the Russians. This force advanced without opposition until they reached the Imperial Arsenal (three or four miles from Tientsin) where a force of about 2,000 Chinese troops was encountered. Here the opposition became very stubborn and the Russians promptly withdrew, leaving the small force of Marines to cover their retreat entirely unassisted, which in their customary gallant manner they were able to do. So well did Major Waller conduct this four hour stubborn retreat against terrific odds, that all the wounded were brought back by hand, and his force reached the rallying point at their previous camp with only four killed and nine wounded. During that afternoon and night reinforcements of 600 Russians, 600 British and small detachments of German, Italian and Japanese arrived. This brought the strength of the force to 2,000 men and an immediate advance was decided upon. They moved out the 23rd (this time Major Waller electing to accompany the British) and arrived at Tientsin the 24th meeting with slight resistance.

Admiral Seymour's expedition after leaving the railway on June 19th (and continuing the retreat on Tientsin by means of junks on the Pie Ho) made very slow progress, due to the fact that his men had to tow the junks while under fire. On the 21st their food, water and ammunition became very scarce, so they marched all night and next day captured the Hsiku Arsenal, eight miles north of Tientsin, and obtained large stores of munitions, as well as food and water. On the 26th a relief force from Tientsin effected a junction with Admiral Seymour's command, and both forces returned to Tientsin practically unmolested. On retiring an attempt was made to blow up the arsenal, but it was found afterwards that only a small portion of the stores had been destroyed. Many million dollars worth of arms and ammunition were on hand here, and in the subsequent advance on Peking the Russians occupied this Arsenal, quietly appropriated everything and sent it to Port Arthur.

The force in Tientsin was now adequate for the defense of that city—part of the command it is interesting to note being a regiment of Chinese troops under British officers from Weihaiwei which rendered excellent service—but it was evident that the powers must concentrate a large force at Tientsin for the relief of the Legations at Peking. Japan was near by, and ready to throw her full strength into the expedition, but she was not permitted to do so.

The combined efforts of Japan, Russia and Germany had made a muddle of Eastern affairs; the designs of Japan were all too apparent; and I believe it was realized that while the Legations should be relieved as soon as possible there was no immediate cause for alarm, as the Chinese had no apparent intention of carrying no more than a harassing siege at Peking. Had they wished to do so they could have overwhelmed the Legation defenders whenever it suited their purpose. Hence a concerted allied move was the only possible way to block the sinister designs of Japan or Russia, or both. As our contribution to this force the War Department

on June 16th ordered the 9th Infantry from the Philippines to China and at the same time set in motion other troops, but as the 9th was the only regiment to arrive in time for the Tientsin engagement, these others need not be considered.

OUTLINE OF CHINESE MILITARY FORCES.

Strictly speaking China had no standing army then, any more than it has had since, though certain forces were under the control of the government—by consent of the various provincial commanders, or Tuchuns. A brief description of the forces opposing the allies will now be given. The Boxers were practically unorganized and equipped with anything that came to hand, from bows and arrows to ancient flint-lock muskets. Alone they could have offered but slight resistance. In spite of much hokus-pokus, they were merely so many coolies out for a holliday; with little or no faith in their leaders, their cause, or themselves.

The Manchu Bannermen were direct descendents of the Scythians, who were great warriors and hunters. In the beginning the Manchu hunters were divided into small bands, each band having a banner of red, white, blue or yellow, for an assembly or rallying point; as well as to indicate which particular band was at work in any hunting area. When these men became soldiers (by natural stages) they retained their distinctive banners, and as the force grew in size the number of banners was increased by a combination of the above colors on field and border. The Bannermen had the duty of guarding the capital and protecting the person of the Emperor. They numbered 150,000 (of whom 10,000 were in Peking) organized into 150 companies. In the latter days of the Manchu Dynasty these Bannermen had lost all semblance of military bearing and fighting spirit, due to indolence and indifference. They had become pensioners, and the only quality that distinguished them from the civil element was their disinclination to work. They received just enough pay to keep them from starving, and their ranks were open only to their male descendants. The Bannermen were armed with bows and arrows which later gave place to rifles, which were seldom if ever used or cared for. All mounted soldiers in China are of Mongol or Manchu origin.

Quite as unmilitary as the Bannermen was the Army of the Green Standard. This was a force of 1,000,000 men, distributed equally among the provinces to act as constabulary and sedentary garrisons. Having few military duties their swords, bows and arrows, spears, and match-locks were hung up to rust and decay, except for periodical and infrequent musters and reviews. A third semi-irregular force was called the Braves, who volunteered for military service from time to time. They had no uniforms, but wore the character for "robust" on their jackets in front and "brave" on the back. In the Banner forces military titles were hereditary, and were set apart for military heroes. These titles were also retroactive at times, and might ennoble the ancestors of those upon whom they were conferred.

The foreign trained forces of China had their origin during the Taiping Rebellion, the greatest civil war that any country has ever known in point of casualties, it being estimated that from ten to twenty million Chinese were killed during the period of these hostilities, from 1850 to 64. Briefly stated the backbone of this rebellion was broken (and peace restored) by a picked force of 5,000 Chinese organized, trained, and lead by an American soldier of fortune, Frederick Townsend Ward. With a handful of white men of various nationalities for assistants, Ward undertook this work as a purely business proposition; made his headquarters near Shanghai; and recaptured cities (that the rebels had taken) for his price, paid invariably in advance—and until he was killed he was invariably successful with his force, which became known as the Ever Victorious Army. There is no doubt that if we had not at that time been engaged in our own Civil War, Ward would have received the recognition that he merited. Chinese Gordon, the British officer, took over command of this force—at the instance, and with the backing, of Li Hung Chang—after Ward's death, and made his reputation with it. The English unfairly give all the credit to Gordon, and pass Ward by as an adventurer. It is worth noting that the branch of the American Legion in Shanghai, several years ago discovered the grave of Ward; had it placed in suitable condition; and since that time have held special services there on the anniversary of his death. Before proceeding, this is proof enough of the fact that the Chinese can be made into good soldiers (especially those from the northern provinces) if they are under competent leaders. In 1859 Russia offered China 10,000 modern rifles, but the offer was refused because the Chinese knew that there would be a Russian with every gun.

Following the defeat of China by the French and English in 1860, prompt action was taken (with the assistance of the British) to produce a field force organized on European lines. As a result a fairly well trained force of about 20,000 soon took over the real military work from the Bannermen, and other haphazard forces, who were then used for replacements and second line troops. In 1891 there were some 200,000 foreign-drilled troops scattered throughout the Empire of varying degrees of efficiency. In 1895 the Krupp plant in Germany sent several groups of instructors to China, following the placement with them of a large order for small arms, field guns, ammunition, and material for establishing arsenals. As a result of this military schools were established at Hanking and later at Wuchung by the Germans, and met with great success. In 1899 the Japanese tried the same thing, but the venture proved unsuccessful, partly because sending Chinese to military schools in Japan proved much the better plan. The Germans up to the Boxer outbreak (when their schools were closed) had turned out about 8,000 well trained troops organized into battalions and sent to various stations to distribute the knowledge they had acquired. The German system of organization contemplated two battalions per regiment, four companies per battalion, three sections (each under an officer) per company, of 250 men. Infantry troops were armed with the 1881 Mauser, and the Artillery with Gruson type field guns, from 37 to 57 mm. As soon as the officers (always a weak link in any Chinese military scheme) got away from the supervision of foreign instructors, they proved a very poor success, due to lack of interest and real military spirit. Their habit of learning only by heart and not from reasoning—replacing personal ideas with maxims and quotations—seemed to produce atrophy of the mind, from which came lack of initiative, their chief fault. They gain surface knowledge very soon, but this is only a drawback since it increases their vanity, makes them self-satisfied, and unwilling to make an effort to comprehend what is explained. The best that foreign instruction, without vital foreign leadership, accomplished with Chinese troops was to make them good at close order drill. They knew nothing of rifle marksmanship, and practiced rather poorly only a few minor field maneuvers.

THE BATTLE OF TIENSIN.

At the time it was ordered to China, about the middle of June, 1900, the 9th Infantry was scattered about among various substations in Northern Luzon; and it is worth noting that the first official intimation it received that any move was contemplated, was a telegram to Regimental Headquarters advising that certain horses would accompany the regiment to Manila. The next intimation came from a civilian wagon-master, who reported to the Quartermaster in regard to wagon transportation for the China campaign. This sort of thing has happened so often as to become rather the rule than the exception in our service. The regiment consisting of 41 officers and 1230 enlisted men, under command of Colonel Emerson H. Liscum, arrived at Taku July 6th. Learning that the allied commanders in Tientsin desired that the regiment participate in an attack on the Chinese city, Colonel Liscum pressed forward with two battalions up the Pei Ho, leaving Lieutenant Colonel Coolidge to follow with the third battalion as soon as transportation (which was scarce) could be obtained. Colonel Liscum arrived at Tientsin on the 10th with five companies of his force and camped in the south east corner of the foreign concessions, across the canal from the old German barracks.

Major Waller was in command of the American troops in Tientsin at the time Colonel Liscum's command arrived, and advised the Colonel that an attack on the Chinese city was planned for the next morning. Colonel Liscum agreed to participate in it, but the order was revoked. On the 11th three more companies of the 9th Infantry arrived, making the total force under Colonel Liscum 15 officers and 575 enlisted men. On the 12th Colonel Robert L. Meade of the Marine Corps arrived with 12 officers and 300 men, making the total number of Marines 26 officers and 425 men. This officer was senior to Colonel Liscum, and superseded the latter in command of the American forces in Tientsin, or at least was the medium by which the council of foreign Generals (to which neither Colonel Meade or Liscum was admitted) communicated their orders to the American command. This was a most impossible situation since no order of the President had placed the marines and the army on duty as a single command.

The city of Tientsin in 1900 had a population of about 750,000 Chinese, and 1,000 foreigners of all nationalities. It was composed of two distinct municipalities, the Chinese occupying the north and west portions

of the city, and the foreigners the south and east portions. A mud wall enclosed the entire city, and this wall was known as San Kwo Lin's Folly, having been built by this Viceroy in 1870 in the vain hope of being able to keep obtrusive foreigners under efficient control. The distance from the north to south wall was 2 and two thirds miles and from the east to west 4 and one half miles. The Pei Ho River runs through the center of the foreign concessions, making their defense a difficult matter, as it necessitated a division of the foreign force in order to hold both sides of the river. In the center of the Chinese City was a locality enclosed by a brick wall—one mile from east to west and one-half mile from north to south—and within this walled city the attacking Chinese had located themselves, with auxiliary forces and guns disposed here and there around the east, and south flanks. The mud wall was 15 feet high and 15 feet wide at the top, and could be easily passed over by digging steps in its surface. The brick wall was 30 feet high and 16 feet wide at the top, and formed a somewhat formidable barrier at that time.

The British, French and Japanese commanders,—Brigadier General Fukushima, the senior commander—decided to attack the Chinese city on the morning of the 13th, in order to clear the route to Peking. Neither Colonels Meade or Liscum had an opportunity to make a reconnaissance of the terrain or to draw up proper plans. They were not invited to attend the councils of the allied commanders until all the plans had been made, for the foreign as well as for the American troops. At 5:00 P. M. on the 12th Colonel Liscum was called to a meeting of the allied commanders, and within about one-half hour returned to his headquarters and gave preparatory instructions, had rations cooked, ammunition issued, etc. He had in his possession a memorandum giving the list of troops with which the 9th Infantry would march out to the battlefield, and designating its place in column. Precise instructions as to his part in the attack had not apparently been communicated to him. Company A was sent that evening to the pontoon bridge (at the north end of the concessions) which was the means of access of our troops defending the railway depot (300 yards north of the bridge) to the east side of the river. Company E was designated to remain behind to guard the barracks, thus giving Colonel Liscum an effective force of 15 officers and 423 men with which to join in the attack. The men were awakened at 1:00 o'clock on the morning of the 13th, had breakfast, and were formed at 2:30 A. M. The regiment was to be the last organization in the left of three columns, and was to follow in its proper place as the left column passed by, and out the Taku Gate in the mud wall, near the quarters. The officers and men were busy making the necessary preparations most of the night and were consequently very much fatigued in the morning, as they had only a few hours sleep.

Before dawn on the 13th the allies commenced a heavy bombardment of the Chinese city, which was continued until midday. The intensity of this fire may be judged from the fact that 15,000 rounds were fired by the British guns alone during this time. The allies had a total of 40 guns of various caliber and 7 machine guns. The Chinese made scarcely any reply to this intense preparatory fire. The general plan contemplated an advance by three columns along separate routes to the West Arsenal, at which point definite orders would be issued to all subordinate commanders. On the east side of the river British colonial troops and sailors were to hold the railway depot, and an entirely disconnected force of 2,300 Russians and 250 Germans were to advance from the east against Chinese batteries along the Lu Tai Canal, at the northeast corner of the city.

A French force of about 600 men comprised the right column and advanced under cover of the mud wall to its assault position. The Japanese contingent of 1,500 men (4 battalions of Infantry, 1 squadron of Cavalry, 2 batteries of artillery of 6 guns each, and 1 company of Engineers) under General Fukushima, comprised the center column; and advanced about 500 yards from, and parallel to, the mud wall. Brigadier General Dorward of the British forces commanded the left column composed of Americans and British, the latter being a composite force of marines, sailors, colonials, and part of the Chinese regiment from Weihaiwei. The six companies of the 9th Infantry, together with the marines (organized as three companies of Infantry and one battery of Artillery of four 3-inch guns) joined General Dorward's column as it passed out the Taku Gate in the mud wall at 3:00 A. M., the marines leading. Several hundred yards south the column changed direction to the right and halted, to wait for daylight. As the light increased it moved on to the northwest (soon getting into low fields) and followed a course which brought it closer to the mud wall as the advance continued towards the West Arsenal—in fact the route of all three columns converged at this point. As General Dorward's column emerged into the open country—having previously been screened by trees and darkness—the Chinese opened an ineffective fire upon it.

As soon as the French and Japanese columns arrived opposite the West Arsenal their forces were aligned outside of (and along) the mud wall, the Japanese line extending three or four hundred yards to the left of the gate with the French on their right. Just within the mud wall (and surrounded by a moat) was the West Arsenal, on the right of the road. A few mud houses were on the left and from here the road stretched straight across the marshy and ditched open country to the South Gate of the Chinese walled city. When the head of General Dorward's column arrived opposite the gate the several organizations in succession deployed in echelon, facing north and about 1,000 yards from the mud wall. The 9th Infantry deployed in a single line, the right flank extending considerably further to the right than any organization in front of it. All were ordered to lie down. The sun was well up, the field was level and free from trees or brush, and a good view could be had of all operations in front. Japanese cavalry were protecting the left and rear, and their Infantry could be seen taking firing positions on the mud wall. A part of the British and all the American marines were sent to the mud wall, to the left of the Japanese.

The most favorable point to attack would seem at first sight to have been the angle of the city wall at its southwestern corner in order to avoid converging fire from the whole length of the south wall, and the auxiliary positions outside it; but a deep, wide canal intervened, which there was no means of crossing, and the Chinese had opened the sluices of the canal and flooded the country on both sides of it. There was another reason for not attacking this corner as the Chinese had a fort about 2,000 yards beyond, in which was mounted a battery of powerful modern guns—this battery thus commanding the west side of the city, though not the south. It was therefore decided at this time to launch the attack against the south gate, advancing by the narrow causeway due north to it. The canal is crossed at the West Arsenal by a small wooden bridge that had been burned some time previous, so it was necessary to delay moving forward until the Japanese engineers could repair it, at which time the attack was begun.

