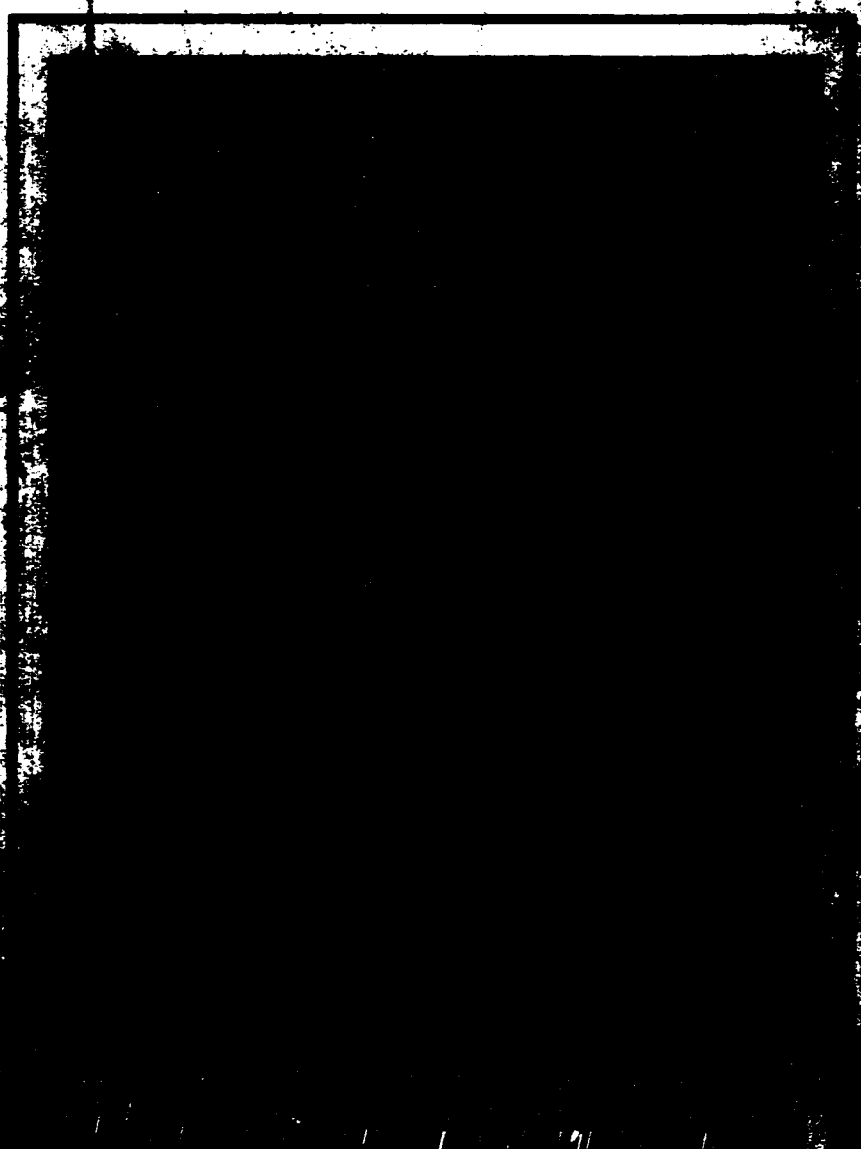
The CAVALRY JOURNAL



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Organized November 9, 1885

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THE CAVALRY JOURNAL

VOL. XLI JANUARY-FEBRUARY, 1932 No. 169

The Air-Cooled Machine Gun

By Captain Thomas J. Heavey, 2nd Cavalry

NOTE: All rifle troops will shortly be equipped with the .30-caliber air-cooled machine gun. Due to lack of funds this gun will be issued with its original mount. With this mount its accuracy is not comparable with its accuracy when mounted on the experimental mount referred to in this article. This experimental mount, or modification thereof, will be furnished as soon as funds become available. Until such funds are available all shooting for qualification by men assigned as light machine-gunners will be done with the rifle and not with the .30-caliber air-cooled machine gun. Firing with the latter gun will be for instructional and combat purposes only.

THE adoption by the Cavalry of the Browning air-cooled tank machine gun (cal. .30, M1919, E-1) to replace the machine rifle has called forth many comments from the using branch, and others. As is usual with the advent of something new, differing radically from the old established traditions, discussions as to the advisability of the change are current. The much maligned machine rifle now appears to have a host of friends, all of whom are not "retiring" in sounding its praise. It is but fair to remark that such eulogy is human nature. None of us ever realize what fine citizens, heroes and pillars of the state we are until we are well away to the eventual dissolution under the sod.

However, the purpose of this article is not to engage in acrimonious debate. It is to acquaint the using service with what we can do and, if we are willing to try, what will be done with the "new" weapon. So, the attempt will be made to stick to facts and not be fanciful.

The air-cooled machine gun, as at present issued, is mounted on a small tripod weighing about five pounds. This tripod was originally intended for emergency use in case the tank mounting the gun was disabled and the crew forced to get out and continue the fight. In such a situation short range fire dispersed over a wide area is satisfactory, and the tripod is well suited to such use, as it is light, quickly set up and portable. However, for its purpose, the Cavalry requires the light machine gun to be so mounted that it can deliver accurate long range fire at a high rate of fire. It is a well established fact that no machine gun is one whit more accurate than the mount with which it is used. We could hardly expect the most accurate National Match rifle to ring up high expert scores when Pvt. John Doe, age 17, weight one hundred and ten, military experience three weeks, natural ability to shoot nil, handles it. Our past experience with an automatic weapon taught us that it was an impossible task to get the type shooting we wanted without a bipod and butt rest, a mechanical controlling device. And we do not as a rule send Pvt. John Doe to shoot on our rifle teams. Hence the development and design of a tripod to team up with the mechanically excellent machine gun, for a square and fair break for the gun.

The results obtained, so far, indicate that our old friend, the machine rifle, was indeed a fine old friend—but had come to the end of his usefulness. The tripod that seems to answer our needs is based on the already proven maxim, that an automatic weapon must have some *mechanical* method to control elevation, in order to be the most effective weapon. As the "issue" or "tank" tripod has one leg in rear and two to the front, it would be quite difficult to equip it with an elevating device. It was, therefore, decided to make the mount with two legs to the rear and to attach the elevating gear to a horizontal bar joining these two legs. To secure stability without undue weight, the tripod was so designed as to place the gun close to the ground.

The first tripod of this type, roughly designed, was tested by the 2nd Cavalry at Fort Riley in September during the musketry phase of the regimental training. The primary purpose of the test was to get a comparison between our old friend, the machine rifle, and the new air-cooled machine gun and try to find out what we had gained or lost by our "swap." To

Firing Position Used with the Air-cooled Machine Gun on Experimental Mount.

this end it was decided to select an experienced machine rifleman (Sergeant Williamson, Troop "B", 2nd Cavalry) and have him fire each weapon in eleven musketry problems, the machine gun to be fired first and then the machine rifle. The same amount of time was allowed for actual firing.

This firing was conducted against silhouettes, many of them camouflaged or completely hidden, at un-

known ranges varying from 300 to 650 yards. The problems called for different types of fire.—surprise. fixed, traversing. searching. oblique traverse—and frequent changes of fire from one target to another. The last three exercises involved fire on moving targets, representing dismounted men, mounted men and armored cars, moving at varying rates of speed up to 25 miles per hour and at ranges of from 300 to 450 yards.

The whole result may be boiled down to the following empirical statement: the machine gun, *in a unit of time*, fired 2.3 as many rounds as the machine rifle and obtained 2.4 times as many hits. No conclusive opinions can reasonably be formed from this limited amount of firing. But the results are striking, especially when it is considered that the gunner was an expert with the machine rifle and had never fired the air-cooled machine gun prior to the start of the test.

Shortly following this test firing a demonstration was given in the presence of The Chief of Cavalry, at Fort Riley, and following results obtained. At a range of 150 yards, 185 rounds were fired, single shot, on the "A" target. Two of these shots were out of the four ring, and they were not very far out. At the same range, 75 rounds, full automatic fire, were fired in 15 seconds. Two of these shots were out of the four ring, and again not far out. Out of a clear sky, fire was ordered on this same target at 1000 yards, and the gunner obtained approximately 50 hits on the "A" target in 200 rounds fired.

Recently firing on this type tripod has been demonstrated at Fort Bliss, to officers and enlisted men of

The Air-cooled Machine Gun With Experimental Tripod Folded up for Packing.

the 2d Cavalry Brigade. At combat ranges of under 500 yards, single shot fire at a rate of 175 rounds per minute was delivered. The group obtained at 200 yards, with this type of fire, was about the size of the four ring of the "A" target. It was slightly larger using full automatic fire. At 1000 yards, using full automatic fire in bursts of ten, 48% hits were obtained on the "B" target. At 1500 yards, which by the way is *quite* a long way off, about 15% hits were obtained, using full automatic fire, bursts of 15. Using the elevating and traversing gear to lay the gun by indirect fire methods, 100% hits were obtained at a range of about 300 yards on a six foot by six foot screen. "Scientific" firing at 125 yards showed that

The Air-cooled Machine Gun Mounted on Experimental Tripod.

the "mean radius of dispersion" of the E-1 gun on the pilot tripod, using "single shot" fire is 3.4".

The pilot model of this type tripod was hurriedly knocked together, and in consultation with the Division Ordnance Officer, 1st Cavalry Division, improvements in design have been made. The tripod now under development will weigh about ten pounds, may be mounted from pack in about eight seconds, is equipped with a mil scale for traverse, an elevating gear incorporating an approximate two mil click, and a clamp which permits indirect and overhead fire. This improved tripod is very stable, and test firings at 1000" indicate that the shot group is about fifty percent smaller than that obtained from the original pilot model. The 2d Cavalry Brigade at Fort Bliss is being equipped with such a tripod. These tripods are being manufactured in the 1st Cavalry Division Ordnance Shops.

With the Cavalry equipped with such mounts for the air-cooled machine gun, it is immaterial whether we have spade grip, pistol grip, shoulder stock, muzzle brake, or what not, added to the gun. It will be the greatest weapon of its kind in existence. It is well to realize how fortunate we are in securing this tank machine gun as a replacement for the machine rifle.

For those who weep for the departed machine rifle, our companion for many a year, condolences are in order, but—

True love, new love,
Best take him for your new love,
The dead they cannot rise
So you'd better dry your eyes
And you'd best take him for your new love.

R. I. P.

Remarks on R.O.T.C. Courses

By Major General Edward L. King, Assistant Chief of Staff, G-3, War Department General Staff

THE annual report of the Secretary of War for the year 1930 presents a picture of the condition of the R. O. T. C. which reflects credit upon all who are engaged in its activities. A large measure of this credit belongs rightfully to the heads of our universities and colleges who have been instrumental in making an assured success of this system. However, as pointed out in the Secretary's report, the fact that the R. O. T. C. system contains much to the advantage of the National Defense should not lead us to overlook the limitations which are inherent in this and all similar systems. In considering these limitations it is necessary to keep in mind the primary purpose of the endeavors, both of the institutions which maintain R. O. T. C. units and of the War Department. It is the primary mission of both to conduct the training of the R. O. T. C. students so that they will be qualified ultimately as commissioned officers in the Reserve.

The War Department is intensely concerned with insuring the fact that this mission of the R. O. T. C. is safeguarded at all times. However, it is realized that the success of this system depends, not so much upon an arbitrary set of rules and policies set up by the War Department as upon complete accord between the institutions and colleges of the land, and the officers of the War Department charged by the Secretary of War with formulating and supervising the policies for the conduct of the R. O. T. C. system. The G-3 division of the War Department General Staff which is charged with formulating policies for the R. O. T. C., is sincerely desirous of ascertaining and conforming to the desires of the institutions and colleges maintaining R. O. T. C. units. Naturally, in a system as large as this many divergent ideas are held by the individuals concerned with its operation, and only by a spirit of compromise and a determination to sacrifice individual ideas to the views of the majority, can the full possibilities of this asset to National Defense be developed.

In order to ascertain how successful the R. O. T. C. system has been up to the present time, the Bureau of Education and the Mississippi Agricultural and Mechanical College each recently furnished a questionnaire to former R. O. T. C. students. Many thousands of replies were received as a result of these surveys, and more than ninety per cent of these in each case indicated great satisfaction with the R. O. T. C. system, as it is conducted, and with its educational value.

The War Department also conducted a survey during the year 1930 in which the heads of institutions and others interested were urged to submit frank criticisms and suggestions for the improvement of the R. O. T. C. The great majority of the replies received by the War Department indicated that no material changes are considered necessary or desirable. Such divergence of opinion as was indicated in these replies was principally in regard to the educational value of the R. O. T. C. courses. Space will not permit the enumeration of all the points raised in these replies, but briefly, it may be said that they can be grouped roughly into two general classes—one in which the institutional heads believe that the educational features of the courses should be stressed to a greater extent and the other in which it is held that the military features are paramount to the educational. The replies of Dr. Bowman of the University of Pittsburgh and Dr. Huliheu of the University of Delaware, respectively, are typical of the views held by the two schools of thought on this subject.

Dr. Bowman of the University of Pittsburgh, a proponent of the necessity for greater stress on the educational features of the courses, said in his reply to the War Department:

"The scope of the present prescribed course is not commensurate with the educational qualifications of the R. O. T. C. students. Raise it by substituting informative military subjects commensurate with higher education in place of the present prescribed elementary subjects pertaining to particular branches of the military service."

On the other hand, Dr. Huliheu of the University of Delaware holds that the military features of the courses are the more important. He said in his reply:

"The fundamental purpose of R. O. T. C. training must be kept in view in considering it from the standpoint of education. Its purpose being primarily to create Reserve officers • • • the courses involved must be principally military. Any effort to make of it a direct preparation for the student's civil career would defeat its primary purpose."

Let us analyze these two conflicting views.

Briefly stated, the attitude of the institutions favoring greater stress on the educational features of the R. O. T. C. courses, of which Dr. Bowman's reply is typical, is that the educational aspect of the military objective should be improved. Basically, the governing idea which actuates this view results from an effort to compare the college courses in general with the R. O. T. C. courses. This comparison develops the fact that the *basic* R. O. T. C. course is of a much more elementary nature than the corresponding college course. However, the fact, which is frequently overlooked in this connection, is that no real comparison between college and R. O. T. C. courses can be made

for the reason that the objectives sought in each case are entirely different. In the first place, college work is based upon a twelve-year educational preparation, whereas there is no prior training whatever for the R. O. T. C. basic course. Naturally, therefore, this basic course must in many respects correspond to the courses in preparatory schools. Furthermore, college work is based on the assumption that it will of necessity be followed by an experience course subsequent to graduation, in which the graduate may learn to apply his knowledge, whereas the R. O. T. C. courses are based on the assumption that there can be, of necessity, no subsequent opportunity for the graduate to learn to apply his knowledge. In other words, the R. O. T. C. course must encompass in military education a field which in business and professional education is covered by three courses, namely, the preparatory, the college and the post graduate experience courses. When this fact is realized it will become readily apparent that the educational features of the R. O. T. C. course can not be made commensurate to any degree with the educational requirements of college work. However, that the R. O. T. C. system is a factor of value in the educational work of colleges appears to be indicated from the following statement of Dr. Lord, College of Business Administration, Boston University:

"The Vocational Department of the College of Business Administration assists graduates in securing positions, introducing them to probable employers. The report of that Department for June, 1930, shows that, of graduates selected by employers as first choice or actually offered positions, only ten per cent of the students who had not taken the Advanced R. O. T. C. Course were selected while over seventy-five per cent of the students who had taken the Advanced R. O. T. C. Course were on this selected list.

"This fact may be considered one indication of the value of the R. O. T. C. courses as a factor in education."

Dr. Hogan of Fordham University states:

"The present course is educational, as most of the subjects and instruction are useful in training a student's mind in logical and analytical reasoning."

It would appear logical then to assume that while the R. O. T. C. course is not comparable to the college course as regards advanced educational features, it supplements and furthers the educational progress of the college student.

Now let us look at the other view, that the military features of the R. O. T. C. courses should be paramount to the educational features. This view is based on the conception that, upon the outbreak of war, the Reserve officer must be competent to assume his duties without further training. To achieve this end, the proponents of this view hold that the principal effort of the R. O. T. C. system should be devoted to producing efficient Reserve officers. They realize that there will be no time and no personnel available for the further instruction of the R. O. T. C. graduate when an emergency arises.

It would appear, therefore, that one of the principal matters to be considered by both the institutional heads and the War Department is that of reconciling these two divergent views. This should not be a very difficult matter if the mission of the R. O. T. C. is remembered. The War Department and the faculty ideas of what constitutes the mission of the R. O. T. C. are identical in two respects. Both believe it to be necessary in the scheme of National Defense for the production of: first, a sufficient number of trained junior officers to meet the initial needs of our mobilization plan; second, a large reserve of partially trained, educated men, whose training might be quickly completed for duty as officers or who may render valuable service in noncommissioned grades in the organization and training of units in an emergency. From the viewpoint of the institutions alone the R. O. T. C. appears to be a means of discipline, control and character development considered necessary during the two years in which immaturity renders the student a considerable problem in psychology, not only to the institution but to himself, and, in addition, a means of imbuing the student with a sense of responsibility to the nation. It is agreed, however, that the mission of the R. O. T. C. involves three basic factors—first, that it is a means of discipline, control, and character development; second, that it is a means of imbuing the student with a sense of responsibility; and third, that it is an agency for the production of Reserve officers. To carry out this three-fold mission, both educational and military features must be included in the R. O. T. C. courses. As at present constituted, the R. O. T. C. courses appear to be producing satisfactory results, and before making any material change in these courses, careful consideration must be given to insure adherence to the *mission* of the *R. O. T. C.*

Dr. Crane of the University of Wyoming has submitted some excellent suggestions to the War Department for the improvement of the courses. He states:

"There could well be a revision and rearrangement of the theoretical courses, both basic and advanced, but as to a change in the contents of the military courses I am not prepared to make specific recommendations."

He further says that the Infantry program presents a scrappy appearance—a lot of parcels lacking integration, and recommends a more liberal grouping into fewer classifications, adaptable to college divisions of the calendar. He also suggests an orientation course.