The attack of the allies was preceded by Infantry and Artillery fire from the mud wall, and as the Chinese replied the overs inflicted casualties among the troops deployed in the open field. After about half an hour of this needless waste of men, a staff officer of General Dorward gave verbal instructions to Colonel Liscum to move to the mud wall, where he would be perfectly protected. The order then stated that the 9th Infantry would cross the canal and move to the left of the Japanese. Colonel Liscum inquired for particulars of this movement but the staff officer was not inclined to stay and give them. The regiment moved to the moat in line of skirmishers, where it was defiladed by the wall on the opposite side. Colonel Liscum (with his battalion commanders) joined General Dorward near the gate of the mud wall, and tried to obtain detailed information, but the General stated that it made no difference if the regiment was on the right or left of the Japanese *at that time*, so long as it was under cover. These instructions seem perfectly clear and evidently applied merely to the immediate situation, but an attempt has been made by some American authors to twist these words into justification for Colonel Liscum electing to support either the right or left flank, whereas it was the announced intention to place General Dorward's command (including the 9th Infantry) on the left of the Japanese.

The battery of marines went into action in front of the mud wall at the left of the Arsenal, and fired about thirty rounds apiece, which exhausted their ammunition supply. They then went out of action and withdrew behind the mud wall. The men of this battery were later used for reinforcements. Colonel Meade with his marines, and the small force of British, were on the extreme left of the first line, and their objective was the southwest corner of the city. They advanced through mud and water under rifle and artillery fire, but found ample cover (grave-mounds and dikes) and sustained few casualties. This force reached a point about 300 yards from the city wall, when they were stopped by an impassable body of water. To their left was a large force of Chinese Cavalry whom they had to keep in check, as well as keep down the fire from the wall, as much as possible. They remained there under ample cover, but exposed to annoying fire, until about 7 o'clock that evening, when they withdrew with considerable difficulty, bringing their wounded with them.

The 9th Infantry from its position along the moat was moved to the left in file, with Colonel Liscum at its head, under the guidance of one of General Dorward's staff officers. It crossed the canal and proceeded for a hundred yards to the left of the gate in the mud wall (apparently to emphasize the fact that they were

to be on the left) where they crossed the wall and found themselves in rear of the Japanese who had just entered at the gate—the road within the gate inclining to the left to skirt the moat around the Arsenal. It is thought that Colonel Liscum believed that these Japanese battalions—in truth the supports—were the ones whose left he was to support. These men were in compact formation behind mud houses on the left of the road, and the 9th Infantry was similarly disposed. Just beyond was a small bridge which crossed a second canal (feeding the moat around the Arsenal) and extending on the left of the causeway to the large body of water at the Southwest corner of the city. Colonel Liscum moved forward to this bridge and meeting there the Japanese commander endeavored to converse with him but without avail. The meeting only resulted in mutual bowing and smiling, and pantomime introduction of two or three officers on each side, all of which transpired under considerable fire.

In a few minutes two Japanese assault battalions moved across the bridge, changed direction to the left and moved toward the city gate, deployed as much as the constricted area would permit. The sluggish stream prevented extension to the left, and on the right large ponds, ditches and marshy ground made accurate deployment there difficult. The causeway was elevated and dry, and offered the only means of a rapid advance. The French, then in position at the edge of the field (beyond the Arsenal) jumped up and followed in rear of the Japanese as they passed. This force moved along the causeway under considerable fire until they gained shelter among a cluster of houses about 700 yards from the south gate. Leaving a small force to hold this position the remainder moved up to the houses skirting the wall and a few hundred yards from it. The company of Engineers constructed hasty intrenchments here, and the Japanese and French held this position until the city was captured, next day.

At eight o'clock the 9th Infantry crossed the bridge over the second canal, changed direction to the right and extended northeast; the men taking cover partly in the moat surrounding the Arsenal, and partly behind another raised roadway running from the Arsenal towards Chinese houses lying between the southeast corner of the Walled City and the foreign concessions. This was a densely populated district and the road apparently lead straight to it. The fact that the road before reaching the houses joined another road leading to the right (and skirting great ponds of stagnant water) was not apparent from the Arsenal. It seemed to lead to the group of houses 1,200 yards distant. The right wing of the regiment had no sooner taken up its position than a withering fire opened on it in enfilade, from the houses referred to. To remain inactive under this fire was impossible; to attempt an advance in the direction the Japanese and French had taken was equally suicidal. General Dorward was not at hand to give instructions, there was no time to send word to him (a case of blind leading if there ever was in military history) so Colonel Liscum decided to execute a flank movement under heavy fire and advance over wholly unknown terrain in the face of this fire, which was well aimed.

The regiment changed front to the right and advanced rapidly by rushes, the fire being well controlled and effectively delivered. Men tumbling into ditches and crawling out, miring in holes and being pulled out, stopping for breath behind Chinese grave-mounds, and a very poor place indeed to catch your breath. The fire silenced the enemy several times, but in this rush the 9th Infantry lost one-third of its officers and one-sixth of its men. Colonel Liscum with his battalion commanders—Majors Lee and Regan—marched along the causeway in plain view of the enemy, urging his men forward by his voice and example. When the advance arrived within one hundred and fifty yards of the houses—part of the firing line got within eighty yards—further progress was stopped by an impassable body of water. They were subjected here to heavy rifle and shrapnel fire and the men sheltered themselves in ditches and behind embankments, many being obliged to lie in water with their heads just above the surface. About 9 o'clock Colonel Liscum was killed and Major Lee assumed command. The regiment was in a very critical situation since its ammunition was giving out, and it was unable to move in any direction. Messages were sent to General Dorward to explain the situation, the officers taking them showing great skill and courage in passing over ground beaten by the enemy's fire. An attempt by General Dorward to send out ammunition failed. Captain Oliphant of the Chinese Regiment from Weihaiwei, being killed in a splendid attempt to cross the beaten zone with ammunition loaded on mules. A direct hit by shrapnel wiped out the entire group of men and

mules. The grave of this brave officer is among those over which the China Expedition holds services each Memorial Day.

Captain Noyes (the Regimental Adjutant) sent word to General Dorward soon after this, suggesting that reenforcements should cross the mud wall 500 yards to the right in order to turn the enemy's left, but this suggestion was not heeded (probably because there were no reserves) so the only alternative was for the regiment to remain where it was.

General Dorward had sent one hundred men of the British Naval Brigade to reenforce the 9th Infantry, and also men from the marine battery, but neither of these forces got within two hundred yards of the regiment's position. A detachment of the Weihaiwei regiment was sent up with litters to assist in carrying off the wounded, but they were unable to accomplish this. The Commander of this force however, was able to assure the General that the Americans and the reenforcements were in comparatively safe positions, and it was the receipt of this information that made him leave the 9th where it was, as they prevented any attack being made on the right flank of the French and Japanese. The withdrawal of the regiment was effected after nightfall, covered by fire of the British and Japanese guns. Upon arriving at the West Arsenal Lieutenant Colonel Coolidge, with two companies of the 3rd Battalion, was found *awaiting an opportunity to give assistance, having arrived there at 4:00 P. M.*

The 3rd Battalion, 9th Infantry under command of Lieutenant Colonel Coolidge arrived at camp in Tientsin about 10:00 A. M. the 13th and learned that the regiment was engaged in the attack on the Chinese City. While making preparations to join the other two battalions he was requested to send reenforcements to the railway depot, and for this purpose detached two companies under Major Foote. Having received from the regimental surgeon a request for medical supplies and water for the wounded, he procured carts to be drawn by hand, loaded them with ammunition and the supplies needed, and accompanied them with two companies to the West Arsenal, where he arrived at 4:00 P. M. as stated. Here he was informed of the situation by General Dorward and was held to care for the wounded. The mud houses near the Arsenal had been converted into dressing stations and many wounded were in them, so most of the others unable to find shelter stood in green, stagnant water to their knees, under cover of dikes and embankments. The day was hot, can- teens were soon exhausted, and many men drank the water in which they stood, disgusting though its condition was. Following this, dysentery was prevalent all over Tientsin.

The Russians and Germans on the east side of the Pei Ho circled around and stormed the batteries on the Lutai Canal, taking them with comparative ease, and capturing seven guns, with a total loss of only 150 killed and wounded. The railroad was in their sphere of action, but it was held by troops from the command of General Fukushima; and while the force here was under severe fire, their action was purely defensive, and they had only to resist fire action. The large body of Chinese Cavalry hovering on the left flank served as a distinct menace to the foreign concessions. If they had been under a competent leader, or had had with them a few batteries of horse artillery, they might easily have swept the foreign concessions from end to end with little or no opposition. Recognizing the peril of the situation, a little before dark a message was sent to the Russians, asking them to send a company or two to act as settlement guards; but the Russians replied that they were fully occupied in the development of their own attack, and were unable to comply with the request. No valid reason can be found for this refusal, since their task had been comparatively trivial.

As night came on the situation looked decidedly gloomy. The Chinese had not been dislodged from their position; the losses of the allies had been very heavy; and at some places the attack had failed and troops had been withdrawn under cover of darkness. The question of a general withdrawal was mooted, but unhesitatingly set aside, it being recognized that the only thing to be done was to cling resolutely to the ground that had been gained in the vicinity of the south gate. During the night the Chinese kept up a desultory fire, and it was a trying ordeal for the Japanese and French, fatigued as they were from arduous fighting during the whole day, under a hot sun, and with little or no food or water. Some of the Japanese troops suffered particularly as the ground they were holding on either side of the causeway was about 2 feet deep in water, and they were therefore unable to lie down, and had to remain standing all night long. Just before sunrise the Japanese blew in the south gate and an entrance to the city was effected. The Chinese fled

precipitately and the allies soon thereafter had the city securely in their possession.

The casualties among the Chinese were estimated at about 5,000 while the allies had between 750 and 800 killed and wounded. Of this number, the records show the 9th Infantry lost one officer and seventeen men killed, and five officers and seventy-two men wounded, or a total casualty list of ninety-five. The total loss of the allies though considerable, was less than might have been expected from the natural strength of Tientsin. It was not only well fortified, but is situated at the junction of seven canals and rivers, making it one of the most impregnable military positions in China. The loss moreover would have been infinitely greater had the French and Japanese not bivouacked where they were at the end of the first day's fighting, for the Chinese troops evacuated most of their positions under cover of darkness, when they found that their opponents showed no symptoms of falling back.

CRITIQUE.

The Battle of Tientsin furnishes many glaring examples of poor tactics and utterly blind troops leading, in spite of many acts of superb personal heroism. However, team play counts most in battle, as it does in many sports. A spirit of rivalry for honors among troops or their commanders, and a display of personal contempt for death, are quite commendable when they do not lead to useless sacrifice of excellent troops.

In the beginning, there appears to have been an almost total lack of unity of command, the first requisite for success in battle. It is true that there were no doubt serious obstacles to this in diversity of language, and conflict of desires on the part of the allied commanders. Some no doubt had an honest purpose in wishing to be first, but others I have every reason to believe were actuated mainly by the thought of the vast amount of loot that was in store for them, and which (it may be added) was quickly siezed once the Chinese City had been entered. Whatever our faults of commission or omission, we had no share in this.

There was no reserve force kept out of the action, to be used in case our rear was threatened, to cover a flank, or to be used for any other vital purpose.

There was no written order for the preliminary advance or for the attack.

There is just criticism of General Dorward for failing to take advantage of darkness to gain his assault position. He had started early enough, but then calmly halted and waited for more light. After it came he moved his command across an open field in column, in full view of the enemy, and then deployed and halted—exposing his entire command to fire, with ample protection from the mud wall just ahead. The entire force could have marched right up to the wall of the Chinese City unopposed, under the cover of darkness, and been ready to blow in the gate and deliver the assault at sunrise; or the assault could have been delivered while it was still dark. The Japanese and British had been in Tientsin sufficiently long to have had a thorough reconnaissance made of the ground and position—or failing this, reliable information could have been obtained, concerning both, from any number of civilians who had been residents of Tientsin for years, and who knew every inch of the ground around it. A knowledge of the terrain, coupled with only the most rudimentary military learning, would have shown General Dorward that an attack on the left of the Chinese opposing the 9th Infantry was entirely feasible, and could have been successfully accomplished by a relatively small force. As many of you may recall the British Army was supposed to be at a very low level of efficiency in 1900, and it is also true that General Dorward had been for some years past in command of immobile troops at Hong Kong; and I offer these facts in his behalf.

It is hard to pass criticism on Colonel Liscum, but in my opinion it is justified in many particulars. He and Colonel Meade had been shown scant courtesy in being excluded from the preliminary conferences of the allied commanders. They were to take part in the attack with their forces, which were second only in size to those of the Russians and Japanese, without any opportunity to consider the plans upon which hung the lives of their men; without a chance to submit suggestions or counter plans; and without a reconnaissance of the ground or the position to be attacked. There can be no justification of their failure to insist upon their rights, having in view only the certain needless sacrifice of men in such make believe-warfare methods.

Colonel Liscum failed to take anyone into his confidence after attending the meeting of the allied com-

manders, the night before the attack. He should have had his Adjustant with him at that conference, or should have confided his mission and orders to that officer, or to his second in command, or to both.

His failure to get on the Japanese left cannot be overlooked. This was known definitely (in fact his command had been literally led by hand to the spot) to be part of his mission. The only explanation of this error is that the second canal (after his command had crossed it) confused him and prevented any extension to the left; but he could have gone back over the canal and deployed, and been in his proper position. In any event he was not justified in going into the assault position without some semblance of reconnaissance. My previous remarks on this feature apply equally to Colonel Liscum, in that a reconnaissance could have been made during the two days he was in Tientsin, waiting, and knowing that an attack was to be made against the Chinese City. Failing this reconnaissance, he could have obtained information as I mentioned before, or no doubt could have found an accurate map of the city with little effort, probably in the office of the British municipal engineer. Or failing all of these, perfect observation could have been had of the whole terrain from the buildings in the West Arsenal, or from the wall surrounding it. This might well have been done while he was engaged in the futile pantomime with General Fukushima. It may have involved some risk to the observers, but a man or two sacrificed here would have outweighed the subsequent needless and wholly avoidable loss. In brief he violated two of the most vital military principles when he moved by the flank under heavy fire, and when he attacked over unknown terrain.

Colonel Liscum's display of personal bravery, in advancing in full view of the enemy along the causeway, I do not find commendable. Perhaps he was following the methods of the old-school—the Civil War type of leadership—in any event it was wrong. He was not where he belonged, and was serving no good purpose there. If I know American soldiers, and I think I do after having been born among them and living all my life with them, they of all soldiers in the world do not require leadership of this sort, except under the most unusual circumstances. It is true that vast numbers of medals and citations have been awarded commanders who have thus grossly misconceived their duty, with little regard for the lives of the men entrusted to them; but whenever I see a decoration won by such sinister methods, I see upon its ribbon not plums, but the gaunt fingers of dead men, clutching to tear it from the breast of the leader who threw their souls away to satisfy his vanity.

Finally there seems little to justify his leaving one company in charge of quarters. You may be certain that thieves were not then prowling about the foreign concession, and had this been so it would not have required an entire company to keep them off. Also if the foreign concession had been attacked by a force of Chinese one company could have offered only trivial resistance.

In mitigation of some things I have said it should be known that our Infantry regiments had been changed from two battalions to three about a year prior to this time, and the 9th Infantry had had no chance to hold even a parade formation under the new system of organization; and while serving in the Philippines had been literally scattered all over Northern Luzon into company and platoon stations. Lastly, in justice to Colonel Liscum—a most lovable and courageous officer—it should be remembered that in 1900 we rarely gave our battalion and regimental commanders practical training in handling their units under battle conditions

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THE DETERMINING FACTORS OF THE FAR EASTERN PROBLEM.

By

Major W. S. Drysdale, Infantry.

The question concerning Far Eastern matters that our government is constantly called upon to settle are so serious and so difficult of reasonable adjustment that it may be well for us as Army Officers to be familiar with the factors that would determine military operations and be prepared to solve the military problems that may some day be presented.