The War Department is glad to receive these constructive criticisms, and thanks Dr. Crane and all others who submitted replies to the War Department survey for their interest. A new tentative program has been prepared by the War Department which it is hoped will carry out some of these excellent suggestions.

It is the policy of the War Department to give serious consideration to *every* constructive idea presented for the improvement of the R. O. T. C. Two suggestions for improvement recently submitted to the War Department are especially deserving of discussion. These were Dr. Crane's suggestions that the development of skill in mechanical action and in the operation of some of the weapons as now required in the R. O. T. C. is questionable, and Dr. Freeman's articles in regard to specialists.

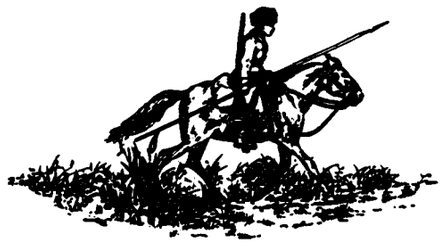
Let us first consider Dr. Crane's suggestion. Skill in mechanical action and in the operation of weapons are subjects fundamental to the enlisted man. In time of war, each junior Reserve officer will probably be given a group of civilians to train in all the details of soldiership, including the tactical and technical use of all the weapons and instruments in his unit. These junior Reserve officers are being trained in the R. O. T. C. units of the Nation today, and each must be so trained that, if necessity requires, he will be able to teach everything that each man in his platoon must know. It is for this reason that the War Department requires R. O. T. C. students to be instructed in mechanical action and in the operation of weapons. In this connection it may be stated that the weapons in the hands of the R. O. T. C. today are the same weapons as to type and model that are in use by the Regular Army, and are the ones which we would probably have to use at the outset of any emergency.

In Dr. Freeman's articles relative to the training of specialists, he expressed the belief that the Basic R. O. T. C. course is training as soldiers men who are being educated to render more valuable service as specialists, in which there existed a vast shortage in the World War. He probably did not realize that the War Department has developed an efficient classification system that is now prepared to meet mobilization needs for specialists of practically every type. Non-military educational and training activities are producing all the non-military specialists needed, and the R. O. T. C. is producing only sufficient military specialists to meet the initial needs of the Army in the event of war.

The War Department is always anxious to receive suggestions and criticisms from the universities and colleges which are cooperating so splendidly in putting over the R. O. T. C. policy of our Government. Those who actively participated in the preparation for and the conduct of our forces in the World War have a deep appreciation for the officer who is a man of action, as well as a student of his profession. In our deep desire to obtain for our Officers' Reserve educated men capable of leading in times of stress, we may be prone to lean a little more than is essential to practical, as contrasted to theoretical, instruction. However, our R. O. T. C. graduate will, through the medium of his general educational training, acquire that mental development which will enable him to arrive at sound solutions of the problems with which he will be confronted. The primary purpose of the R. O. T. C. is to teach the practical application of such reasoning to war conditions which demand rapid conclusions and immediate positive action. If our armies are to be led to success with the maximum effectiveness and the minimum loss, our leaders must be positive, forceful men of action as well as accurate, rapid thinkers. Balancing these considerations one against another, our courses should consist in the main of the practical application of the theory of military science and the leadership of men. These are considered vital elements in the training of combat officers.

In studying the material submitted in response to the War Department's request for constructive criticism of the conduct of the R. O. T. C., it was particularly gratifying to learn in what high esteem our officers are held by the personnel of these institutions. While the success of each unit depends largely upon the support it receives from institutional authorities, the degree of such support and the development of real and enduring efficiency depend upon the qualities of tact, efficiency and leadership of the Professor of Military Science and Tactics.

Again, I desire to reiterate that the War Department is glad to meet any suggestions relative to changes made necessary by local conditions provided the *mission* of *the R. O. T. C.* is safeguarded.



Rochambeau

By André Benéteau, Ph. D. Professor at the Catholic University of America

THE Yorktown celebration, in the month of October, has once more brought back the memories of Franco-American friendship. On the very spot where Lord Cornwallis surrendered to George Washington, we saw reenacted before our eyes the historical drama: a glorious pageantry, the buff and blue costumes of the Colonials, the British red coats, the white uniform of the old French royal army. And now, with eloquent speeches contemporary American and French celebrities recalled to our minds illustrious

Rochambeau

names: Washington, Rochambeau, de Grasse, Franklin, Lafayette, and these days of war and glory, cementing undying bonds of fraternity between the two nations.

While every American remembers with reverence the general who commanded the French forces, yet not so many, perhaps, know of his life before and after the alliance. In American affections, Lafayette comes first. And this as the natural result of his youth and romantic background.

The young marquis had left his country and his lovely wife because of his fervid desire to participate in the realization of a great ideal. He was a voluntary crusader, urged into battle by his own enthusiasm, whereas Rochambeau was the appointed chief of a regular army: he came to America in pursuance of the orders given him by his king. Rochambeau's merits are acknowledged, but he does not appear, in the pages of history, with the halo of knightly and adventurous youth, as the romantic figure of the nice-looking boy, venturing his life for the sake of a *beau geste*.

Let us consider, however, that Rochambeau was more than fifty when the American Revolution started, and that his rank was that of a general in the French army. Born thirty years later, he might have been one of Lafayette's companions. He might have followed in the direction of so many young French noblemen of that time, who, tired of being only inactive courtiers, longed for the opportunity to devote themselves to a noble cause. At any rate, if Rochambeau's age and standing did not allow occasional passionate outbursts and heroic pranks, nevertheless he was, at heart, in deep sympathy with American Independence. "An officer completely in the ideas of the time", a contemporary writer said, "and quite fit to please a crowd of young giddy heads who were to serve in this war." From this we see that Rochambeau did not fight the British just because it was his assigned duty; not only did he carry out his orders but he also had the satisfaction of fighting for principles he cherished, and for men he admired.

Jean-Baptiste-Donatien de Vimeur, comte de Rochambeau, was born at Vendôme,—in the very heart of old France.—on July 1st, 1725. Like Lafayette, he belonged to that *noblesse d'épee* which was certainly the best element in the French aristocracy. These *gentilshommes* were soldiers, not courtiers. They did not stoop to intrigue for the honor of giving the king his night shirt but vied amongst themselves for the glory of setting his flag upon the parapet of an enemy fortress. They did not always know how to conquer but they always knew how to fight.—and to die

The future general of the French Army in America was at first educated for the priesthood. It is difficult to ascertain if he really had religious leanings; this question probably did not greatly concern his own family. Children had no voice in the choice of their careers; they had to abide by their parents' ambitions. The first born son inherited the château, estates, fortune, and titles; he married the girl selected for him

and was charged with perpetuating the lineage. So Jean-Baptiste-Donatien, being a second son, attended the Jesuit College of Blois. This ecclesiastical education no doubt developed his qualities of thoughtfulness and self-control, his unassuming character, together with a strict sense of obligation and duty.

But the oldest boy of the Rochambeau family died. The younger man became then the heir presumptive. In 1742, he joined the Duke of Saint-Simon's cavalry regiment and took active part in the war of the Austrian Succession, in Bohemia, Bavaria and the Rhineland.

We cannot say whether young Rochambeau would have achieved greatness as a priest but we see that, in the army, he showed himself at once to be an excellent soldier. His calm courage, his disciplined spirit and the military qualities he evidenced promptly drew attention to him. As aide-de-camp to the Duke of Orleans, then to Count de Clermont, he assisted in the taking of Namur by a bold reconnoitering manoeuvre, in recognition of his prowess, he was appointed colonel of the *Régiment d'Infanterie de la Marche*. After being gravely wounded at Lawfeld in 1747, he recovered soon enough to fight in the siege of Maästricht, the following year.

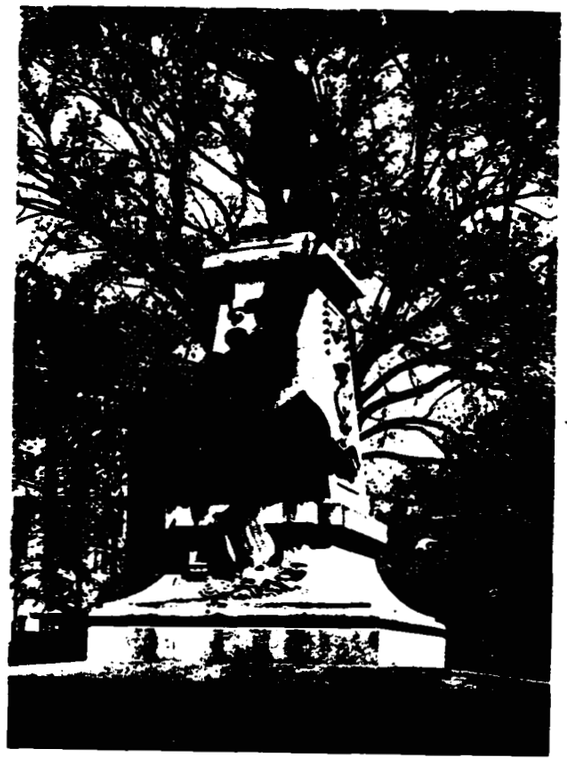
Even in these times of continuous warfare, such accomplishments were remarkable for a twenty-three year old boy. After the signing of the peace at Aix-la-Chapelle, he was already advantageously known and appreciated. He might have been satisfied with his past deeds and become a prominent figure in the court of Louis XV. But he felt no attraction for the elegant and useless life of the pampered lords of Versailles: he was too much of a soldier and, let it be said, of a man. He belonged to the kind of people who fail to understand how healthy and apparently intelligent persons can find perennial amusement in witty conversation, in well performed dances, in ribbons and laces, and rack their brains and bend their backs to win a word or a glance from a pleasure-crazed monarch.