A generation ago John Hay, then Secretary of State, declared, "Whoever understands China socially, politically, economically and religiously, holds the key to the world's politics for the next five centuries", and as late as last year in a summary of the proceedings of the conference of prime ministers and representatives of the United Kingdom, the Dominions and India, General Smuts wrote, "The scene has shifted away from Europe to the Far East and to the Pacific". The problems of the Pacific are to my mind the world's problems of the next fifty years or more".

It is common knowledge that during 1921 the disputes concerning Far Eastern matters in which the United States Government was involved became so serious that the administration was constrained to call for a conference on the Pacific and Far Eastern questions in Washington, to which the governments of Great Britain, France, Italy, Japan, China, The Netherlands, Belgium and Portugal were invited to send representatives. Although the conference was officially designated as The Conference on the Limitation of Armament, the most important questions discussed and among the most difficult of adjustment were the questions involving policy and procedure in Eastern Asia. Some of these questions still remain unsolved to the satisfaction of the Governments concerned.

In the preface of his book, "The Oriental Policy of the United States", Henry Chung says, "The present eastern question is far more menacing to the future peace of the world than was the Balkan problem of ten years ago".

The above seem to be rather startling statements, so let us consider for a moment the questions under dispute and make an effort to determine:-

(a) Whether or not the disputes concern matters that may be considered as fundamental national objectives, and,

(b) What effect, if any, would policies, geographic considerations and other factors have on our military operations in case of war.

GOVERNMENTS

It is of especial importance in any study of Far Eastern problems to consider carefully the form and efficiency of the various governments concerned. It is obvious that the efficiency of a government coupled with the characteristics of its people will determine to a large extent the ability of that government to use its available man power and resources in the emergency of war.

First let us consider China. This oldest of monarchies became a republic in 1912. There is a President, a Vice-President, a Prime Minister and a Cabinet of nine ministers, including a Minister of War and a Minister of Navy. There is a Parliament which consists of two Houses, the Senate and the House of Representatives. The President, with the consent of the legislature can declare war and conclude treaties.

When we speak of China the term is used to include the eighteen provinces of China proper, the three Manchurian provinces and the dependencies of Tibet, Mongolia and Sinkiang (Chinese Turkestan). It is important to note here that Tibet and Mongolia are practically independent States and that they are in no wise under the physical control of China. Mongolia is now functioning as a republic assisted by Soviet Russia. Tibet is not friendly to, but actually antagonistic to Chinese aims.

Within China proper, that is within the eighteen provinces, the government is for all practical purposes controlled by the Military Governors. These Governors either give only a nominal allegiance to the Peking Government or claim actual independence. The central government has practically no authority outside the walls of Peking except that gained through the fact that the great powers, with the exception of Japan, have refused to deal directly with individual leaders.

Compare this weak, decentralized government with the military autocracy of Japan. The Japanese government is strongly centralized and exercises a control over its subjects that is exercised by scarcely any other government in the world. The government policies is determined by the tradition of divine imperial right and the influence of the small group of elder statesmen surrounding the throne. Japan is classed as a constitutional monarchy. The term has not the usual meaning of parliamentary government under a limited monarchy for public opinion does not determine to the slightest degree the policies of State.

It is obvious therefore that of these two governments, Japan, (everything else being equal), could be expected to utilize its government machinery in the emergency of a war to far better effect than could China.

PSYCHOLOGIC.

The mystery of China's great weakness when compared with the strength of little Japan is largely explained when one considers the age long decentralized system of the one and the germanized, highly centralized government of the other. The difference is largely the result of social thinking based on inherited customs and traditions.

Psychologically the masses of China differ materially from the masses of Japan in the support they would give to their governing bodies. The Japanese still allow themselves to be, and are taught in infancy that the Mikado is placed in power by God and that obedience to him is a religious duty. The Chinese, on the other hand, consider their government as something unnecessary. The Chinese are individualists whose main thought is for the family. They are ruled much more through their obligations to the individual and family than they are by government agencies. The Chinese have no real voice in the affairs of the Government. Though they may be considered as being patriotic to the "race" they are lacking to a remarkable degree in any sense of responsibility or obligation to the State. This is important in this study to show the utter lack of control the State ordinarily exercises over the masses of the people. In Japan, on the contrary, the mental attitude of the people toward the government makes it possible for the government to make the maximum use out of the population in case of war. This would not be possible in China.

MILITARY ESTABLISHMENTS.

Let us consider next the size and equipment of the military establishments maintained in Asia. In China we find the total population varying according to different more or less authentic sources from three hundred and twenty-five millions to four hundred and fifty millions of people. Due to the low standard of living and poor sanitation the number of men available for military service, supposing that they had a government that could compel such service, would be between fourteen and fifteen million. This would seem to be and is an enormous man power with which to create a military machine. In actual practice however, we find that it would be physically impossible for the War Department to control more than a very small percent of this number. Each military governor maintains troops that are more or less his personal retainers and are not subject in the slightest degree to the authority of the Central Government. It is my personal belief that no matter how serious the emergency might be it would be impossible, due mainly to psychological and geographical considerations, for the War Department to organize and control more than a very small percent of the man power of China proper. Theoretically China's army consists of twenty-four divisions and twenty-two mixed brigades. There is no unit larger than a division which is supposed to, but never does, consist of 12,000 men. A mixed brigade should consist of 5,000 men. Of these Regular Army troops only a very few (this depends on the internal political situation) are subject to the orders of the War Department.

The outstanding characteristics however, is the inability of the Chinese to organize. There is no centralized staff that could perform the proper functions of a staff in the emergency of war. All of the equipment is old, antiquated, and insufficient. There is no reserve equipment and probably no plans for mobilization.

The Chinese Navy is in a more deplorable condition than the Army. The most powerful ships of the fleet are two small cruisers built in 1913. There are no new ships under construction. The Navy is inadequate and unable to attempt proper defense.

In short China's military establishment is incapable of withstanding the operations of the army and navy of any first class power.

Japan on the other hand, due to her form of government and the characteristics of her people is able to utilize to its fullest extent the available man power and other resources of the country. According to the census of 1920 the population of Japan proper, exclusive of Formosa, Japanese Saghalien, and Korea was 55,961,100. Of the Empire about 77,000,000. It is estimated that about 6,000,000 men, or ten per cent of the population, are available for military service. There are over 300,000 men in the present standing army, with trained reserves numbering over 2,000,000. There is a compulsory military service so that at the outbreak of war the country could mobilize the necessary replacements, and maintain the trained reserves at the desired number. It is estimated that in less than one month the Japanese General Staff could put onto the Asia mainland (China) her entire active army (300,000), fully equipped. It is interesting to note here that Japan maintains three divisions and numerous police in Korea, one division and one Infantry Brigade along the Manchurian Railways and at present one brigade in Northern (Russian) Saghalien. As will be shown later, these troops are garrisoned in the area of the Asia mainland on which Japan must depend for certain essential supplies (iron and coking coal especially), in case of war. This, the location of essential supplies, would have considerable influence in determining the theater of operations. The Japanese General Staff realize that in case of war they must keep open their communications with these essential supplies on the mainland, which accounts for the present location of troops in this region. Whether or not this violates the neutrality of China by no means deters the Japanese from the necessary military operations for safeguarding these supplies. China's neutrality was not observed in the Russo-Japanese War or by the Japanese in the late war.

Japanese maintains a Navy second only to that of Great Britain and the United States. The ratio of Capital Ships is 525,000 tons for the United States and 315,000 tons for Japan. We can assume the Japanese Fleet to be efficient, well equipped and well able to protect her sea lines of communication with Asia and even with more remote parts of the world. It would be a very powerful fleet indeed that could engage the Japanese Fleet in her home waters and destroy or immobilize it. Under the provisions of the *Five Power Naval Agreement* the United States and Japan are agreed not to exceed their present ratio of tonnage in Capital Ships. We can therefore assume that at the outbreak of a war between the United States and Japan that Naval operations would begin with this ratio provided the United States maintained the tonnage of capital ships permitted her by the agreement. This might not be the case, for there seems to be a strong political movement in the United States to reduce both the Army and Navy. As will be shown later from a study of the geographic considerations such a policy on the part of the United States would prevent her from successfully operating against a Japanese fleet in Asiatic Waters. It is obvious that our fleet must be prepared to control Asiatic Waters if we wish to dislodge Japan from her position in securing the necessary supplies from the mainland of Asia.

From June 1914 to June 1920 Japan advanced from sixth to third place among the world powers with regard to the size of her Merchant Marine.

It is obvious that this merchant marine which totaled in June 1920, 2,996,000 tons could be used to augment her navy and for the transportation of troops and supplies that may be required in operations.

We find then that the Japanese Army and Navy are well organized and equipped and are capable of undertaking both offensive and defensive operations and that the entire national resources in men and supplies would be made available to the high command in case of war.

GEOGRAPHIC.

A careful study of the geographical features will be necessary before we can attempt to make any deductions of military value. The geographic features will determine to a large extent the strategy of the war, and the theater of operations.

By a study of the map we find China with a coast line of about 2500 miles in extent with this coast line flanked by the islands of Japan. The outstanding feature of the Chinese coast is the almost entire lack of railway and roadway means of communication. There is no railway or water way communication between North and South China. What rivers we find extend from West to East. The lack of railway and roadway communications from the coast line inward makes the coast line a source of weakness to China. In case foreign

troops should occupy a section of the coast it would be difficult to dislodge them on account of the lack of communications from the interior, and it would be equally difficult for invading troops to operate inland. The only ports connected to the interior by railway or waterway are Canton, Tsing Tao, Tientsin, Yingkow, Dairen, Fusan, and, further to the north, Vladivostok. To reach any of these ports ships must pass through the natural barriers imposed by the islands of Japan, and her Pacific possessions and Mandates. On the other hand Japan's geographic position makes it easy for the Japanese fleet to keep open the communications to these ports. From the Formosa Strait north to Saghalien (Karafuto) the Japanese Islands offer a natural barrier against any force attempting to reach the coast line of Asia. This location of Japan's bases makes it easy for the Japanese Fleet to control these waters even when opposed by a more powerful fleet operating over long lines of communication.

Japan consists of a series of islands extending along the coast of Asia for about 2,000 miles. It has numerous excellent harbors; the Inland Sea affords protection to a fleet and permits that fleet to pass readily from the Pacific Ocean to the Japan Sea. Japan exercises Mandate authority over the Marianne, Caroline, Marshall and Pelew Islands.

The American Fleet based on San Francisco and Pearl Harbor, the latter a distance of about four thousand miles from the defensive base of the Japanese fleet at Shiminosaki, Pearl Harbor is about 2100 miles from San Francisco and 4800 miles from Corrigedor, our only fortification in Western Pacific waters. From Corrigedor to the Inland Sea is over 1500 miles. One does not need to be an expert in Naval Strategy to realize the tremendous difficulties that would confront the United States fleet in operating over a line of communications which stretches for thousands of miles past numerous possible submarine bases in the islands over which Japan has been given a mandate. In the very beginning of the war (the preparations might even be complete before the declaration of war) the Japanese would probably seize the Philippine Islands and Guam and would undoubtedly make certain of their supplies on the mainland of Asia by mobilizing there a considerable part of the standing army. There would be no particular need of keeping the entire army in Japan rather than on the mainland. Food available in Manchuria could be utilized and the drain on food supplies in Japan proportionately lessened.

LOCATION OF CERTAIN ESSENTIAL SUPPLIES.

From a study of the trade returns it is evident that in case of a war Japan must depend on outside sources for her supplies of coking coal, iron, cotton, wool, nitrate, oil and rice. Japan is known to have enormous stores of oil, nitrate and rice held in reserve for an emergency, but in any case she would depend in large part on the mainland of Asia for certain essential supplies, particularly iron, coking coal, cotton and wool and to a lesser extent rice, wheat and other food supplies. Baron Shidehara in addressing the Washington Conference stated that "It is indeed to the Asiatic Mainland that we must look for raw materials."

FORTIFICATIONS.

It might be well to point out here that under the provisions of Article XIX of the Five Power Naval Agreement that Japan and the United States are agreed "that the status quo at the time of signing of the present treaty, with respect to fortifications and naval bases shall be maintained in their respective territories and possessions specified". The area specified for Japan includes "the Kurile Islands, the Bonin Islands, Amami Oshima, the Loochoo Islands, Formosa, the Pescadores and any insular territory or possession in the Pacific which Japan may hereafter acquire".

The United States is restrained from "fortifying any of her insular possessions in the Pacific except those adjacent to the coast of the United States, Alaska, and the Panama Canal, not including the Hawaiian Islands". The treaty provision is given here in order to emphasize the tremendous advantage to Japan in case she elects to fight a defensive war.

POLICIES.

This discussion would not be complete without a study of American Policy and its relation to the policies of other powers in the Far East.

Policies are determined by national interests and it is ordinarily a conflict of policies that causes war. The United States became an Asiatic Power and entitled to a voice in the settlement of Far Eastern questions after Dewey's victory at Manila Bay and the subsequent surrender of the Philippine Islands. Before this time the European Powers has been quietly selecting their respective spheres of influence in China, selecting Naval bases and railway and mining concessions. They had entered into secret agreements to safe-guard the interests they had thus acquired.

At this time John Hay, then Secretary of State, addressed notes to the various powers in which, though admitting the existence of "spheres" and "leases" he suggested an international agreement in regard to the treatment of trade in the newly acquired spheres and advised that China be regarded as an "open market" for the world's commerce and that all possible steps be taken to preserve and strengthen the Imperial Government in its integrity. Great Britain approved and the others, however, somewhat unwillingly acquiesced.

Later Secretary Hay addressed a second note to the Powers after the Boxer Rebellion explaining that "the policy of the Government of the United States is to seek a solution which may bring about permanent safety and peace to China, to preserve Chinese territorial and administrative entity, protect all rights guaranteed to friendly powers by treaty and international law and safeguard for the world the principle of equal and impartial trade with all parts of the Chinese Empire".

That is clearly a declaration of American policy which consists fundamentally in demanding freedom of trade for American commerce. While demanding freedom of trade we found it necessary to request that the territorial and administrative entity of China be observed. It is obvious that such a policy wins for the United States the gratitude and good will of the Chinese, and that our policy is not in conflict with Chinese interests. The mass of Chinese are conversant with and appreciate this policy.

Is our policy of freedom of trade a fundamental national objective? It is conceivable that as our industries develop and our foreign trade increases, freedom of trade will become more and more vital to our national well being. Trade statistics show that only two countries of the world have a larger trade with China than does the United States, and that American trade is rapidly increasing. These are Japan and Great Britain.

The only other world power to-day whose interests seem to differ fundamentally with those of the United States is Japan. By means of her official acts we can with reasonable accuracy determine Japan's aims to be "expansion in Asia and securing there special and exclusive privileges for Japanese Subjects".

Prof. John Dewey's statement in his book "China, Japan, and the United States" is literally true when he states "what one senses in China from the first moment is the feeling of the all prevailing power of Japan which is working as surely as fate to its unhesitating conclusion—the domination of Chinese Politics and industry by Japan with a view to its final absorption".

In the so called twenty-one demands (Sino Japanese Negotiations of 1915) Japan demanded and received by threat of military action special and exclusive privileges for her nationals in Manchuria and Eastern Inner Mongolia, extension of the leases of the Liao-tung Peninsular and of the Manchurian railways, former German rights in Shantung and Chinese recognition of Japan's special interests in Fukien, one of Japan's so called spheres of influence. It might be of interest here to record the statement made by Mr. Hanihara, the Vice-Minister of Foreign Affairs of Japan and one of the Japanese delegates in Washington Conference. Mr. Hanihara, during the conference in Washington stated in effect that "to jeopardize Japanese interests in Manchuria would seriously affect the economic existence of Japan". This statement gives an insight into Japanese official attitude toward Manchuria and the Liao-tung Peninsular. The Japanese policy has been to seize, occupy and exploit such parts of Asia as they desire.