In 1749, Rochambeau married Mademoiselle Telle d'Acosta. France was then at peace. The young colonel attended to his regiment, which had become under his direction one of the best fighting units in the French army. At the beginning of the Seven Years' War, which was to be so ruinous for France, he joined the expedition of Minorca, in 1756. Ordered to Germany, under the command of Marshal de Clermont, Rochambeau with his regiment held back the entire Prussian force at Crevelt.

He was colonel of the *Régiment d'Auvergne* in 1759. Shortly afterward, at Minden, he prevented once more a defeat from turning into disaster by covering the retreat of the French army. Strange to relate, his future opponent, Lord Cornwallis, was present in the same battle, in the English ranks.

The next year, while Rochambeau was still in command of the *Régiment d'Auvergne*, an incident occurred, which is as famous in France as the story of Nathan Hale, for example, is in America. On October 15th, 1760, the French army encountered the Hanoverians near Klostercamp, in the Rhineland. At nightfall, Rochambeau ordered one of his officers, Captain Louis d'Assas, to patrol a wood presumably occupied by the enemy. D'Assas left, accompanied by Sergeant Dubois. They had scarcely taken a few steps among the trees when they were surrounded by a party of Hanoverians, who motioned them to surrender and to keep still. But d'Assas, realizing that the French were in danger of being surprised, shouted the famous words: "*A moi, d'Auvergne! Voilà l'ennemi!*" He and Dubois fell instantly under the bayonets, but, due to their sacrifice, the battle was won. Rochambeau, although wounded in the early stages of the fight, remained at his post until assured of victory.

As *Maréchal de Camp*, then *Inspecteur de la Cavalerie* in 1761, Rochambeau acquired more and more renown and esteem. The ministers, d'Aiguillon and de Saint-



Rochambeau Monument in Washington

Germain afterward, frequently asked his advice. He was promoted to the rank of lieutenant-general in 1780 and designated to command the French troops sent to the newly born United States.

We do not need to remind American readers of the operations which culminated in the surrender of Cornwallis. Rochambeau gained the respect and approbation of all Americans. His soldiers exemplified efficient discipline and commendable deportment. He never tried to inflict his views upon Washington, to whose instructions he was always amenable. One hundred and thirty-six years later, General Pershing, generously offering his services to Marshal Foch, gave just as great a proof of solidarity and cooperation.

Upon his arrival in France, bringing with him two English cannons, a gift from the American Congress, Rochambeau was awarded the blue ribbon of the *Croix de Saint Louis*, and appointed military governor of Picardy.

Tragedy was in the air. The extravagant expenditures of the court, in face of an acute financial crisis, the wretched misery of the people, the growing outcry for a general reorganization of the kingdom.—all presaged impending change. Rochambeau was among the clear-sighted men who discerned what would happen, unless reforms were quickly effected. He participated in the second *Assemblée des Notables* called by Necker in 1788, to prepare the famous *Etats Généraux* that initiated the Revolution.

But he was no more politician than courtier. His proper place being with his soldiers, he stayed there, ready to answer the call, whenever his country should need him. Many noblemen, frightened by popular uprisings, realizing their existence to be menaced, left France. We can be assured that even the thought of escape never occurred to Rochambeau. In 1791, Louis XVI bestowed upon him the supreme dignity of *Maréchal de France*.

The following year, war with Austria broke out. The French army was then in a sorry plight. A large number of officers were no longer in France; regiments were completely disorganized, and the clamor of *la patrie en danger!* had not yet inspired the reckless courage which, later on, brought hundreds of thousands of men to the defense of the Fatherland. With these troops deficient in spirit, lacking proper leadership, wanting ammunition and supplies, no offensive operation could succeed. The commanding general Dumouriez planned to invade Belgium. Rochambeau advised him to remain on the defensive for some time to come. Dumouriez notwithstanding attacked the Austrians and was badly defeated at Quiévrain. Whereupon Rochambeau resigned and withdrew to his estates in Vendômois. Let us not forget he was a nobleman; if he had sincerely hoped for reforms, he could not help feeling offended, even disgusted, by the mad demagogy which heaped destruction upon destruction. As it happened, his title of count was more than enough to make him a suspect and subject him to arrest. He spent several months in the Conciergerie prison, in Paris, and was free to return to his castle only after the downfall of Robespierre. From this time on, he lived in retirement, writing his memoirs and seemingly forgotten.

In 1803, he met Napoléon Bonaparte. The First Consul, who became Emperor one year later, treated the old warrior with all due respect and granted him a marshal's pension. The interview between these two men symbolizes the spirit of the rejuvenated nation, embodied in the illustrious young conqueror, paying a supreme homage to the past.— as if the tricolor flag saluted that of the ancient *fleur-de-lys* before superseding it in proclamation of the glory of France.

Rochambeau died, eighty-two years old, in Thoré, department of Loir-et-Cher, on May 10th, 1807. He had lived enough to witness the first and best part of the Napoleonic era. He closed his eyes in a period when the power and splendor of his country had never before been equalled. He left an unstained name to his son, General Donatien-Marie-Joseph de Rochambeau, who was killed at the battle of Leipzig in 1813. The last great general of royal France, he remains in history a noble, a splendid figure, forever associated with Washington and the attainment of American liberty. He will always be revered by two nations, his character will always command esteem, his deeds will always inspire admiration. He personified military virtue at its best. While France, so rich in heroic soldiers, can be particularly proud of Rochambeau, America also has cause for never forgetting him.

YORKTOWN, 1781, by Colonel H. L. Landers, Historical Section, Army War College. 219 pages; 19 illustrations; 7 maps. 1931, U. S. Government Printing Office.

George Washington, resourceful and successful commander in chief of our ragged Continentals, is at his best in the remarkable series of land and sea operations that culminated in the surrender of Cornwallis at Yorktown. His masterful leadership in effecting the final concentration, involving the employment of French and American troops in harmonious cooperation with the French fleet under De Grasse, is ably presented in "Yorktown, 1781."

In preparing this book, the author has gone deeply into the most authoritative original sources, and has studied the ground with an appreciative eye for military values. His work displays not only professional military training, but a breadth of view which embraces the background of diplomatic maneuvers, in England and France, that had direct bearing on the outcome of the struggle then going on in America. Among the chapters devoted to the leaders on both sides, those on Lafayette, D'Estaing, Rochambeau, Cornwallis, and Franklin at the court of Louis XVI, are especially worthy of note. The story of the sea battle between the fleets of De Grasse and Graves, off the capes of Virginia, is one of absorbing interest. It is the most comprehensive account of this action that has appeared in print, and the only one that is adequately supplemented with a battle map showing the positions and movements of the ships.

This book is published as Senate Document No. 273, 3d Session, 71st Congress, by the U. S. Government Printing Office. It is beautifully printed, well-illustrated, and supplied with excellent maps. For the Yorktown area, the maps show both the fortifications of 1781 and the present road net, so that a person on the ground would have no difficulty in orienting himself. In addition, there are several oblique airplane views of Yorktown and its environs. A limited edition, cloth bound, is available for distribution by members of Congress; additional copies may be purchased from the Superintendent of Documents, Washington, D. C., cloth bound, at $1.75 per copy. This book deserves a place on the shelves of every public and military library in the United States.

Contrasts of 1931–Mobility or Stagnation*

By Captain B. H. Liddell Hart, British Army

THE Army exercises of 1931 were remarkable for two extreme contrasts. And were, in consequence, the most illuminating since the war. The first picture was seen in August, when the atmosphere of another August, seventeen years ago, was re-created at Aldershot by the mobilization of the 1st Division (less one infantry brigade) at war strength.

The primary idea underlying this mobilization was that of seeing what reductions could be made in the stores and equipment carried with units, as a means of improving the mobility of the division. But its immobility was the ultimate lesson of the mobilization.

It may be true that imagination and calculation could have provided an approximate answer on all save the most detailed questions. But as with a car, so with an army—the most thorough of makers' tests is not an adequate substitute for the service test which comes when a model is placed in the hands of the ordinary user. Moreover, the test mobilization had a psychological result too marked to be missed. I am not referring here to the spirit of the troops under trying conditions, and the striking way in which men of different units merged in composite battalions. But the test brought home to officers the unwieldy bulk and complexity of a division as at present constituted.

Four years of siege warfare, coupled with the natural growth of needs and invention, converted the soldier into a living Christmas tree, and the military unit into a superpantechnicon. After the war the trumpet-call of "back to open warfare" did not avail to reduce these immovable walls of Jericho. Something was done to lighten the load on the soldier and on the horse—by transferring it to his transport. But this meant increase of transport. Even if the individual soldier can march a little easier, his effective rate of movement is governed by the scale of his movement in mass—by the size of the column, the possibility of handling it, and its vulnerability to interference.

The problem has been partly obscured since the war by the skeleton size of units when taking part in peace time maneuvers, and the fractional proportion of transport therein employed. It needed a mobilization to lift the veil, and to focus attention on the urgent need for reducing mass to manageability. Much of the superfluous fat is undoubtedly caused by the military tendency to provide for every contingency. Possibilities too easily come to be regarded as probabilities, and luxuries as necessities. It is an old, old story—a case of fatty degeneration.

Thus did the armies of 18th Century Europe swell until dispersed by the ragged but mobile mobs of the French Revolution. Thus likewise, did the armies in the American Civil War grow stagnant from their own bulk until Sherman showed the way back to mobility by a ruthless scrapping of transport and equipment. It may not be possible for the modern British Army to contemplate such reliance on "living on the country," but something must be scrapped in the Sherman spirit if that army is ever to move. And it is interesting to note that this 1931 experiment seems to have had its germ in a proposal that the year's training should take the form of a "Sherman march." In a characteristically watered form that was the purpose expressed in the 1st Division "trek."

Preliminary analysis of the problem brought to light some curious facts. It was found that since pre-Boer war days units had been dragging round with them a fortnight's supply of various consumable stores. And, presumably through oversight, this burden on transport had continued during the static warfare of 1914-18, in spite of the ease with which replenishment could have been made by motor transport. Again, in the process of removing weight from the cavalryman, his emergency or "iron ration" was transferred to the transport, which was actually carrying his next day's ordinary rations! An infantry battalion, also, still carries with it twelve miles of telephone cable.

The post-war state of the division can, indeed, be summed up as a case for "slimming" treatment. Cure has, in part, been delayed because of tardiness in exploiting the increased mobility provided by motor vehicles. So long as the Army was dependent on horse transport a division was compelled to drag an endless tail of vehicles around with it, to meet not only its immediate necessities put possible contingencies. But the speed and range of motor transport make it possible to bring forward stores from rail-head as and when required.

Hence it is practicable to reduce the number of lorries (trucks) that actually accompany the division. And this the authorities have now done. They have also substituted 3-ton six-wheelers for light lorries in the divisional train. This substitution combined with the elimination of stores allowed the number of vans and lorries to be brought down from some seven hundred to about five hundred. The course of the "mobilized" exercise, although cut short by General Rain, seems to have satisfied most people that the reduced scale of the divisional transport was practicable.

In contrast, attention was forcibly focussed on the truth that the real movement problem, and the danger of congestion, lies within the fighting body of the division. And that it is due to a superabundance of cumbersome horse traction, if also to an overload of equipment. How many people realize that a division still includes some 5,500 horses and mules and some

* It is expected that the *Army Quarterly* (British) will publish concurrently this article by a writer, who has been for several years one of the foremost exponents of the complete mechanization of arms.

740 horse-drawn vehicles? The disadvantages of this incubus were vividly brought out during the exercise.

Previous to it, an astonishing misconception of its meaning became current, even among soldiers, and was due apparently to a misleading explanation being imparted to the press. For the test was spoken of as an attempt to solve the difficulties, especially the congestion, that had been introduced by mechanization! One even heard it said that the difficulty of moving a modern division was due to its mechanization. This naive comment ignored the fact that, apart from the rear services, only a few fragments of the division were as yet motorized. Among them was one motorized infantry brigade signal section, and one motorized field company of engineers, the latter a striking example of successfully applied mechanization. But how few were these "modernities!"

Thus when the mobilized division marched out from Aldershot the first real impression—it seemed a surprise to many spectators—was how little the division had changed since the war. One watched the same interminable chain of foot-slogging men, interspersed with horse-drawn limbers and carts. The most visible differences were supplementary without being novel—the addition of a brigade of light artillery and of a divisional cavalry regiment. These have contributed to increase the road space occupied by the division from some fifteen miles before the war to nearly twenty miles.

Thus it was natural that all observers should be struck by the immense length of the columns. Twelve years had passed and memories had faded since battalions half a mile long had been seen on the march. And half this space is occupied by horsed limbers, cookers and carts. If bombed from the air or fired on by tanks, the men in the column might scatter and re-form—with a loss of time. Horsed limbers cannot. A chain that has such rigid links is perilously inflexible under modern conditions. Even greater was the impression of cumbrous bulk made by horse-drawn divisional artillery, each battery of six guns, and each brigade stretching well over a mile. But they at least did not look so anachronistic as the field companies of engineers, marching on their feet—so as to be sure, as cynic or realist might say, of arriving late and tired at any emergency point where their services might be needed.

"So you've come to see the old-fashioned Army?" a staff acquaintance remarked to me. It seemed to me that an answer of symbolical fitness was, at that moment, supplied by the appearance of an ice-cream barrow bearing the legend "Stop me," which was being pushed by a boy, on foot, in front of the column. But the "gradualness" of military progress was to be even more vividly illustrated by a subsequent procession of the lumbering old horse-ambulances which constitute my first childhood recollection of the Boer War. I presume they had been unearthed from a military museum to take part in this 1931 mobilization.

Meantime, above the columns, serenely sailed flights of aircraft, taking photographs of the points where in war bombs would have been dropped. They had plenty to photograph. For the columns, each originally seven to eight miles long, soon began to stretch out—but not with elasticity. The steep gradients of the Hog's Back were the cause of "echoing" hitches which brought out the difficulties inherent in the mass of animal transport, even when free from the enemy's intervention.

But the delays gave one leisure to look overhead—and to think ahead. Then one's eyes came down to the ground—to the interminable columns with their mass of men and horse-drawn vehicles, slowly winding along the road. The sight gave one a shock when one thought of the development of new means of interference—not only air bombers, but tanks and motor guerrillas. How thoroughly did it so seem to the Chief of the Imperial General Staff in 1927, when he declared that "crowds of men are out of place on the battlefield" in the face of such weapons. "Think again of the result of the destruction of their communications and supplies!"

In the years since then we have seen infantry forces repeatedly paralyzed, even under peace conditions, by the mere presence of such menaces. To move at all they have to take infinite precautions. In war, what is now a snail's pace would become full-stop—and deadlock. And, while we have witnessed the growing moral and mobile domination of aircraft, tanks, and motor-cars, we have not seen the effect of another war-time check—mustard-gas. It is well to recall that the C. I. G. S. said, "I don't see how, in modern warfare, we shall be able to use enormous numbers of men and horses if mustard gas is employed to the extent that I imagine it will be."

The truth is that a large force of foot troops will not be able to arrive anywhere in the time available. Yet these crowds of men and horses still make up the bulk of the army, and have not been cut down to provide the money for less impotent types of force.

After the mobilization a failure to recognize the facts is unlikely to remain a check or excuse. For I have never heard such concordance in criticism as occurred among the soldiers who watched it. The call for reform and progress seemed as universal as it was urgent. The pity is that the awakening waited until the year when an economic crisis has not only made money tight, but curtailed the latitude in apportioning what there is.

Unfortunately, one now hears the argument that the military need to replace man-power by machine power must yield to the need of keeping soldiers in employment. The practical reply would seem to be that even the dole is but a fraction of what an infantry soldier costs the hard-pressed finances of the country. And all infantry beyond the proportion who can be provided with, and backed by, up-to-date armament are militarily superfluous. They are, indeed, merely a present charge and a potential pension increase of the national debt in case of war.

As for the proportion of infantry who remain, and are worth keeping, it is inconceivable that they will march on foot as a normal thing. Those who are used as guards and garrisons would be brought forward to their posts by rail or 'bus. The "light infantry" required for mobile operations need special transport and training. I foresee such units being made up of a proportion of motor machine gunners in little armoured carriers, a larger proportion of skirmishers in "baby" cars and a reserve in six-wheeled lorries or 'busses.

The still prevailing practice of mixing motor vehicles and marching men in the same column obstructs mobility, increases wear and tear, and wastes petrol gas—with consequent waste of public money. And the present numerical strength of battalions is not attuned to the development of light machine guns and automatic rifles. Motorized battalions could, with advantage, be half the present strength in men.

As for the training of such modern infantrymen, the guerrilla exercises carried out by the Guards' Brigade and some of the London Territorials this year not only relieved a season that was rather drab tactically, but pointed the rational and natural way to develop a ruseful and resourceful type of men. Such exercises call on and develop the intelligence necessary to combat machine-gun nests. I have long argued that a course of guerrilla warfare would be the best means of teaching tactics. It was left for the Guards to prove it. Their schemes in the Vale of White Horse were designed to revive the characteristic nature of British warfare, and to cure the "tactical arthritis" which is a consequence of a too long and too slavish practice of continental methods.

These methods, for all their technical thoroughness, tend to mould commanders into cogs of the machine. The need today is to breed tacticians. While it is unlikely that any future Continental war will see "masses" of the 1914-1918 type functioning effectively, it is still less likely that, even if such warfare were possible, it would fit the military problems and possible expeditions which lie on our Army's horizon. In a "mass" army it suffices if brigade and battalion commanders are competent military foremen, but for the "British style" of warfare we want everyone of them to be capable of acting on his own—to be, if possible, a potential Wellington or Clive.