Siberia differs from China only in degree. One of the most difficult questions at the Arms Limitation Conference and one that is not yet settled to the satisfaction of the United States Government was the question of Japanese troops in Russian Saghalien.

POLICIES AFFECTING RUSSIA

American policy toward Russia is clearly outlined in Mr. Hughes' reply to Baron Shidehara's own statement at the Washington Conference concerning the Japanese occupation of Russian Saghalien. He

stated "In view of its conviction that the course followed by the Government of Japan brings into question the very definite understanding concluded at the time troops were sent to Siberia, the Government of the United States must in all candor explain its position and say to the Japanese Government that the Government of the United States can neither now nor hereafter recognize as valid any claims or titles arising out of the present occupation and control, and that it cannot acquiesce in any action taken by the Government of Japan which might impair existing treaty rights or the political or territorial integrity of Russia". This a definite expression of American policy toward Russia.

The Japanese have seized the enormous oil deposits in North Saghalien and are attempting to exploit it. Japanese troops still remain in Russian Saghalien notwithstanding their solemn agreement with the United States to withdraw when United States' troops withdrew.

In discussing policies of Japan and the United States the Anglo-Japanese Alliance has an important connection. The Anglo-Japanese Alliance is one of the factors working for Japan. If allowed a free hand in China by England, Japan will go on step by step toward supremacy in Asia. If in spite of this alliance Great Britain should join with the United States in favor of the Hay policy, then Japan would be compelled by silent pressure to relinquish bit by bit its ill gotten hold on China. The Washington Conference brought the United States and Great Britain in closer accord in this respect, but the failure of the French Government to ratify the Four Power Treaty continues the Anglo-Japanese Alliance. By this agreement each pledged "Joint defense of their Asiatic interests and the maintenance of strict neutrality in case the other should become involved in war with a third power". And also agreed "to join it in war, if two or more powers should unite in hostility". This latter clause would operate to prevent the United States receiving an ally in a war with Japan, provided Great Britain complied with her treaty agreements.

SUMMARY.

The following may therefore be considered as determining factors:-

The manner and form of Government, together with the characteristics of the population permits Japan to utilize more completely its man power and resources than any other Asiatic State.

The Policies of the Imperial Government of Japan are in conflict with the policies of the United States.

Japan considers her interests on the mainland of Asia as necessary to the well being of the State and she would consider the use of military measures to safe-guard her interests there. She has already gone to war with Russia and China over these interests.

In case Japan is engaged in a prolonged war she would depend to a certain extent on supplies from the mainland. The degree to which she would depend on these supplies would seem to be proper subject for a General Staff Study.

It is conceivable that Japan may be defeated by economic and financial attrition, applied by stopping her ocean borne communications and commerce, by cutting off her supplies of food and raw materials and by stopping her exports.

Japan's geographical location gives her a decided advantage in maintaining her control of the policies at issue and her communications with Asia mainland. Conversely her positions operate to the disadvantage of forces opposing Japan.

That the provisions of the Five Power Naval Agreement maintains a fixed ratio between the tonnage of the Japanese and United States fleets. This ratio is such (about 3 to 5) that it would be difficult for the United States fleet to take the offensive and control Asiatic waters.

The Anglo-Japanese alliance operates to the disadvantage of the United States in that it might prevent the United States from receiving an ally in a war with Japan.

That there is no serious difference of policy between the United States and China and Russia. A war with these powers it therefore improbable.

CONCLUSIONS.

This will be a war about "policy". That is the governments will differ as to their fundamental objectives

and can find no way to reconcile them. Given such a divergence, it is small moment what the immediate occasion of the rupture may be.

It is more probable that we may become involved in a war with Japan than with any other Far Eastern Power.

The character of any such war, whether with China or Japan, combined with the geographical position will require the United States to take the offensive and place the other belligerent on the defensive, strategically. In other words, Japan or China, as the case may be, will at the opening of hostilities be in possession of the elements that control the policy at issue and it will be necessary for the United States to dislodge her opponent from that position in order to win the war.

In case this war should be with Japan the sovereign territories of both belligerents are practically immune from invasion by the enemy. Therefore the war cannot be brought to a decisive conclusion by a military penetration of enemy territory or by breaking down at its center of energy the military force of a belligerent. The most either belligerent can accomplish by direct military action may be to attack and seize some out lying possessions of the enemy.

Nevertheless, in this case Japan might substantially win a war against the United States by being able to prevent herself from being ousted from control of the factors which determine the question of policy at issue, for those factors lie almost entirely in the Far East.

It is conceivable that by interrupting Japan's ocean borne commerce and her communications with Asia mainland the United States might win such a war. This, particularly interrupting Japan's communications with Asia, would be extremely difficult without an ally on the mainland of Asia.

In such a war the provisions of the Anglo-Japanese Alliance would operate to prevent the United States from securing an ally. It is therefore to American interests that the Anglo-Japanese Alliance be broken.

The greatest potential allies of the United States would be Russia and China, for the fundamental objectives of these powers differ, as does that of the United States, with the fundamental objectives of Japan.

In case we are involved in a war with China (an improbable supposition) it would not be difficult for American troops to seize some important seaport or section of the coast line until American demands were complied with.

In any case, whether in war with China or Japan, the probable theater of operations would be on the Asia mainland. Japan, in such a war, would unquestionably mobilize large forces in Manchuria and attempt to keep intact her communications to those supply areas and would probably sieze the Philippine Islands, Guam, and other insular possessions of the United States.

References.—The American Constitution and the Chinese Republic; The Oriental Policy of the United States; Must We Fight Japan; Encyclopedia Britannica; Conference on Limitations of Armaments; Our Relations with the Far East; China, Japan and the United States; The Sino Japanese Negotiations of 1915.

THE MILITARY POLICY OF THE UNITED STATES THAT FORCED THE USE
OF A LARGE PART OF ITS BEST TROOPS ON INTERIOR GUARD DUTY
DURING THE WORLD WAR.

By
Colonel T. W. Heavey, Infantry.

FOREWARD.

This monograph was prepared with the intention of placing before the Advanced Officers Class one of the many domestic problems which had to be solved during the World War. The solution of these problems deprived 62 percent of our regular officers of their opportunity to fight upon the battlefields of France.

We frequently hear it announced that this Government never had a policy for National Defense until after the passage of the Act of June 5th, 1920. The basis for the opinion is found in Upton's Military Policy and the desire of the officers of our time to claim credit.

Even in the days of our country's infancy there was a policy but not an efficient policy. It is still in our constitution. We are greatly indebted to General Upton for emphasizing the many defects in that policy for his work is responsible for the Act of June 3rd, 1916, which was on our statute books at the breaking out of the difficulty between Germany and the United States.

True it is, that the law was of such recent vintage that all its good points were not in full operation and some of the provisions were not favorable to the theater of war in Europe. There were so many good provisions in our policy placed in statute law that the law of 1920 is only an amendment to the law of 1916. Changes only were made in those provisions which were found to be undesirable by reason of our experience in the World War.

The regular army was familiar with the provisions of the law bearing upon the regular army; but few were aware in 1917 of the provisions governing the National Guard for the regulations governing that force were promulgated in book form in 1919.

I wish to call attention to only a few points of the law of 1916:

The regular army was to be increased by five yearly increments to a strength not exceeding 175,000 men with recruits not to exceed seven percent of the authorized enlisted strength. So far as the Infantry is concerned there were to be by 1922, 64 regiments of Infantry and the Porto Rican regiment, a total of 65. Is this an improvement over our present condition?

The National Guard was to be organized into tactical units of Brigades, and Divisions and the President could determine what troops would be raised by each state for such purposes. He had the control of the continuance of officers as officers of the National Guard after their appointment by the governors.

The details of organization were itemized in the law but based upon a theater of war on this continent and not in Europe. Naturally, the organization prescribed would not fit conditions in Europe nor suit the trenches built in Europe for a European division. A change was necessary.

The use of the National Guard beyond the limits of the United States as federal force was rendered effective by changing its character from state forces to Federal forces by draft.

The regular army of thirty regiments and the organized National Guard were all the forces in this country of a military nature when the fateful 6th of April, 1917 arrived. The organization for sixteen divisions had been allotted to the States under the new law passed ten months before. Within one year July 1st, 1917, the National Guard was to have a force of only 106,800 men and the Regular army 35 regiments of Infantry.

In case of need the law provided for the complete increment of the regular army at once and states were permitted to organize their entire quota, not less than 800 per each congressman, at any time. Furthermore, in event of actual war or threatened war or similar emergency there was no limit to the enlistments for the regular army. 1022 extra officers were authorized, so also an Officers Reserve Corps.

This was the condition on April 6th, 1917.

Preparation was made for the war; the Regular army was increased, the officers for the entire increase were made by September 1st, thus furnishing officers of the Regular Army for 65 regiments of infantry. The National Guard by voluntary enlistments and the prospect of a draft rapidly increased and by Midnight August 4th—5th had enrolled 366,966 men and 12,615 officers organized into sixteen incomplete divisions and with surplus troops.

There were in Europe during the active fighting only seven divisions of regular troops. The eighth arrived about the time of the armistice. This represents only 32 regiments of Infantry. What of the other 33 regiments of Regular Infantry? Have you ever given it a thought? Suppose we deduct the garrisons of Panama Canal Zone, Hawaii and the Philippine Islands; there twenty regiments of infantry unaccounted for.

An explanation of this leads me to interior protection of the country, for all the Germans were not in Germany. To give full credence to all the information and to the request received in the War Department, we had more enemies in our back yard, the United States, than the armies had confronting them in Europe. The order for responsibility for interior protection and the means available are set forth in appendix "A".

In 1914 and 1915 this country was a neutral nation and her markets were opened to all belligerents. Due to the control of the sea by England only the allies could purchase and ship from this country. Our merchants were ready to sell with delivery to the sea guaranteed. The central powers could not ship from that point to their home ports. Hence the activity of German sympathizers in this country. Vast amounts of foodstuffs were burned, notably at Baltimore and cattle at Kansas City. Explosions of unknown origin were frequent and after giving full credit for the great number of green and inexperienced laborers employed there was much which could be laid at the door of Teutonic sympathizers. Incendiary fire losses for five months, February to June, 1918, amounted to \$2,172,250.

Upon our entry into the war these troubles increased and soon the Governors of the states were besieged for military protection. The National Guard was used for this purpose as there were a large number under State control. Not less than 100,000 were thus employed. The Federal Government began to furnish protection for federal agencies and there were large forces on interior guard duty.

On July 3rd, eleven States were notified that certain National Guard troops not already in service would be called into federal service on July 15th and nineteen others on July 25th and that all would be drafted in early August. The States were requested to furnish other forces to perform this work and were invited to form other national guard, but the Federal Government stated frankly that it could not furnish uniforms and equipment as required under the law for all supplies that could be obtained were needed for the troops destined for Europe. Furthermore, a policy was adopted which did not relieve the personnel of the new National Guard from the operation of the Selective draft law; should the States form new National Guard organizations the federal draft would of course take their personnel and ruin the organization.

This action was necessary in order to prevent the slacker from dodging service in Europe by joining the National Guard. The policy was announced to the effect that as Congress had provided a better and more recent manner to secure forces for the army of the United States during the emergency, no further draft of National Guard organizations would be made.

Many units of the national guard were not quite complete on the date set for the draft, Midnight August 4th-5th, 1917. These still remained in the States available for use. The personnel was secured by promise of service overseas and therefore took little interest in the National Guard when this was denied them. Permission to disband such National Guard was granted upon request by the States.

Governors were notified by letter July 10th—17th that the organizations of the National Guard would be removed from under their jurisdiction on August 5th. That day arrived and few States had provided any other troops. The National Guard was not removed. Another notice was sent out and September 15th was the latest date for the relief of all National Guard and their movement to the concentration camps for the necessary training and organization for service overseas. Yet, it was October before the troops were all concentrated.

Then the troubles of the W. D. were increased by the requests of the citizens and business of all kinds for protection from the German and Austrian sympathizers. The Secretary of War was besieged by Governors, Congressmen, Corporations and private citizens for military protection. The National Guard was keen for oversea work. Military reputation of value in future political preference was at stake and the pressure to keep these troops in training camps and to send them overseas was irresistible.

The demands blocked the work of the Secretary of War who was interested in winning the war in Europe. He turned to the Militia Bureau for aid as that Bureau by law of 1916 could not be abolished or made part of any other office or department or branch of the War Department and reported direct, according to the law, to the Secretary of War. Furthermore, nearly all the National Guard was now in Federal Service. The Chief of the Militia Bureau agreed to solve the question with the aid of two assistants; and altho he was of the Cavalry, two Infantry officers were selected for the work. Both reported by November 21st, 1917. The work pertained to the Adjutant General of the Army.

At this time the United States was divided into six departments. By the use of the department Headquarters it was made possible to decentralize the guard problem to some extent. Then came the Alien Enemy Proclamation which the Attorney General was to enforce with the aid of the War Department. This also went to the Militia Bureau and the problem increased.

In reply to a memorandum calling attention to the breaking up of division training the following was received by the Militia Bureau dated January 28th, 1917, as a memorandum, shows the original policy of the War Department:

"The Secretary of War directs as follows: It is believed for the present, at least, that when requests are made from the ship building yards for protection by the troops, that this should be granted. Inspection would first be made of the situation by the Department Commander and his recommendation on will be the guide for action. The Secretary further directs that when there is a National Guard equipped in any of the states, it may be used for that purpose; that Home Guards shall not be brought into the U. S. Service; that if further troops are needed either the regulars or troops from the National Guard and National Army be used. The general principle would be to take such necessary troops from the nearest camp or cantonment, or, if that is not practicable, from the one which in any case may prove most suitable. It is believed better that the actual troops shall be chosen by the Division Commander, having the understanding that such detail is only temporary and that no single bodies of men will be kept on duty for any great length of time, but will be replaced by others—You will therefore take action in accordance with the above instructions".

The policy announced concerning the use of guards for the enforcement of the Alien Enemy Proclamation is found in a letter from the Adjutant General of the Army to the Department Commanders, dated December 3rd, 1917, is as follows.

The number of men used as a United States Guard will be governed by the requirements in each case, and will be only such as to make the guard effective.

The organization of a special force for use as interior guards is now being considered, but the details are not ready for publication.

Until such time as this additional force is organized and ready to take over the guarding of piers, docks, wharves, and major utilities pertaining to the prosecution of war, the necessary guard will be taken from regular troops or other forces under your command.

You are directed to furnish a report of the action taken by you and to make such recommendations as you deem advisable.

The expense connected with the arrangements of markings off restricted zones, quartering and messing of guards, transportation of troops, is chargeable against army appropriations.

Requests for troops for this duty will be forwarded by you to the Adjutant General with your recommendation in each case before action except as noted in par. 5.

(5) The necessity of the guard will be determined, and troops placed per instructions from this office, except

to meet an emergency, when you may act at once, furnishing report of action and emergency to the Adjutant immediately.)

It is not intended that the Federal Government take over the State or Municipal duties of police or fire protection. The object is to aid the federal government in the prosecution of the war by rendering efficient protection to those industries, necessities and localities directly concerned with the prosecution of the war."

One of the officers who was called to the Bureau for duty of caring for the Interior guard work had heard in 1912 a lecture delivered by Major Frank Coe, now Major General and Chief of the Coast Artillery, at Fort Leavenworth upon the Coast Artillery Defenses which, after showing the need of 65,000 men for one relief for the proposed coast defenses, concluded with a statement to the following effect: In case of war with a foreign nation the U. S. will either gain supremacy of the sea or she will lose supremacy of the sea. In the first case there will be no need to man the coast defenses and the Coast Artillery troops should join the Mobile army. In the second case, the enemy will have possession of the sea and can make a landing; whereupon, the coast artillery troops should vacate the defenses and join the Mobile army. When questioned as to the arm of the service in which they would serve it was admitted that the Infantry would be the gainer. A mental note was made of that remark.