But the greatest contrast to the negative lessons of the 1st Division mobilization came through the positive experience of the "1st Brigade Royal Tank Corps." The formation and first trial of a complete brigade of tanks under Brigadier C. Broad provided the brightest spot of the military year. One can only hope that it is a first instalment of that progress forecast by the C. I. G. S. in 1927 when he spoke of creating "armoured divisions," and declared them to be the only means of making mobility possible on the battlefield, and "to revive the possibility of the art of generalship." With all the weight of his authority he then declared that the human race would not again stand such losses as accrued in the last war, and that civilization itself would go to pieces if a war was fought on similar lines.

Those who have long urged the formation of an all-armored force, freed of old-style impedimenta and given scope to practice mobile or, better still, "Mongol" tactics, had their long-awaited justification last September. The exercises proved the most significant experiment since the war; indeed, in all tactical experiment since Sir John Moore created the Light Brigade for the struggle against Napoleon. The Imber Area may take its place with Shorncliffe Camp as a landmark in the history of the British Army. Indeed, with all sobriety one can go further in suggestion. For just as the Imber plateau stretches wider and higher than the Shorncliffe plateau, so may the tactics tried there—in affecting the future of armies and of land warfare.

Armored mobility was at last applied in a true way—fitted to its nature. In previous years there has been a tendency to rely on armor to cover any frontal bludgeon stroke, as a guarantee against having to pay the price of one's folly. This year armor was simply utilized as an additional security to the value of speed—to the power, which a tank force possesses, of swiftly circling round any strongly held position and piercing its weakest spots. Nor was that all. For the key idea of the new tank tactics became that of "indirect approach." And this was not simple, but cunningly compound. The light tanks—small, nimble, and hard to hit—always sought to "draw" the enemy by approaching from an unexpected direction. And when their stings had drawn the enemy's muzzles in one direction, the medium tank punch would crash home from another direction.

These mixed tactics are helped by a mixed composition of tank units down to the company. The new tank brigade comprised one light tank battalion and three "mixed" battalions, each made up of three mixed companies and a section of close support tanks. For an innovation this year, which one has long advocated, was that the company should combine both medium and light tanks—a section of five medium, and one of seven light tanks.

If such a mixture has a naval aspect, suggesting a squadron of battleships with its attendant destroyers, it has a "Mongol" ancestry. The combination makes possible the distracting and paralyzing tactics by which Genghis Khan's incomparably mobile horsemen triumphed over the solid battle-arrays of medieval Asia and Europe.

Yet less imagination is needed to see a modern parallel than to conjure up the rest. Even though there were marked differences, there was a fundamental similarity between the maneuvers of this brigade of "landships" and those of a battle fleet at sea. At Imber we truly saw the first "fleet exercises" of the Royal Tank Corps.

The parallel became vivid not only in some of the formations which the tanks adopted, but also in the way they were controlled and maneuvered as a unity by wireless and flag signals. A new and simple two-letter code had been devised, and orders for maneuver were given by it either through the display of combinations of two flags, one above the other, or by wireless the two letters in Morse. These signals covered a remarkably comprehensive range of orders.

And they were supplemented by the radio telephony with which the tanks were fitted.

The tanks maneuvered either in close or open order. In close order there was 25 yards interval between the tanks. In open, or fighting, order the intervals between medium tanks were doubled, and one saw the light tanks of each company move out to "protection stations."

There was a peculiarly strong flavor of Mongol battle drill in two of the swift maneuvers that were made at "signal-notice." A particular pair of flags were shown which meant "single flank attack"; thereupon the medium section circled round to strike the enemy's flank, covered during its move by one light sub-section, while the rest of the light section pinned the enemy with fire from its original position. Another pair of flags meant "double flank attack"; this time the bulk of the light section would move off to strike the opposite flank to that which the medium section was attacking.

The brigade training opened with a series of five exercises, each of which was carried out by the different battalions in turn. The opening feature of each exercise was in itself so novel as to grip one's attention, for it revealed a new system of "leadership" that had been devised. The brigadier had as assistants, besides a brigade major and an orderly officer, three "field officers," who acted in a way similar to Napoleon's expert aides-de-camp—and were mounted in light tanks. During the immediate advance to the battlefield the brigadier went ahead accompanied by two of these field officers and by the battalion commanders—all in tanks. Behind came a second party of tanks containing two company commanders from each battalion. Third came the brigade mass, which was temporarily commanded by the remaining field officer.

When the brigadier had made his reconnaissance and issued his orders, indicating the "brigade center line of attack," the battalion commanders would track away in their tanks to reconnoiter and choose their own center lines. Meantime one of the field officers who accompanied the brigadier would drive back to take over the brigade mass and lead it forward, bringing it up at right angles to the chosen brigade center line. As the mass of tanks came up one saw the company commanders drive into position at the head of their companies and lead these along their respective lines.

The whole process went with a swing, and the tanks avoided any halt under fire. It was an extraordinary vision of the new warfare, if it also recalled the remote past, when knights in armor pranced and caracoled at the head of their mailed "battles." The likeness was increased by the parti-colored signal flags which fluttered from the lance-like masts of the commander's tanks. But it was far less obvious than the marshalling of medieval chivalry must have been. These modern mail-clad knights not only move faster and waste less time than their ancestors, but are now growing skilled in using ground as cover.

The first of the exercises was really a test of such "groundcraft" each battalion in turn moving in close order under cover of a ridge, and making changes of direction in order to avoid both impassable ground and hostile shell fire—the latter represented by blue screens and smoke puffs. Finally, the battalion had to cross the ridge in view of the enemy, changing its formation to reduce its vulnerability. Rapid execution of these various changes was the keynote of the exercise.

The second was a more advanced test, covering the deployment for battle. In the third we saw a normal type of maneuver attack—against the artillery area of an enemy force. For against an enemy in position his artillery is now taken as the natural target of a tank punch rather than his infantry, who being spread out along a front presumably dotted with anti-tank guns, form a relatively unprofitable object to strike. The guiding principle is to strike in against the rear of the artillery area, or the administrative area, after a quick move round the enemy's flank. Even if the guns are turned in time to meet the indirect approach of this menace, there is no guarantee that they will be able to stem the steel attack. For it is this grimly playful way of the nimble and relatively invisible light tanks to draw the enemy's fire just before the massive medium tanks debouch from a different direction and sweep down on the guns. From what I heard, artillery experts are of opinion that, having turned once, it would hardly be possible for the guns to make a fresh turn in time.

In the fourth exercise, the tanks were set a harder and more complex problem. It was assumed that the enemy had been able to spare enough anti-tank guns from his front to put a screen of them round his artillery area. The anti-tank machine-gun is certainly a more dangerous obstacle than the field-gun. It is easier to conceal; its fire is harder to spot and more easily switched in a new direction. There is, however, some compensation in the fact that its sting is less fatal. And the gun is hard to move—unless it be mounted in a tank. The best antidote certainly lies in the light tank. For this offers only a small target and it is far more agile than the anti-tank gun; its two-man crew enjoy the protection of armor, while the crew of the anti-tank gun are exposed.

On these considerations the new "anti-anti-tank-gun" tactics are based. A few scattered guns can easily be overrun by a tank force in its onward surge. If there is a thick screen of them they have to be tackled more warily. In country where cover is good and fields of fire limited the light tanks may be counted on to carry out the "sweeping" task, stealing upon the guns unseen, and smothering them with bursts of fire from various directions. But in open country, with its long fields of fire, a more methodical process may be necessary.

The key principle is to approach from an unexpected quarter, so that the anti-tank guns have to shift their position—and thus disclose themselves.

In the actual exercise witnessed, the enemy artillery area was covered by a five-mile semi-circle of anti-tank guns west of Imber. The light battalion of the tank brigade was assumed already to have cleared the north-

west fringe, on Summer Down, of this anti-tank screen. The leading mixed battalion had moved up, and was lying in wait behind the shelter of the ridge. Its commander, according to the new system, was on ahead in his tank, accompanying the brigadier.

He now received orders to attack and clear the south-western sector of the enemy's anti-tank screen, with the help of an additional light company. The way would then be open for the mass of the brigade to be launched into the enemy's artillery area from the rear.

At 2:07 P.M. the brigadier's tank had roared up. At 2:10 P.M. his orders had been issued, and a field officer was dashing back in a tank to fetch the leading battalion. Meantime the battalion commander surveyed the ground and decided on his plan.

The co-operating light company was to circle out to the south-west across the low spurs, draw the enemy's fire, and pelt him in return. The leading mixed company was to strike in from W. N. W. behind the ridge and sweep astride the back of the chain of guns. The second would follow it, but turn south down the first spur. The third company would in turn sweep down the next spur, while the second company was rallying ready to descend a farther spur.

At 2:15 P. M. these orders had been given. A few minutes later the battalion appeared in sight, deploying for action. At 2:26 P. M. the leading company had launched the attack. The close-support tanks followed on the heels of the mediums, and fired smoke-shell to "blanket" the more distant guns while the nearer ones were being dealt with. A fresh mixed company was then launched through at a fresh angle to smash the rear links in the anti-tank chain.

On such combination of tank-types and on instinctive co-operation between sub-units success would depend in war. That co-operation will be the fruit partly of trained initiative and partly of a battle-drill that revives the Mongol method.

In the fifth exercise the tanks were given the task of attacking a marching enemy column. As the last of the series, this was presumably regarded as the most advanced and difficult test of maneuver. It may have been the most difficult maneuver, but it was certainly not the hardest practical problem to solve—and would not be in war. One had to recall the recent march of the mobilized 1st Division near Aldershot, slowly coiling its immense length and swollen bulk along the road, to realize what a target is offered by a war-strength infantry division.

To-day the supposed infantry column was a comparatively small one, generously endowed for its size with anti-tank guns. It was marching south across the Plain from Bratton to Heytesbury. The tank brigade was coming from the east, and its advanced guard was checked by a screen of anti-tank guns, only 200 yards apart, which the marching column had put out along a ridge to cover its flank.

While the tank brigade mass halted behind the next ridge the brigadier drove forward in his tank to join the light battalion and reconnoiter the situation. In a few minutes he sent back the order. "Right encircle" to the field officer in charge of the brigade mass. He then turned northward himself with his tank party and headed for a patch of woodland known as Tinkers Firs. The brigade mass also changed direction and moved to the same hiding place, covered by a company detached from the light battalion. The original advance guard, staying where it was, now became a flank guard, and laid a smoke screen—"an artificial hill"—to cover the encircling maneuver.

Arrived at Tinkers Firs, the brigadier found he was on a line with the tail of the marching column at Bowls Barrow. Detaching one of his three mixed battalions to attack the screen of anti-tank guns, he promptly led the brigade mass in a swift circuit to the north round the enemy's tail, aiming to reach the high ground due west of it.

On reaching this high ground the brigadier turned his tank's bows to the east, to indicate the new direction, and gave the signal "Open order: attack" to his leading battalion. Thereby he launched it against what had been the far flank, and was still the unguarded flank, of the enemy, whose anti-tank weapons would be more than fully occupied in meeting their immediate assailants.

The enemy's aircraft may have given warning of the original approach in time to put out an anti-tank screen, and this had been assumed as able to hold up the tank advance guard. But having put out the anti-tank guns, the enemy could not easily shift them, and the separate attack launched against them was calculated to fix them beyond any possibility of such a shift.

First smothered with smoke and then flailed with bullets, it is unlikely that they would either be aware, or have a care, of the remote maneuver being carried out by the rest of the tank brigade. For it is one of the oldest experiences of war that men who are being fired at from close range have eyes only for their immediate assailants, and do not give a "tinker's damn" about what may be happening elsewhere.

Tank mobility can exploit this battle-psychology. And in any case infantry cannot change their dispositions as quickly as tanks can change their direction. The master-key with which the tankman may open any barred door is his 360 degree range of maneuver.

A blue and white flag above a forked red flag fluttered from the mast of the brigadier's tank—"Open order." The signal was repeated—"Attack." The leading tank battalion forthwith bore down on the enemy's defenseless western flank. Two companies ran along the edge of the marching column, firing into the mass of men, horses and wagons. It was easy to imagine the confusion, the panic, the stampede that would have occurred in real war.

The medium tanks may sometimes crash through the middle of the column, "pulping" it as did the whippets to the three German battalions they caught at Cachy in April, 1918. But one doubts whether such shock action could increase the chaos that would be caused by a driving storm of bullets at close range.

The light tanks in any case keep clear of the mêlée, "holding the ring," and being ready to deal with any anti-tank weapons which may emerge. But it is hardly

conceivable that even if any were at hand, they could be handled amid the confusion.

The speed with which this wide maneuver was carried out was most impressive. In the case of that executed by the 2nd Bn. R. T. C. the brigadier gave the order, "Right encircle," at 11:10 A. M. At 12:30 P. M. he gave the signal to close. Within one hour and twenty minutes the battalion had covered seven miles in its two bounds, delivered, and completed its attack. A case of "quick disposal," if of "unhappy dispatch"—for the enemy infantry.

After completing this series of exercises, three days were spent in exercise as a brigade. They began with brigade drill—one is tempted to call it drill by a brigade of machine-made Guards. If not always so symmetrical as on the Horse Guards Parade, it was far swifter—and hence more practical. We had the spectacle of one hundred and eighty tanks marching and countermarching, wheeling and deploying, as a single body—controlled by a single voice. The brigadier gave his successive orders by radio telephony from a tank that was sometimes, in the more open maneuvers, a mile or more distant from the recipients. Their execution, in alacrity and precision, certainly excelled the performance of infantry in open battle drill.

The next brigade exercise comprised a six mile advance across country in contact formation, with two battalions "up." After the first bound had been completed, and a light tank screen put out beyond, the reserve battalion was launched through at a different angle against a fresh objective.

In the third exercise the brigade "made rings round" an infantry column in a literal sense, pinning it from the north while they circled round and clove it from the south. Increase of tentacles obviously increases the chance of successful pinning, and the enemy's difficulty in parrying the eventual thrust. And the prevailing mist, wherein the tanks were often indistinguishable from bushes, would have put the infantry in an even more precarious situation. As the tanks emerged from the mist and swept forward the glint of the sun on the tracks made an impression for which one observer found apt words by quoting what was written of a charge of Numidian horse—"the sparkle of their spearpoints coming out of the dust."

The speed of the onsweep would have been still more impressive if armored machine-gun carriers were not still compelled to do duty as light tanks. Suited for working with infantry it was a strain on them not only to keep up but to keep ahead of this fast moving tank force in its rapid bounds across steep spurs and rain-sodden ground. Only a bare dozen of the modern Mark II light tanks were available this year, and they were used mainly as "mounts" for commanders and liaison officers. With their squat toad-like chassis surmounted by a high, narrow turret they seem excellently designed for stealing up behind a bush or crest, and "peeping" their turret machine-guns over it. To watch them sweep forward is to perceive the menace of their speed, agility and unobtrusiveness combined, to infantry and artillery. They are, in truth, an ominously looming cloud on the horizon of all old style forces.

But for that menace to be fulfilled these new and comparatively cheap machines must be provided in sufficient quantity to form a tactical cloud. In driblets they may be merely useful, whereas in a deluge they would be decisive. To provide the deluge we must, however, face the necessity of finding the money by substitution. A light tank with its crew of two men, has more fire-power, and far more effective striking power than an infantry section. Its annual cost would be less than half.

In quantity of such machines lies one means to discount the inevitable toll taken by anti-tank guns. The other means lies in the reborn Mongol tactics which were so well brought out in the exercises. It may be said that these exercises were set and selected by the Tank Corps. The answer is that they were set to test the tank units, and, as designed, were a harder test than these would be likely to meet on any battlefield of the present or near future.

At present anti-tank guns are mostly represented by green flags—which are cheap to provide and easy to wave—whereas an effective weapon, complete with tractor and ammunition trailer, is an expensive item, and far less agile than the light tank. Even if such weapons were manufactured, I cannot see how any infantry division could be provided with enough to form the immense circular screen that would be necessary for its protection. Taking the march of the mobilized 1st Division as an example, a screen at least thirty miles round would be required. This would have to be expanded considerably if the division had to march on a single road, if the columns became strung out, and still more if the screen were extended to embrace the routes of supply.

Now in the test attack on a marching column practised by the Tank Brigade, the enemy's screen was composed of anti-tank guns spaced at two hundred yards interval. On this basis no less than 270 anti-tank guns would be required, as a minimum, to be "in action" at any time, with at least as many on "wheels" to maintain the screen as it advanced and to provide for contingencies. Such figures give some idea of the almost insuperable difficulty of protecting a division on the march against tank attack. Moreover even on such a basis the screen would be but a fragile single line, that would stand little chance against a concentrated tank punch at any point. Tank mobility provides the means of striking within a few hours at any point on the circumference. It provides a 360 degree choice of the point of attack.

With the development of independent tank forces the old linear warfare is replaced by circular warfare. Thus, to sum up, the Tank Brigade, this year, proved capable of creating a new system of tactics suited to its mobility and promising an effective antidote to any immobile anti-tank agents. I have seen the realization of a dream and have few criticisms to offer. The tactics truly fulfilled the Mongol ideal. Perhaps in movement also, now that order has been obtained, it might be possible to go further and develop "ordered disorder." Officers who flew over the brigade significantly said that from the air it made a very visible if fast-moving target so long as it kept in drill formations. But when the formation broke up as the attack progressed the tanks "simply disappeared" from observation. The moral would seem to be the cultivation of controlled irregularity in the approach as well as in the successive wasp-like attacks.

While "variability"—the power to vary the direction of attack—was the dominant feature of the exercises carried out by the tanks, their invisibility was scarcely less noteworthy. To think of Salisbury Plain is to conjure up a picture of country where tanks can move fast but can scarcely hide. The picture was contradicted by the reality. Even though one knew the exact and small, area in which they were working, and was following them in a car, it was difficult to locate them. Time after time companies of tanks were swallowed up in some fold of the ground, to emerge suddenly close to their prey. While the noise of their tracks gave some warning of their stealthy approach, it is a deceptive noise to locate, and the presence of a large number of tanks confuses the listener.