The demands for Military guards seemed to be an excellent place for the coast artillery as our side had supremacy of the sea and efforts were made with success to use them. After a large number had been so placed, General Pershing called for heavy Mobile artillery and the result was a loss of many coast artillery troops from this work. Infantry had to replace them. The railroads presented an exhaustive study of the needs throughout the country showing important places for guarding railroad lines. This was studied and a conservative estimate revealed that it would require at least 150,000 men to care for the railroads alone, if military guards were to be employed. Demands from everyone who had a government contract fluttered in, complaints that in one department guards could be secured; and, in the adjoining one the commander would not furnish guards for the same kind of industry engaged upon part of the same contract. Waterpowers claimed protection, mills, mines, depots of foodstuffs, irrigating dams, ship yards of the Emergency Fleet Corporation along both coasts and along the Gulf Coast, public buildings, arsenals, storehouses for explosives. This last was of a most serious and alarming nature. The French High Commission had stored sufficient high explosive on a pier in Brooklyn to have made the Halifax disaster a side show had it been exploded. New Jersey was covered with store houses for T. N. T. and the quantities near New York were sufficient to have demolished that city in case of explosion.

The Black Tom disaster, and the T. A. Gillespie plant explosions were of a disturbing nature at the time altho guarded by private guards. The Chief of Engineers tried in every way to secure a military guard for the great electric plant at Niagara Falls even after he had been informed that the system of protection by the company could not be improved.

In a period of forty days, 584 demands were received for the protection of property and plants in and around New York in spite of the wonderful Police protection of that city. After investigation, only thirty-nine were placed. It must be apparent that had the demands of the citizens been filled over half of the forces organized for service in Europe would have been employed on guard duty in this country.

The only troops of a federal nature that were available for this after October 1st was the regular army. They obeyed orders and went where sent without the War Department being bothered by their friends and interested politicians.

Unfortunately, many of the States assumed the attitude that as the Federal Government had seized their National Guard and removed them from the States the Federal Government should also assume the State duties. Many organized State Guards and formed Home Guards which the Federal Government equipped partially but with obsolete arms or those made for the Russian Government and undelivered due to the breaking down of the Russian Government. Special Regulations No. 37 covers the details of this equipment. One set of equipment was furnished for each two men. The records of the Ordnance Department indicated that there were about 79,000 citizens in these bodies. In some States, the work of these organizations was good; in others, very unsatisfactory.

The State Guards in Pennsylvania, New York, New Jersey, Massachusetts, were rather numerous and many

of the States went into the market and bid against the United States for arms and equipment for their State Guards. The Federal Uniforms were used to such an extent that it became necessary to carry out the provision of the law of 1916 for the protection of the uniform of the army of the United States. The red star was required on the sleeve of all troops who were wearing the olive drab uniform in order to distinguish State troops from Federal forces. The action was resented and produced much criticism and hard feelings. It saved olive drab cloth for our fighting forces.

The investigation of the officers sent to Washington to handle the subject of interior guard showed there were parts of twenty Infantry regiments on guard duty. Regiments which had not been assigned to Brigades or divisions which could have been better employed in preparing for the war in Europe.

A plan was devised under Section two, Act of Congress approved May 18th, 1917, to organize a guard force for interior protection be made up of men over the draft age preferably former soldiers and men already familiar with such work. The force was to be organized into battalions of four companies each with a strength of 150 men, 7 officers, motor transportation, uniformed with the old blue uniforms which was reported to be on hand in limited quantity. Men were to be obtained by enlistment for the period of the war. Details of the organization are set forth in G. O. 164 W. D., December 22nd, 1917.

A large number of National Guard Officers had become surplus and had been discharged due to the reorganization for service in Europe. Some resigned from the National Guard organizations drafted. Others were discharged for various reasons. The training camps had trained a number of citizens who were rejected by the surgeons as unsuited for the firing lines in Europe for slight physical defects; and, it was expected, officers for such a force could be secured from these sources.

The Quartermaster General started organization of Guard and fire companies and forwarded the authority with the request that the Militia Bureau organize such companies which duty was accepted.

About the time this organization started the General Staff discovered the shipping available for transportation of troops to Europe would only transport 50,000 a month and at that time there were 2,000,000 men in training in this country. On January 5th, 1918, the Secretary of War ordered the discontinuance of enlistments for the U. S. Guards just as the work was well underway—1800 had been enlisted. It was stated that there were sufficient troops already in arms to take care of the interior guard during their wait for suitable accommodations for transport to Europe. The authority to organize fire and guard companies was thereupon returned to the Q. M. General who retained control of such companies.

This delay was a sad blow to the officers who were planning to place all the infantry regiments into divisions and train them for oversea service. It was pointed out that the training of the division as a whole was impossible, that troops on guard duty would be unable to keep up in their training with the troops who were concentrated in the division camp; and that the division would be delayed entering the firing line until its least advanced element was properly developed. In the meantime the blue uniform proved a stumbling block, for to the credit of the American, he does not like a distinctive uniform branding him as a home service man when any fighting is going on.

It was at this stage that the Secretary of War went to Europe and inspected the forces overseas. During his absence infantry officers on duty in Washington aided by an Assistant Chief of Staff kept working on the original idea of releasing the regular infantry from this guard duty and using other troops in their place. The first thing of importance to develop was the rejection of many trained drafted men by the surgeons as unfit for oversea duty. The Phychiatrist was a great aid. Here was trained drafted material which could not be used in Europe and there were over 15,000 of such men in January and The Emergency Fleet Corporation was turning out ships.

A memorandum was prepared in which attention was called to the fact that the retention of these regular regiments of infantry was keeping whole divisions of troops from Europe and their simultaneous training for such duty. It was shown that the use of twelve regiments would deprive the firing line of over 83,000 men; also that 15,000 draftees, trained but unfit for service over seas, were available for service in the U. S. Guards. When Mr. Baker returned to this country the memorandum was placed before him and favorable action resulted as he had seen the necessity for the use of more men in Europe; and, best of all, he had made

arrangements by which the European nations furnished ships for the transportation of men to the theater of war. From 50,000 per month sent to Europe the figures grew rapidly to 306,000 per month. This paved the way for the formation of twelve additional divisions of regular troops. It is the first time we hear of the divisions from 8 to 20 inclusive, altho twenty-five numbers had been reserved for regular divisions in the scheme for numbering the divisions of the army.

Soon there was a steady increase in the battalions of the U. S. Guards. They were organized as needed and authority was finally granted to organize as many as seventy. The growth of the U. S. Guard is shown in appendix "B". The total force organizing before the Armistice was 1488 officers and 28,896 men in 48 battalions. Maximum strength attained, 1216 officers and 25,568 men actually on duty.

The highest rank in this force was that of Major, the forces were designed particularly for taking over the peace time duties of the regular army in the home country and they would have been the only troops of a federal nature by which the department commanders could care for the federal needs within the Departments.

The organization was fraught with complications, the principle ones being a selection of officers securing the proper class of men from overseas training centers. With the Militia Bureau handling this last matter directly in Washington the character and class of the men secured proved satisfactory.

The men rejected for service overseas having been trained and drafted they were already supplied with the olive drab uniform. When the organization was resumed a change was made in the uniform. But the Russian rifle was issued in lieu of the Springfield; and the issue of pistols was never completed due to the needs of the army overseas, and the scarcity of the arms. Later riot guns, night sticks, Lewis, and Colt machine guns were issued; and also citizen clothing for men employed as plain clothes men. Training centers for U. S. Guards were established in each department. Upon request of the General Staff Document 882, "Military Protection" was prepared in the Militia Bureau for this particular class of duty and published without charge by the War Department.

The information furnished to the War Department indicates that the effort of American forces under General Pershing would be made in the Spring of 1919 and the organization of the U. S. Guards was based upon this information and was being perfected in such a manner that the regular infantry regiments on guard duty were concentrated in ample time to train for service in Europe by division with the great bulk of the men furnished by the selective draft law. U. S. Guards were furnished as fast as the department commanders desired.

The history of the fighting overseas in the regular divisions gave evidence that the regiments officered by the regular army formed good troops. There is every reason for believing that the regiment which were to be formed with regular officers detained on home duty and drafted men would prove just as good troops as those already overseas and serving with the regular divisions. Four of these new divisions were forming November 11th. The 11th Division at Camp Meade was under orders to sail when the breaking out of the Flu caused the cancellation or delay of the movement.

The English had placed all their trained troops in the first contingent from England and had them all annihilated in the early stages of the war. The United States was profiting by the experience of England. It was thought by most of the officers in the War Department that about fifty percent of all regular officers were serving over seas. The officers on this side who were clamoring for service overseas were met with the statement: "Your time will come. We need trained officers on this side and as soon as officers are invalided home we will send you. Before long the casualties will cause trained officers to return and as long as a man has a good head he will be available to replace you and you will go over in good physical condition"

The army over sea and the Allies proved too good or the Germans too poor for the opportunity never came to more than 62 percent of our regular officers. It was a sore disappointment.

In the handling of the question of Interior Guard, many lessons were learned for the first time by this government. We had never been compelled to fight an enemy at such great distance from our own country; nor one which had so many sympathizers among our own citizens due to ancestry. No precedent had been established and at the risk of being tiresome the following points are emphasized:

It is suggested that the National Guard of the State making the request for additional Federal Guards

be returned from the training camps to the home State for guard duty. The personnel would make such objections to the move that the State would withdraw its application for troops.

Inspect factories for which military guards are requested and report those in which proper fire protection is not provided to the fire underwriters. The fire insurance rates will be increased unless measures are taken to reduce the probability of fire. This will lessen demands for Federal Guards.

As the danger of fire is from within by reason of enemy sympathizers working in the factories, workmen of known loyalty should be detailed to watch those whose loyalty is doubted.

Sabotage is the work of stealth not of armed forces. Troops are designed to meet armed forces, not sneaks. They are not designed to combat stealth.

The placing of a military guard over a factory is one means of pointing out to the enemy sympathizer the plants which are engaged in important work or Contracts. A military guard is merely an obstacle which when seen can be avoided like any other known obstacle.

The duties of the States are not transferred to the Federal Government by reason of a state of war; but such a condition magnifies the duties of the States and makes it more imperative for them to perform their proper functions in order that the energies of the Federal Government can be concentrated upon winning the war.

The use of Federal troops within a State is for specified purposes enumerated by law and the constitution. They are used as a last resort when all other means have failed or are likely to fail. Then only is the use of Federal forces to perform State duties warranted. Application for such aid should come thru the prescribed channels.

The use of alert and reliable plain clothes men is the best protection against stealth. The cost of such protection can well be added to the cost of production.

The military system of two hours on and four hours off is harder on men employed on interior guard work than eight hours on and sixteen hours off.

Lights so placed as to form bands of light without shadows around important areas and buildings are essential for efficient protection at night.

States should be impressed with the fact that they are parts of a whole and their own safety demands all their efforts to preserve and to aid the Central or Federal Government. No requests should be made which would in any way detract the Federal Government from its important mission of winning the war.

The above measures should be remembered in all future uses of troops on interior guard duty.

COMMENTS.

The organization of the United States Guards did not start soon enough; when started it should never have been interrupted. With 2,000,000 men in training and facilities for transporting only 50,000 per month to Europe it would have required forty months to transport the troops in training but this estimate did not take into account the product of the Emergency Fleet Corporation nor the aid of the Allies which was secured. It did not give sufficient consideration to the ingenuity of this Nation.

Sufficient consideration had not been given before the war to the question of Interior protection during the war.

The policy in forming our army adopted, established class distinction by maintaining Regular Army, National Guard classes and creating a third class, the National Army. This was conducive to increasing wrangles, intrigue and prejudices within the Federal forces.

All forces could have been classed as Army of the United States or U. S. Army under the law of 1916, which was possible after May 18th, 1917. There was no reason for a National Army class or a National Guard class nor a U. S. Guard class. There was no limit to the number of men in the army during an emergency. The limitation of 175,000 for the Regular Army applied only during peace. Two fears seemed to pervade the War Department.

A repetition of England's loss of trained soldiers; perhaps well justified at first. This should have disappeared by the end of the second training camps, November 26th, 1917.

A fear that all new members of our army would have the same rights as the Regular Army as to pay, discharge, retirement, etc. This could easily have been regulated by Congressional legislation after the war. We needed a united single army backed by our united national resources. We obtained it by the end of the war.

The retention of regular troops in this country at first was justified by the probability of drafts riots due to the selective draft law; but, when none developed, the regular troops were needed more urgently in Europe than here in the U. S. By failing to organize regular divisions opportunities were thrust upon the citizen soldiery which responded, and made good. History will record that the regular army was again disrupted by war, that only seven active divisions of regulars were on the firing lines whereas their infantry peace time regiments should have justified sixteen. The National Guard which was expected to furnish only sixteen divisions by 1922 furnished the frame work of seventeen divisions and part of another, the 93rd (colored) by August 5th, 1917. Only twenty-nine divisions shared in the active work overseas: 7 Regular, 11 National Guard and 11 National Army. Had the National Army Divisions never been created under a class name, history might have recorded eighteen army divisions and eleven National Guard Divisions. Our new policy will require only the enumeration of Divisions of "The Army of the United States" in our next war.

We have all seen the policy as announced under the act of June 4th, 1920. I am unable to see wherein the use of Regulars for interior guard duty during a war has been remedied in this new policy. There has been no change in the status of the National Guard under the new law other than to remove the former provision of law; that in case of draft the National Guard shall be drafted first. Section III, Act of June 4th, 1920, uses the word "may" and makes the drafting of the National Guard optional with the President. The National Guard is part of the Army of the United States only while in the service of the United States which was its identical condition under the former law. The new policy provides for the Organized Reserves as the third component of the Army. It might be possible, at present, under the law for the President to omit drafting the National Guard in a major emergency thus leaving this force to the States. The most recent policy of the War Department places the National Guard in the first line with the Regular Army. Policies however, change like women's clothes; a new fashion may be in vogue when the next war starts.

Unless change be made in the Constitution before the next war, the relegation of the National Guard to interior protection would cause unmeasured trouble for the party in power.

LESSONS.

Lessons for application in future war:

We have a Regular Army and we will have a National Guard until Congress in its wisdom provides some better force for our national defense and a change in our Constitution.

The conditions arising during the World War will be repeated in the future should we engage in war with a leading foreign power.

Upon the declaration of war of a major emergency form a force at once for Interior Protection as part of the Army of the United States to take over and to perform the usual peace time duties of Regular Army in the home country.

Officers rejected for oversea or fighting line service from all sources. The National Guard officer will not be lost; nor will he be converted into a knocker of the War Department and a disturbing nucleus for evermore; neither will the rejects in the Officers Reserve Corps and the training camps hold out to the personnel of this force the hope of qualifying for service on the firing line.

As the draft is without doubt now firmly established in this country for supply of fighting men in future wars, the rejects of men for firing line service after their preliminary training will prove sufficient in a major emergency for all purposes requiring interior Federal Guards. Create under regular officers as many divisions of the Army of the United States as can be formed under the law. They should be our best troops and far more efficient on the firing line than on interior guard duty.

Maintain extra officers in the Regular Army in sufficient numbers as to warrant above action in all future wars.

APPENDIX "A"

ORDER OF RESPONSIBILITY FOR INTERIOR PROTECTION IN WAR.

	AVAILABLE MEANS
1. CITIZENS.	
Self defense	Proper lighting Watchmen Courts
2. (A) CITIES.	Police force including detectives Fire departments Courts Sheriffs Deputy sheriffs Courts
Toward individuals within city limits and extending to life, liberty, property and business.	
(B) Counties toward individuals not residing within cities	
3. STATES.	State Officials Courts Agents and detectives National Guard (During the World War) Home Guards, State Groups.
Toward all within its borders affecting life, liberty, prop- erty and business; except those duties expressly conveyed to the Federal Government and those performed by 1, 2 (A) and (B)	
4. FEDERAL GOVERNMENT.	Federal Courts and Processes Federal Officials Attorney Generals Office Secret Service and Agents Military Information Army and Navy Army and Navy Forces (During the last war the Army was employed in the following manner)
(A) To the States	1. Regular army and drafted National Guard
To prevent invasion	2. Regular Army alone
To insure domestic tranquility	3. (A) U. S. Guards
To insure a stable form of government	(B) Ordnance guards
(B) Toward whole country	(C) Fire and Guard Companies.
To enforce the laws of the land Interstate commerce law.	
Proper transmission of the mails	
Prevent introduction of liquor on Indian reservations	
To raise and support the military and naval forces.	
To enforce the Alien enemy proclamation when issued.	
To manipulate our resources so as to win the war.	
To protect everything necessary to the winning of the war in case the States fail to do their full duty.	
To win the War.	
N. B. The lower order should endeavor to control matters by its own effort unless failure will result or there are strong reasons for believing that failure will result without additional aid. Number 4 should be called upon for interior work only as a last resort. Other agencies should be exhausted before the Federal Govern- ment is called away from its vital mission of <i>Winning the War</i> .	

APPENDIX "B"

January 8th

GROWTH OF THE U. S. GUARDS

1st two battalions numbered one and two inclusive; one battalion in each the Eastern and Southern department and one company each of 3rd, 4th, 5th and 6th battalions in the Northeastern, Southeastern, Central and Western departments respectively.

March 18th

Headquarters and companies B, C, D, 4th Battalion in Southeastern Department.

April 5th

Headquarters and companies B, C, D, 3rd Battalion in Northeastern Department.

May 2nd

Completion of organization of one existing battalion each in Northeastern, Southeastern, Central and Western Departments.

The formation of 19 additional Battalions the seventh to twenty-fifth inclusive was begun.

7th and 8th in Northeastern Department 9th, 10, 11, 12, 13, 14, 15, 16, in Eastern Department; 17 in Southeastern Department; 18, in Central Department; 19, 20, 21, and 22 in Southern Department; 23, 24, 25 in Western Department.

May 31st

26th Battalion authorized for Central Department.

June 8th

27th Battalion authorized for Northeastern Department.

June 18th

28th Battalion authorized for Southeastern Department.

June 19th

29th Battalion authorized for Central Department.

June 22nd

30th Battalion authorized for Western Department (Alaska)

July 13th

31st to 40th inclusive authorized as follows:

31 Northeastern Department; 32, 33, 34, Battalions Eastern Department; 31 North Eastern Department 32, 33, 34, Battalions Eastern Department; 37 and 38 Battalions Western Department; 39 and 40 Battalions Southern Department.

August 23rd

41st to 70th Battalions authorized; the 41st and 42nd being assigned to Southeastern Department; 43rd, 44th, Western Department.

REPORT M. B. PAGES 68 AND 69, 1918.

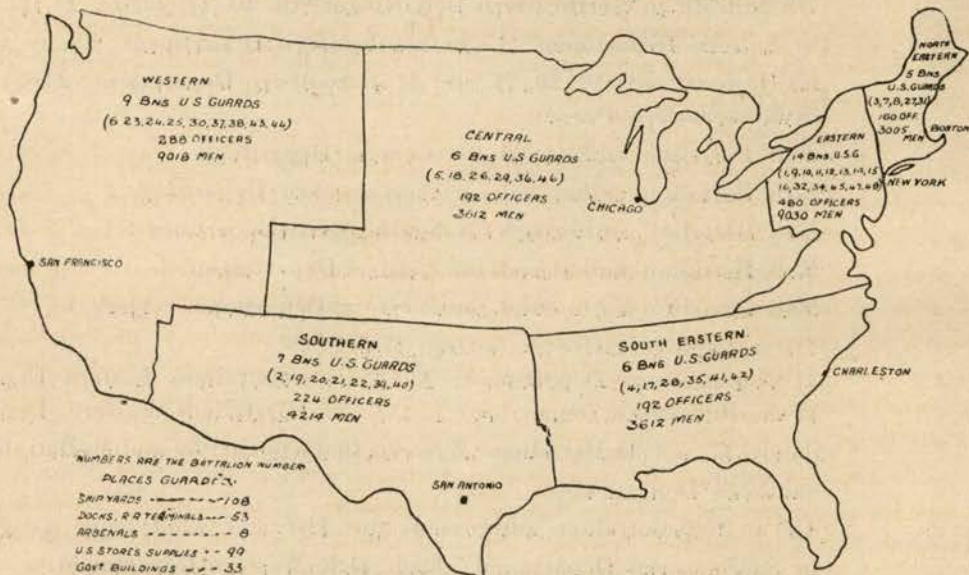
DISTRIBUTION OF THE BATTALIONS OF THE U. S. GUARDS.

Northeastern Department 3, 7, 8, 27, 31	155 officers 3010 men
Eastern Department 1, 9, 10 11, 12, 13, 14, 15, 16, 32, 33, 34, 45, 47, 48,	465 officers 9030 men
Southeastern Department 4, 17, 28, 35, 41, 42,	186 officers 3612 men
Central Department 5, 18, 26, 36, 46,	186 officers 3612 men
southern Department 2, 19, 20, 21, 22, 39, 40,	217 officers 4214 men
Western Department 6, 23, 24, 25, 30, 37, 43, 44,	279 officers 5418 men

ORGANIZED STRENGTH.

Officers 1488 Men 26,796 Total 28,896

DISPOSITION OF U.S. GUARDS, NOV. 11, 1918.



NUMBERS ARE THE BATTALION NUMBER.
 PLACES GUARDED:
 SHIP YARDS ----- 108
 DOCKS, R A TERMINALS --- 53
 ARSENALS ----- 8
 U.S. STORES SUPPLIES --- 49
 GOVT BUILDINGS --- 33
 R A BRIDGES
 TUNNELS --- 18
 LOCKS, DAMS, PAGES --- 12
 PRISON GUARDS ----- 4
 TOTAL 338

JAPANESE OPERATIONS AT TSING TAO, 1914.

By

Lieutenant Colonel W. J. Davis, Infantry.

Germany's world wide colonial policy may be said to have materialized about the close of the 19th century. She began in 1884, with the occupation of certain lands in Southwestern Africa, later extending her influence over Eastern Africa and thence to Oceanica. As it happened, however, the desirable colonies of the world had been divided among England, France, Holland, Spain and other countries. China seemed to be the only place remaining for the Germans to try their grand scheme in a financial or military way.

Germany being alive to the advantages secured by the other powers in China, came to seek a base of operations for extending her influence. Richthofen, a geographer, explored the Shantung Province in about 1882; and in describing its natural resources to his people, laid great emphasis on the possibilities of Kiau Chau Bay, as a gateway to this land of promise. His enthusiasm attracted the attention of the German authorities, who later in 1896, ordered Commodore Tirpitz, Commander-in-Chief of the Eastern Fleet, to examine and study Kiau Chau Bay from a military point of view; the next year the Superintendent of the Kiel Harbor Improvement, was directed to accurately effect the technical exploration of this bay. The two reports admitted the high value of Kiau Chau Bay for a naval base. There being no pretext upon which to seize it, there was nothing to do but wait for a chance to come. As it happened, the wait was a short one, for on the 1st of November, 1897, two German missionaries were murdered by a mob of Chinese irresponsibles. Such an opportunity was not to be lost, the German government ordered Rear Admiral von Deiedelifiss, then commanding the Eastern Fleet, to seize Kiau Chau Bay at once.

On the 14th of November, 1897, a force was landed at Tsingtao, under the guise of a maneuver. Without loss of life, this force turned out the Chinese garrison, including the Commander-in-Chief, and at the same time, the German Admiral declared the occupation of the entire bay. Later, through pressure, China entered into a formal agreement on the 6th of March, 1898, and thus we have the lease of Kiau Chau.

The clauses of this lease specifically included the boundaries, rights conceded and duration of the lease, certain railways were to be constructed to Tsinan-fu, and the right to work all mines within 50 miles either side of the railways, was conceded to the Germans, foreign investments were to be included, allowing preferential rights to German capitalists alone. It would seem as though the foundation had been well laid to bring the whole of Shantung Province into the German sphere of influence, preparing in a measure for a later penetration into the heart of China.

Germany lost no time in formulating an economical arrangement of the leased ground, to make it serve as a connecting link for the mutual approach of China, and herself. This included provisions of a modern nature, using Tsingtao as a base for her Eastern Fleet and also as a starting point for the materialization of her Chinese policy. No time was lost in surveying mining properties and constructing the railroads, which were to connect the leased territory with Central China, and in developing the areas in Shantung Province.

As a result of this development, in about four years time, the trade of Tsingtao reached even to Tsinan-fu and revolutionized the economical conditions of the whole region. The further construction of railways to other districts as the Honan and the southern part of the Pechili Province extended the German influence practically into the heart of the Chinese Empire and these routes were used as feeders for the Shantung Railroad. The result was that this influence brought into Tsingtao goods which properly belonged in the British zones of supremacy. As a result of her success, her ambitions progressed to the Yang-tse-Kiang River.

As Germany acquired rights for railroad construction in China, she began to display political power. Germany spared neither labor nor expense to attain her ends. The result was she stood foremost among the powers economically, politically, commercially, and industrially. Germany even aspired to Germanize the Chinese people, to this end she left no stone unturned to implant her influence. The Chinese government was encouraged to and did use her military officers as instructors, in legal matters German lawyers were available, on construction projects the German engineers were on hand, in educational matters every encouragement given was followed by the establishment of German-Chinese schools in the larger towns as Tientsin, Hankow, Nanking, Shanghai, etc. In Germany there was established a German-Chinese Society for the en-

couragement and protection of Chinese students within her borders. Both internally and externally every effort was made to diffuse her own civilization. And strange as it may seem the Chinese education was gradually on the cast of a German one.

The existence of a secure base of operations, the leased Kiau Chau Bay, contributed much towards the achievement of the firm foothold established in China. The affairs of the leased territory were from the time of occupation executed on the basis of Germans first and always.

It was prohibited to sell land generally, the Governor General was authorized to purchase desirable ground, by condemnation, if necessary. All taxes were readjusted and in fact everything was done to encourage her own nationals to settle in the leased territory.

An area adequate for the building of Tsingtao was taken over, in most cases payment was made for the ground taken, the Chinese houses burned, and a true, modern European town constructed, European and Chinese being kept separate. Tsingtao Harbor was constructed with its sea wall, wharves, ship yards, etc. The large harbor was built to permit entrance of her fleet of war vessels and commercial steamers. A small harbor was built to take care of the Chinese boats and small steam ships.

At the time Germany took over Tsingtao, it was small, unimportant fishing village, in about ten years time, we find the town transformed into the commercial center of North China, its wharves capable of simultaneously anchoring about eight ships of the 6,000 ton class with facilities for dry docking ships of even larger tonnage. Some thing like 1,000,000 tonnage passing in and out of the harbor annually, at the expense of Tientsin, Chefoo, and other towns in North China.

To make the base secure, Germany paid close attention to things military from the first. The liberal appropriations from the Fatherland were spent on the land and sea defenses. The local revenues augmented home subsidies so that fortresses and barracks were provided for.

As a result of the declaration of war between Austria-Hungary and Servia on July 28th, 1914, into which Russia, France, England, and other European countries became involved, we find Germany siding in with Austria. By the 12th of August, 1914, most of Europe was engaged in war, which in turn had a far reaching effect in the colonies of the countries concerned.

Japan, while allied with England, did not immediately declare war as she considered her area as being outside the entangled regions and desired to maintain a strict neutral attitude, but realized that with England entering the war it might become her duty to join her ally.

Meanwhile, Tsingtao made feverish preparations for war, certain ships which had made this port their base, preyed on British and Russian merchantmen, even holding up Japanese steamers, the result being that the peace of the Far East was much disturbed.

On the 7th of August, 1914, Great Britain made a request on Japan for adequate naval assistance under the English-Japanese Pact of Alliance, which Alliance was drawn with a view to securing peace in Eastern Asia, the independence and territorial entirety of China, the assurance of equal opportunities in that country and the maintenance of the rights of England and Japan for possessing territories in Eastern Asia, as well as the protection of their special interests. Moreover, on account of the existence of a base of activity in the Far East, under the German Government, whose interests were apt to run against the Alliance, it was deemed a serious obstacle to the maintenance of the interests of Great Britain and Japan, and the latter country, after mature thought, made known its decision to enter the war on the side of Great Britain.

On the 13th of August, Great Britain informed Japan, that she had instructed the Commanding General for Eastern Asia to consult with the Japanese authorities concerning military operations.

In as much as the opinions of the two countries, on the whole, agreed, we have the soldiers of Japan for the first time in their history, preparing to fight shoulder to shoulder with a white soldier and with the white man under the leadership of a nation of the yellow race. It also happened that the enemy, Germany, had been their instructor along military lines.

While plans were being made for war, Japan evidenced a desire to accomplish its end by peaceful means if possible, she sent the following advice to the German Government on August 15th, "Considering it

highly important and necessary, in the present situation, to take measures to remove all causes of disturbance to the peace of the Far East and to safe guard the general interests contemplated by the Agreement of Alliance between Japan and Great Britain, in order to secure a firm and enduring peace in Eastern Asia, establishment of which is the aim of the said Agreement, the Imperial Japanese Government sincerely believes it their duty to give advice to the Imperial German Government to carry out the following two propositions; 1st. To withdraw immediately from the Japanese and Chinese waters German men of war and armed vessels of all kinds, and to disarm at once those which cannot be so withdrawn. 2nd. To deliver on a date not later than September 15th, 1914, to the Imperial Japanese authorities, without condition or compensation, the entire leased territory of Kiau Chau with a view to eventual restoration of same to China. The Imperial Japanese Government announces, that at the same time, that, in the event of their not receiving by noon August 23rd, 1914, the answer of the Imperial German Government signifying an unconditional acceptance of the above advice offered by the Imperial Japanese Government, they will be compelled to take such action as they may deem necessary to meet the situation."

As no reply was received to the foregoing ultimatum, Japan declared war on Germany, during the afternoon of August 23rd, 1914.

Due to the Austria-Hungarian Ambassador requesting his passports on August 27th, diplomatic relations were severed with that country and the Japanese Ambassador recalled.

Tsingtao is located in the extreme southwestern part of the peninsular which with Cape Jaeschke, forms the bay of Kiau Chau. That portion of this leased territory found on the peninsula is bounded on the east by the Laoshan Mountains with an altitude of about 3,500 feet; westward to Kiau Chau Bay there are several ridges of less height running generally northeast and southwest. These ranges have a gradual fall to the south and end in the valley of the Litsun and Tschang-tsum-Rivers; the southern end of these ranges form the outer line of defense for Tsingtao 600-1500 feet high).

Farther south there is another line of hills running from Foushan to Kushan, (350-1200 feet high) which forms the line of resistance for the land defense of Tsingtao.

To the north of the town is another line of hills, from east to west, Iltis, Bismarck, and Moltke (250-600 feet high).

Between the Foushan line and the latter line, the Germans constructed their redoubts as their first line of resistance, because the garrison was too small to permit of using the Foushan-Kushan line. The redoubts were numbered from 1 to 5, and extended from sea to bay, forming strong points and a serious obstacle to forces attacking from the land side.

The hills in Siaochau were covered more or less with pine and fir trees, planted by the Germans, but not yet large enough to protect the valleys from inundations during the wet season. Tsingtao and vicinity was well screened by trees, especially the forts on Iltis, Bismarck, and Moltke Hills. This screen concealed their communications from land and sea. The hillsides were under cultivation and terraced by the Chinese farmers. Crops are peanuts and sweet potatoes.

The main roads within Kiaochan were generally good, two main roads to the north, one along the bay and the other to Litsun were macadamized, well drained, bridged and in good repair. Many of the cross roads within the leased territory and most of those outside were practically impassable during the rainy season, practicable only for the Chinese wheel-barrow, and even these found it impassible where the roads wandered over stream beds. During the dry season the stream beds were used for roads as the sand and debris packs well. Mountains were crossed by narrow trails.

The railroad parallels the bay from Tsingtao and then runs northwest and west to Tsinan-fu, where it is connected with North and South China.

The rivers are numerous and except during rainy season, easily forded.

Many excellent mules and donkeys are found in this area, the mules draw carts and the donkey is used as a pack animal.

The Chinese houses are usually one story, with mud or stone walls, and thatched or tiled roofs.

The latitude of Tsingtao is about the same as Fort Benning. The Province of Shantung was practically

contained within the theatre of operations, lying in northeast China proper, between 34 degrees 35' and 38 degrees 15' North Latitude, and 115 degrees 20' and 122 degrees 45' East Longitude. This province is washed on the east by the Yellow Sea, Gulf of Pechili on the north, touches Chihli and Honan on the west, and borders Honan and Kiangsu on the south. Area given by the Chinese government as 55,984 square miles, with a population of 34,000,000. (Census of 1910).

Telegraph lines followed the railroad; to Wei-hai-wei; and to Shaho, most of the offices were under Chinese control.

There were seven cable lines in operation, two of these lines were owned by the German Government, the other lines were controlled by the British and Japanese.

Telephone service consisted of only two lines, the one in Chefoo, and the other in Tsingtao.

The wireless station at Tsingtao was the only one in the province and it was under control of the German Government, it was said to be 7-20 kilowatt station, and communicated with the stations at Yap Island, Peking, etc.

Temperature ranges from 90 degrees F. in summer, to 5 degrees below zero in winter. January is usually the coldest month. During July and August the heat is intense. Day and night temperatures are very marked in their changes, especially during the spring and fall, being quite warm during the day and dropping below freezing at night. The southern shore is warmer in winter and cooler in summer.

From November to February the winds are northerly; during April and May, easterly; May and June, easterly to southeasterly; July and August, southerly to southwesterly; September and October, southwesterly. The velocity of the wind is high in spring and winter and low in summer and fall, except for typhoons.

The wet season generally is from June 15th to August 15th, during which time about 70 percent of the rain fall of the entire year falls.

The natives bear strong resemblance to the Manchus and are a strong bodied people. The Germans were not popular with them.

The transportation throughout the province is similar to that used in the leased territory.

The local products consisted mainly of millet, soya beans, sweet potatoes, peanuts, indian corn, and barley, the stalks being useful as forage. Fuel consists of wood, straw, and grass. Cows are plentiful in the western part of the Province, and fishing is an occupation all along the coast.

If the ordinary resources in the field of operations were taken advantage of, a force could subsist on the country for a time without difficulty.

The country is mountainous or hilly east and north of Laichowfu and east and southeast of Ping-tu, being rocky, giving rise to steep, precipitous slopes here and there, there is little or no timber, affords good observation, but is difficult for the movement of troops other than infantry. To the south of Tsimo lies the Laoshan Mountains, which to the west consist of lines of ridges of lesser elevation.

The river beds are generally wide but usually are not great obstacles except in the wet season.

The coast waters are generally shallow and except in harbors which have been artificially deepened (and there are very few of these) ships must usually anchor two or two and one half miles from shore, on account of the shallow water and because of direction of the monsoons. In case of storm, ships as a rule steam out to sea.

On account of the time selected for active operations and the desire to drive the Germans from the hinterland, the port of Lungkow, on the northern coast of Shantung, 150 miles from Tsingtao, was selected as the first point for debarkation, as a result of a conference between British and Japanese commanders. Later troops, ordnance, munitions, etc., would be landed nearer the leased territory.

Negotiations were started at an early date to define a war zone outside the leased territory. After several exchanges of notes between the Chinese and Japanese, the Chinese defined a war zone to extend not farther west than about 50 miles east of Wei Hsien, the Japanese complained that this area was too restricted, but finally accepted the Chinese decision.

The Chinese Government intimated that it might be necessary to protect operations outside of the zone to exonerate themselves should the Germans protest.

Later when the landing did take place at Lungkow, the Germans made a special grievance of the fact that the Japanese had been allowed to land without any notification from the Peking authorities to the other belligerents.

During peace time Germany ordinarily maintained, at Tsingtao, a battalion of marines, (with a field battery and a company of engineers attached). The Governor General of Kiau Chau made his headquarters in Tsingtao, he was a naval officer, subordinate to the Minister of the Navy. All officers and officials, judicial and military, were under his supervision. The business of the different bureaus and departments were managed by members of his staff.

The officers and enlisted men were supplied by the Navy for convenience, the Navy belonged to the central government, while the Army was largely under the control of the different States.

The instruction system was patterned after that of the land forces in Germany, with modifications to meet local situations, as for example, certain companies of the Naval Infantry Battalion were drilled in the duties of transportation troops, as well as cavalry. The Artillery units received instruction in the service of security on the march and in camp in addition to exercises in the service of fortress guns, ammunition supply, planting mines, etc. Annual maneuvers were held in the leased territory.

The war craft numbering 17, with a tonnage of about 45,000 tons, made Tsingtao their base.

The first line of defense on the land side extended from the mouth of Hai-po-ho River eastward about six kilometers, strong points, with wire entanglements encircling them studded this line. No cannon were installed during peace time, but certain machine gun emplacements with guns mounted in them were located on the southern side of the Hai-po-ho.

The second line of defense running from Iltis Hill to Moltke Hill provided for fire against land or sea, this line was five kilometers in length.

Iltis Hill contained a strong fortification which covered the right flank.

The fort on Bismarck Hill was similar to the one on Iltis Hill, while the fortification on Moltke Hill, was the strongest one of all and intended as the main defense of Tsingtao. On the sea front were various small batteries designed for the defense of the harbor entrance, and to flank mine fields. The armament in these fortifications were of an antiquated pattern generally.

The barracks for the troops assigned to the different fortifications were usually at the base of the hills on which the forts were built.

The supply store houses, and magazines, were built in the valley south of Moltke Hill.

At the outbreak of the war the Germans forces stationed in Tsingtao may be listed as follows:

4 Companies, 3rd Battalion and Staff.....	1,000
1 Mounted Company.....	140
1 Machine Gun Detachment, Horse drawn.....	40
Total.....	11,80
1 Battery Naval Field Artillery, 7. 7om Guns attached to Battalion....	100
1 Company Naval Engineers.....	120
5th Battalion Naval Artillery and Staff.....	750
East Asiatic Naval Detachment and Staff consisting of 4 companies of Infantry (400 men), 1Battery of Field Artillery (100 men), 1 Machine Gun Detachment (60 men).....	560
Total.....	1,530
Grand Total.....	2,710

To this number may be added about 2,000 reservists, who reported at Tsingtao shortly after the outbreak of the war.

The peace army of Japan consisted of 18 Infantry Divisions and the Imperial Guard Divisions, 4 brigades of cavalry, 3 brigades of field artillery, and 1 brigade of communication troops.

Usually 2 divisions are on foreign service in Korea and Manchuria. In addition to those just mentioned, certain troops manned the fortresses throughout the Empire and in the Colonies special forces not heretofore listed were maintained by the Governors of the Colonies. Other detachments were stationed in Peking, Tientsin and Honkow.

The naval forces divide the coasts in five districts and take over the guarding of the waters and coast assigned to it.

The Japanese land forces ordered out for the operations against Tsingtao numbered about 50,000 men. This force consisted of 1 Division, 1 additional Infantry Brigade, 1 Battery Mountain Artillery, 2 Regiments Howitzer Field Artillery, 1 Headquarters and 4 Batteries Howitzer Siege Artillery, 2 Battalions Engineers (additional), a special Railway Regiment, Detachment Field Telegraph troops, Radio Detachment, Pontoon Trains, Air Detachment, Field Search Light Troops, Ammunition Train, and line of Communication Troops.

Immediately after sending the ultimatum to Germany on August 15th, the Japanese General Staff proceeded to make plans for the contingency, should it arise, and organized special units on paper. Orders were issued on August 21st, to the 18th Division, giving the order of battle and the composition of the special units. War being declared on the 23rd of August, the commander of the 18th Independent Division, as it was now termed, was informed of the orders for the movement of the troops, line of communications established, line of supply and an outline of the plan of campaign for the siege of Tsingtao. The British Commander had been in consultation with the Japanese Authorities since the 18th of August, and had arrived at an agreement by August 24th, on the main points, which included the British forces, the 2nd Battalion of South Wales Borderers, were to be placed in command of the Japanese Commander of the expedition for unity and control.

The Japanese plan of operations was as follows: (a) to organize a division, and attach thereto one regiment or heavy artillery, an additional battalion of engineers, some siege troops, detachments of field telegraph troops, air service, field search light troops, pontoons and line of communication troops or service of supply. (b) To send this reenforced division across Shantung Province. (c) To capture Tsingtao in conjunction with naval forces.

The Japanese Command estimated the maximum forces available for the defense of Tsingtao to be about 4,300 men, with about 40 heavy guns.

If the Asiatic fleet remained in the harbor, there would be available about 4,700 additional men, with about 80 field pieces and 80 guns.

In consideration of the foregoing it was decided to land the division and auxiliary troops at Lungkow and advance via Ping-tu and Tsimo; the heavy ordnance and heavy materials were to be landed at Laoshan Bay after the capture of Tsimo by the land forces. The Foushan-Kushan advanced positions were then to be taken and then move on to the Tsingtao fortresses.

Laoshan Bay would seem to be the logical point to land the expeditionary force, in order to shorten the route of operations, but owing to the fact that during this period the wind on the southern coast made landing difficult and also that the Germans had mined Laoshan Bay. By the time the troops from the north arrived at Tsimo, their reconnaissance would clear hostile detachments from the Laoshan Bay area and the Navy would clear the mine fields, it would be possible to approximately set a date for the dispatch of siege material, personnel and supplies.

This date would be about two weeks after the landing took place at Lungkow.

The units making up the Expedition came under the orders of Lieutenant General Kamio, who was designated as the Commander-in-Chief, upon sailing from their home port.

At this time the whereabouts of all of the German Fleet was not definitely known, the main part was known to be in Oceanica during the early part of August, the remainder of it and certain converted cruisers were known to be on the high seas adjacent to Kiao Chao Bay.

It was therefore decided, on August 23rd, that the Navy would convoy the military transports to their

destination. The transports, some 70 in number, were directed to proceed to Hakkoho, off the coast of Korea, and there receive further instructions from Vice Admiral S. Kato, Commander of the 2nd Squadron, relative to subsequent movements.

The 1st Squadron was charged with the security of the routes south of Hakkoho, and to cover the Yellow Sea. The 2nd Squadron was charged with closing up Kiao Chao Bay, convoying the expeditionary force and covering its disembarkation. Other units were assigned routes to guard to the north and south of the ones assigned the 1st and 2nd Squadrons.

It will be realized that a general mobilization was not necessary for this operation, although upon the declaration of war the Navy placed guard ships on duty to guard the principal ports, the Army likewise prepared their fortresses for action.

The movement of the Expeditionary Force was made in two stages, the first movement being completed and the same ships being used for the second stage, so as to disturb commercial ship traffic as little as possible.

The following units were with the first expedition: 18th Division, less 1 Artillery Ammunition Train and 2 Supply Columns, 1 Mountain Battery, 1 Independent Battalion of Engineers, less 1 Company Detachment of Radio and Field Telegraph troops, Detachment Air Service, less captive balloons and personnel attached thereto, Detachment of Troops, Service of Supply.

As a result of the conference between the Japanese and British Commanders, the understanding required a set of Articles of Agreement, which provided for attaching certain British land and naval forces to the expedition, places and dates were designated at which these forces should report, rules of procedure, as to conduct, supply, hire of labor, etc.

The principal ports of embarkation were Nagasaki and Ujina. Major General R. Yamada commanded the advance detachment, consisting of a reinforced brigade, sailed from Nagasaki, on August 28th, for the rendezvous at Hakkoho, and there met the other units of the Expeditionary force which had sailed from Ujina. Under the convoy of the 2nd Squadron the expedition sailed for Lungkow, arriving off that port in a typhoon on September 2nd. Disembarkation was started at once, but on account of the storm which lasted until the 9th, the disembarkation required several days longer than planned. No opposition was met with, and General Yamada's force, leading, moved out in groups as they came ashore in the direction of Lai-Chow, where they billeted for the night.

The march continued notwithstanding the storm which made the roads almost impassable and the swollen rivers difficult to cross. On September 12th, a cavalry officers' patrol from Yamada's detachment, had their first contact with the Germans, at Tsimo, driving the German patrol to the southward and took possession of the town. The following day another officers' patrol entered Kiao-chow, on the railroad.

September 14th the main force of the Japanese Cavalry occupied Tsimo.

Yamada's infantry arrived in Ping-tu on the 14th, the head of the main body resting at Shih-lu-pu, about two and one half miles south of Lai-Chow.

On August 27th, the 2nd Squadron occupied several small islands off the entrance of Kiao-chow Bay and began mine sweeping, at the same time mine sweeping craft were sent to Laoshan Bay to clear those waters and if necessary to prepare a landing place for later use.

In order to keep in communication with the home authorities, the Commander-in-Chief of the E. F., caused a cable to be laid between Lungkow and Talien. Communication was established on September 13th, the Navy providing the necessary protection for the cable ships.

On September 5th, additional troops were assigned to the expedition, namely:

4th Independent Battalion of Heavy Siege Artillery, 6—28 cm Howitzers.

One Special Railway Regiment, to be used in handling heavy ordnance and to build piers at Laoshan.

2nd Regiment Heavy Field Artillery—24—12 cm Howitzers, in case unloading and transportation of heavy ones being delayed.

One Independent Battalion of Engineers.

On account of the slow advance of the division, General Kamio ordered the 46th Infantry Regiment with Radio and S. O. S. Detachments, by water from Lungkow to Laoshan Bay, this detachment disembarked at Wang-Ko-Chuang on the 18th and captured the Hotung Pass the same day from a small force of Germans, who had taken up a position near that place.

On September 18th, a portion of Yamada's Infantry Detachment arrived in Tsimo after a hard march, the following day, the reserve arrived in Tsimo, which is a Chinese town of 30,000 inhabitants.

On September 17th, the railroad connecting Tsingtao with Tsinan-fu, was cut at Kiaochoo, by the officers' patrol and an infantry company which had just arrived to take possession of the town.

The troops designated for the 2nd Expedition arrived in time to start disembarkation at Laoshan as soon as the infantry made the landing secure. The Special Railway Regiment started to build a special pier and lay a light railway on the 20th, 4th Battalion of Engineers, started the same day to repair the roads. The remaining units disembarked by the 26th.

Yamada's Cavalry, on the 18th, moved along the north bank of the Paisha River towards Liuting and engaged about 200 German Cavalry and Infantry at Kow-tu-pu for about an hour, when the Germans retired, here the Japanese suffered their first losses, one officer killed and two men wounded. German casualties 10.

The Laoshan Detachment, 23rd Infantry Brigade, less one Regiment, General Horiuchi Commanding, moved to Lui-Shu-tai on the 19th and drove out a German detachment.

By the 20th the main body had arrived in the vicinity of Tsimo. Yamada with the 24th Infantry Brigade covered a front from about 5 miles south of Tsimo, to Chung-tsun. The Horiuchi Detachment covered the line Puli-Wang-Ko-Chuang Lui-Shu-tun. These dispositions covered the main body closing up on Tsimo and the landing at Laoshan Bay. Between the 20th and 24th the trains arrived and the main body was gotten together as a unit. The air service brought up their planes to Tsimo on the 22nd, and made daily flights reconnoitering the country south of the Litsun River, frequently subjected to rifle fire and machine gun fire. On the 23rd, Horiuchi's detachment was attacked by 250 men with 4 machine guns and 2 artillery pieces at Chai-ko, but drove the attackers southward.

On September 19th, the British contingent sailed from Tientsin, touching at Wei-hai-Wei enroute, arrived at Laoshan Bay on the 22nd and began to disembark the following day and proceeded to Tsimo on the 26th.

The commander-in-Chief decided to advance to the attack and issued from Tsimo, at noon, September 25th an order to that effect.

By 6:00 P. M. on the 26th, the Germans were driven from their positions along line of Lungkow, not the seaport, Heitschien, the positions south of Laoschan-Chow were still held by the Germans. During this engagement the gun-boats and Kaiserin Elizabeth, bombarded the Japanese right flank from Kiaochoo Bay.

Before daybreak on the 27th, the Horiuchi Detachment, which was really the pivot for the line to swing on, captured the area around Tschien-tschia-ling, northeast of Prince Heinrich Hill, south of the Litsun River.

Following up the success of the morning the advanced lines were pushed in close to the Foushansho-Kushan line, under the cover of darkness. On the morning of the 28th, the operation developed rapidly by the attack on Prince Heinrich Hill, which being precipitous and difficult of ascent, held up the attackers for about 4 hours. It was captured by a regiment of infantry with a loss of 50 killed. About 30 Germans were captured in the position.

The capture of this hill gave the Japanese commanding gun positions and observation of the interior fortifications.

The battle line now extended over 5 miles of front and steps were taken to form the line for the investment of the area. The British force consisting of the 2 Battalions of South Wales Borderers, numbering about 925 men, joined the reserve during the afternoon of the 28th.

The German gun-boats kept up a continuous fire, day and night, to hinder the dispositions of the troops. The Japanese Air Service kept 4 or 5 machines in the air observing German movements in the field and kept their own command informed of the German positions and movements. A German plane made daily trips over the Japanese lines, but was usually driven away by the Japanese. The fire from the ships in the bay was stopped by an air raid which drove the ships out of range.

Now that the field of operations had narrowed down, it was decided to occupy the western side of the bay with cavalry. Up to this time the Germans still maintained communications with the outside world via Western Kiaochan.

The Cavalry Regiment occupied Wang-tai and vicinity, September 30th, cutting another line of German communication.

The 2nd Squadron continued its mission of removing mines from the Kiaochan entrance and Laoshan Bay, furnishing convoys for the Army transports and keeping a close blockade on the Tsingtao. On the 28th, the blockading ships opened heavy fire on the eastern fortification. The British cruiser, H. M. "Triumph", taking part in this engagement.

The Shantung railroad had done much to increase the fighting efficiency of the Tsingtao forces, since the outbreak of hostilities.

On the 26th, a detachment was sent to seize the railroad at Wei-hsien.

This detachment consisted of 1st Independent Battalion of Infantry and 1 platoon of the 3rd Company of the 4th Battalion of Engineers with a mission to protect and maintain necessary transportation east.

This act brought strong protests from the Chinese, it was considered as necessary in the prosecution of hostile operations. On September 30th, the detachment was ordered to cover the railroad west of Wei-hsien, but cautioned to avoid trouble with the Chinese troops. On October 3rd, Tsinan-fu came under the protection of this detachment. The Japanese Government, having decided to take over the railroad, reinforced the Expeditionary Force by sending the 29th Infantry Brigade to insure the security of the railroad or for use during the siege if necessary.

The siege troops and armament began to arrive in Laoshan Bay on October 10th, munitions and stores were unloaded and the guns moved to prepared positions at Lin-ting and vicinity. The special railway regiment was charged with the construction of the light railway. The siege park was established at Lin-ting. Ration and forage stations were established at Wang-ko-Chuang, La-Chiao and Tsimo. The task of moving this material required in addition to the troops about 4,000 coolies daily, they were rationed along the route from the above mentioned ration stations. The method of moving the ordnance, ammunition, and siege material was by using the coolies to push by hand the light trucks.

The position now held by the investment force from Kushan on the west to Foushan on the east commanded the German line of works on the southern banks of the Hai-po-ho and the Foushan-so-ho, this line also commanded from east to west the forts on Iltis, Bismarck, and Moltke Hills from the Kushan position, an extensive view of the town was gained. The ground immediately to the south of the Japanese position was rolling and sloped downward to the Hai-po and Foushan Rivers, it was favorable for an advance under cover of the rolling terrain, ravines, woods, etc., the country to the south of the rivers, however, was exposed to fire and view of the German positions. The line occupied afforded the artillery excellent observation and gun positions and places of concealment. The line terrain south of the rivers would be difficult for the movement of infantry and engineers, as they closed in on the fortifications on account of the numerous gullies and ravines.

These gullies later afforded protection from fire from the flank fortification, and were utilized for communication trenches, some of them were found very useful in quartering troops and they assisted in solving the water problem.

The German artillery fire was kept on the Japanese positions day and night, to interfere with the consolidation of the ground. Attacks were delivered almost daily at different points along the Japanese line, these attacks were beaten off but were not followed up as the Japanese command knew that it would only be a question of time before Tsingtao would fall and while seeking information as to enemy locations, they endeavored to bring up their siege material and improve communications.

Troops occupying the front line lived in shelter trenches, those on the hills, strong points lived under portable tents pitched on the reverse slopes. The 2nd line were camped in the ravines and valleys.

On September 30th the Commanding Officer of the Naval Heavy Artillery Detachment decided to place his 3rd Battery of 4. 7 guns, at Kushan, the object being to fight the naval force which was consistently firing on the different units.

As the siege preparations were nearing completion, the Japanese offered the German Commander an opportunity to permit the non-combatants and nationals of neutral countries to leave the area. The American Consul at Tsingtao led the group that left Tsingtao on October 15th the Japanese escorted those that desired as far as Tsinan-fu.

Heavy rains began to fall on the 16th, washing out the railways, roads in rear and due to swollen streams severed communication for a time. It was not until the 23rd that the repairs made brought the siege preparations back to the condition they were in on the 15th.

On the 22nd, two companies of Skaas, disembarked at Laoshan Bay from Tientsin, joining the British force at the front on the 28th.

The Japanese troops were quite used to being billeted, therefore they used the Chinese houses for shelter whenever possible. The typical Chinese village is filthy and usually swarming with flies. Open trenches invariably were used as latrines. The men made no effort to clean their billets and unconsumed food was thrown wherever convenient. There were no epidemics during this campaign. Four field hospitals were established in Chinese villages, two Japanese hospital ships and one British ship evacuated the sick and wounded from Laoshan Bay. There was little or no trouble from the water, as the Japanese soldier never drinks water, when he can make tea. Kitchens were set up in sheltered places and cooked food, carried to the men in the trenches.

It was decided upon the arrival of the 29th Infantry Brigade, that such a large force was not necessary to guard the railroad to Tsinan-fu, the 34th Infantry was assigned this duty, the remainder of the brigade augmented the besieging forces. The Germans, early in the operations, destroyed all the bridges along the railroads, the storm in which the Japanese landed at Lungkow, had washed away much of the railroad bed. The section from Tsinan-fu to Ta-ku-ho was opened October 15th, the eastern section was not opened to traffic until after the fall of Tsingtao.

Between September 28th and October 29th, the preparations for the siege were practically completed. Siege guns and howitzers of a knock-down type had been landed, transported and mounted; a captive balloon had aided greatly in observation and in giving corrective firing data to the artillery, the line of investment had been pushed forward to from 1200 to 2000 meters of the main position, the front line at this time was constructing communication trenches, preparatory to an attack. Japanese aeroplanes reconnoitered the town and fortresses, and dropped bombs practically at will.

The blockading division had disabled a number of the guns on Fort Itis, their fire was directed by naval observers, near Prince Heinrich Hill, using the radio so that their firing was not accurate.

The Germans made sorties during the investment by day and night, but without success, their artillery and war vessels fired unusual number of rounds daily. Their search-lights made it difficult for the working parties. Their captive balloon was destroyed, because of the systematic practice of raising it from and lowering it to the same place. The redoubts in front of the main forts had been frequently struck and damaged, the main forts returned fire on both land and sea fronts, but each one had lost a number of guns. On the night of October 18th, Torpedo Boat S-90, escaped from the bay, and meeting the guard ship Takachiho, torpedoed her, and then continued her flight.

On October 31st, a general attack was planned, this being the anniversary of the Emperor's accession to the throne. The Japanese first line was able, by November 1st, to complete the occupation of the line Foushan-so-Ssu-fang. The work was immediately started for the 2nd attacking position, which was taken during the night of November 3rd, this position ran from the Pump Station to a point 500 meters west of Foushan-so, by the way of Hsi-Wu-tsun and the height on the eastern side, Kang-shia-Chuang.

The advanced line was now approaching the stone wall which extended from sea to bay, in front of the five German redoubts. In approaching this wall it was necessary to cross a stream bed, each skirmisher working behind sand-bags, which he pushed forward as protection when he was ready to advance. The work was speeded up at night, notwithstanding the fact that each redoubt was equipped with a couple of search-lights, making the front light as day for the German gunners. The work generally ceased about 4 M., the Japanese returning to their own trenches.

Each redoubt was encircled by a stone wall, barbed wire entanglements, four and one half feet high, about ten meters wide, and the ground in front of and in the vicinity of these redoubts was planted with mines.

The traces of these redoubts differed according to the terrain and location.

Each redoubt was defended by about 250 men, magazines, casements, etc., built of concrete. These structures afforded ample places for the storage of ammunition, food, clothing, etc., also dining halls with kitchens, dormitories and dressing stations, water was supplied from wells, dynamos furnished light for search-lights and quarters. In rear of the redoubts from Nos. 1 to 4, there was a continuous road, also another road to the village of Tai-tung-tschien and thence on to Redoubt No. 5. These roads were lined with entanglements and machine guns were mounted to cover the intervals during attacks.

The Pump Station on the west was not subjected to fire because of the probable need of water when the besiegers entered Tsingtao. A force was sent against this station, but met with no resistance, a small detachment surrendered without a fight. This was the beginning of the end as it exposed Fort Bismarck and the redoubts to fire from the left flank. The Kaizerin Elizabeth was sunk on November 2nd by the Germans after useful war material had been stripped from her.

The besiegers increased the intensity of their fire from land and sea, setting fire to large oil tanks, destroying dry docks, many fires were started in the town, the power plant was struck and the town was in darkness, from this time on, however, star shells were used with the same effect as search-lights.

November 6th found the Japanese occupying their lines close up to the redoubt walls, at midnight the German fire slackened, General Yamada, whose forces were in front of redoubts Nos. 3 and 4, sent out a reconnoitering detachment, who after climbing over and cutting a passage through the entanglements, could find no sentries, reinforcements were called up and Redoubts Nos. 3 and 4 fell about 1:30 A. M., Nos. 2 and 5 fell between 4 and 5 A. M., the British took No. 1 about 6:30 A. M. As the redoubts fell, those who could get away fell back on the forts about 400 meters in rear.

As soon as the Redoubts on the east were taken, the troops pushed on and took Fort Iltis and Fort Bismarck, some of the British had already entered Moltke, when a white flag was run up on the Observatory between 7:00 and 7:30 A. M., at 9:20 A. M. the Germans were offered terms of capitulation at Tun-Chia-Tsun, which were accepted the same date.

Actual transfer of property commenced on November 10th, and practically completed November 14th. The Japanese lost 1968 men in killed and wounded during this campaign.

From the German point of view, the war found the Tsingtao Fortress unprepared, in personnel and material. About one half of the garrison consisted of reservists, who were living in the Far East for business, and were so far removed from the spirit of the Fatherland that the defense could hardly be declared to have been as sturdy as might be expected of the soldiers of the Kaiser.

The armament in guns, dated from the Franco-Prussian War to the Boxer Rebellion, with a few modern ones taken from the gun-boats and mounted during the emergency.

In aeroplanes they were sadly deficient as to numbers, having only one machine and one aviator, this plane made daily flights, and bombed places within the Japanese area, and furnished data for the German artillery.

On account of the small force available for the defense of the Fortress, but small detachments were available to harass the advance of the Japanese, as most of the men were engaged in preparing the works for the final resistance against the Japanese investment.

The supplies of food and material seem to have been ample, the seeming waste of shells may be accounted for by the desire on the part of the defenders to search roads and back areas, with a view to interrupting the communication and supply wagons and in every way delay the fall of the Fortress.

Before the actual surrender all plans of the Fortress, secret papers, fortress guns and material were destroyed. That there existed no strong feeling of animosity between the Germans and their Japanese captives was evidenced by the fact that all German Staff Officers were permitted to retain their side arms and all officers were permitted to go about at will in Tsingtao after the surrender.

Before issuing to Germany the ultimatum which Japan undoubtedly realized would end in war, Japan had in her possession from her Intelligence Section, enough information to justify causing provocation to bring about the end desired. Her earlier wars had included the reduction of a fortress, so that with her previous experience, and a small force to contend with, she had little doubt as to the result on land. With this end in view, she planned thoroughly and systematically, however, these plans did not include the necessity for taking Tsingtao by assault, as there appeared to be no possibility of reinforcements reaching the fortress.

It would appear that the expedition landing at Lungkow was entirely too large for the purpose intended, that of clearing the country of small bands of Germans, undoubtedly a feeling that the Chinese might cause trouble, influenced to a degree the decision to order such a large force to march through Shantung and impress upon the Chinese from the start the strength of their force.

Laoshan Bay being mined, precluded its use as a point of immediate debarkation.

The Japanese cavalry covered the advance of their main body and established contact with German detachments from the time they arrived in the vicinity of Lui-ting.

The Japanese sanitary conditions, everywhere, were reported as very bad.

The Japanese invariably out-numbered all hostile detachments, their advance to the 1st investment line was very slow, due to the slow moving trains attached to the main body. The presence of the British Contingent, under Japanese leadership, set a precedent in the world's history, otherwise it did not affect, in any way, the fall of Tsingtao.

The month occupied in digging trenches from the 1st line of investment to the vicinity of the redoubts gave them an excellent opportunity to become acquainted with the country, fortifications and particular objectives assigned each sector. The air service furnished maps showing valuable details as to the location and armament of each fort.

An earlier mounting of heavy calibre guns would have saved the right flank from being harassed by fire from the gun-boats in Kiaochan Bay, a more aggressive action on the part of the air service would have served the same end.

No Chinese were permitted in the trench system, all the work being done by Japanese engineers and infantry.

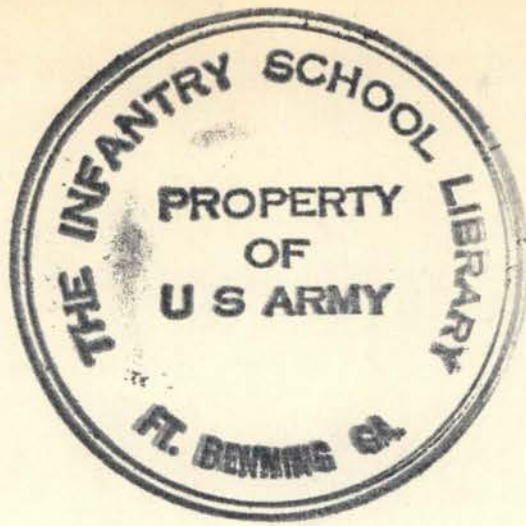
That the campaign ended so quickly was as much a surprise to the Japanese as to the outside world, the fortress being captured 77 days after the declaration of war, and about five weeks after the investment began.

The lesson to be learned from this campaign would seem to be that a possession which is likely to become isolated at the outbreak of war, should early be equipped with the modern engines of war, and a sufficient garrison maintained to offer resistances at a distance from the main forts.

It is believed that where these conditions are not permitted to exist, the besieged point becomes a trap.

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