As for controllability, the progress achieved was remarkable when one considers that the new creation was only a few weeks old. And further training will, obviously, increase it. But the fact of supreme significance comes through comparison. For a tank brigade is the only formation that can, in the strict sense, be controlled and maneuvered on the battlefield. With an infantry formation, even a local tactical maneuver can scarcely be accomplished in the day. With a tank brigade a wide maneuver is a matter of hours only; and a local maneuver, of minutes.

To appreciate what this may mean, let us for once lift our thought onto a higher plane than the question of tank attack *versus* anti-tank defense. Let us, instead, consider the tank as essentially a means of moving fire power quickly to any spot, if also of bringing it closer to the target than can be risked by weapons which are handled by unprotected crews. For this is its fundamental value, and would remain, even if an omnipotent armor-piercing weapon was invented. An old-style unit cannot, as a rule, be expected to make more than one attack in a day's battle, and, once committed, cannot be shifted to a different sector. Thus it is practically limited to what one may call "one-point" use of its fire-power. In contrast, a tank unit is capable of a "several-point" use of its fire-power, without special strain or risk. The utility of a tank formation, such as a brigade, has a similar proportion in comparison with an old-style formation. And this sense of proportion ought, therefore, to govern any estimate of their respective economic values for military purposes.

The tank as a "fire-mover" gives a fresh meaning to Napoleon's acute dictum that force is mass multiplied by velocity. This is the true way to calculate force.

We must also remember that material effect is multiplied by moral effect. The fact that the tank can bring its fire so quickly to a spot, and from an unexpected direction, morally multiplies the value of its fire—even apart from any panic which its ugly appearance may cause. Hence the real force innate in tanks is the product of mass, velocity and surprise. They give a commander the chance of fulfilling in a way hitherto unconceived Forrest's famous yet simple recipe for success, that of "gittin' thar fustest with the mostest"—fire and fear.

The History of the United States—is the History of Its Armed Forces

Whether our peace sentimentalists like it or not, the history of the United States is the history of its armed forces. The Army and the Navy are knit into everything that has made the nation possible. The army created it and breathed life into the words of statesmen who conceived the United States as possible in theory. Without the army the theory might have been born, but it could not have lived.

Without armed force the nation, even if it had taken form and drawn its breath would have remained in its colonial domain. Emigration went West behind the army. The battle of the Thames in Canada made Ohio and Kentucky inhabitable. Tippecanoe cleared Indiana for settlement. The army took a quitclaim for Florida from the Seminoles. Texas and the South-west and California came in via the War Department. Hard bitten regiments pacified the Sioux, the Apaches, and other warlike tribes which barred the white man.

The colonies were made possible by their fighting men. The republic was created by them. The Union was saved by them. Its territory was rounded out, defined and maintained by them.

If a citizen of the United States wishes to regret everything that has happened in his country since 1775 and in fact wishes to regret his own presence in America he may deplore the force which controlled the event. He cannot deny its decisiveness.

—THE CHICAGO TRIBUNE

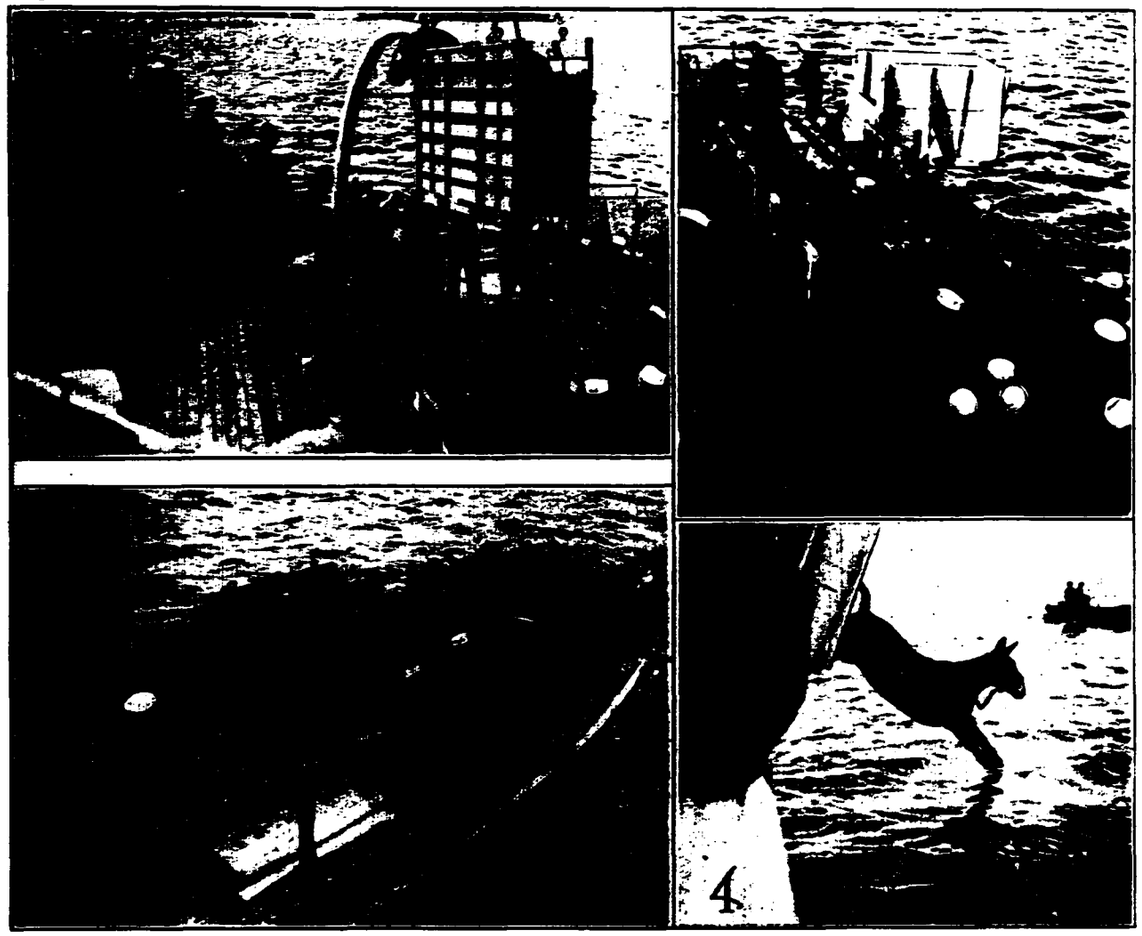
Notes on Animal Swimming[1]

By Captain Donovan Yeuell, 30th Infantry

A FORMER installment of these notes outlined preliminary steps in teaching animals to swim, and carried this training so far as to permit them to pass down a specially-built chute at Crissy Field, enter the water, and swim about a hundred yards to shore. This training has been continued at intervals, and the mules and horses so trained now enter the chute and launch themselves with little or no trouble, following each other down the chute like circus animals. Few, if any of them, get their heads wet, but, strange as it may sound, launch themselves into the water with the same type of motions which swans use in entering from a bank, moving out from the chute with one motion of the hind legs, and commencing their swimming with scarcely a ripple.

In the first article it was stated that no ill effects had been experienced by the animals, which was true at the time, but since then, about 25% of those regularly trained have suffered from "scratches," mostly of the hind legs. In the moist, cold weather that prevails on the bay of San Francisco, this has proven a bit troublesome to heal, but all cases are now well under control. It has been found helpful to clip all animals regularly engaged in swimming, and to keep them

[1] The first installment of Capt. Yeuell's notes appeared in the INFANTRY JOURNAL of November-December, 1931.



Photos by Signal Corps

1. Blindfolded Mule in Flying Stall being Lowered into Launch. 2. Launch, Showing Flying Stalls and Dumping Stall. Ready to Proceed. 3. Removing End Gates of Flying Stall, Preparatory to Loading Animals Singly into Dumping Stall. 4. The Involuntary Dive from the Dumping Stall.

clipped close. This to some extent keeps the sand and dirt from grinding into their fetlocks, and also helps to prevent infection when they scratch themselves, as they frequently do, on barnacles.

Although all animals were thoroughly clipped in September, their coats, while satisfactory for general service, proved too long in December, not only around the fetlocks but all over their bodies, and it was found it took two or three hours to dry them, even when they were rubbed down with grain-sacks upon landing, and immediately covered with horse-blankets. On cold days, these long-haired animals were walked around until quite dry. The clipped animals, however, dry within a half-hour, and although they lose the protection of the winter hair, it is believed preferable to have them dry quickly, than to be wet for three hours, with consequent opportunities of chilling.

In continuation of the training, local naval assistance was secured, the plan being to approximate as nearly as possible conditions that might be found in making a landing from a transport upon hostile shores. The standard Navy 50-ft. power launch was utilized, and upon this was built what is known as a "dumping stall" (Fig. 2). This dumping stall is pivoted on the sides of the launch, and is held in position to receive an animal by a chain and trigger, which can be released at will. On the sea side is a gate, usually closed; on the boat side is another gate which is placed in position after the animal is in the stall.

5. Just Before Tripping the Sling.
6. Sling Tripped. Swimming Freely.

The accompanying photographs show the various steps taken to get the animal from the deck or hold of a transport into a launch, and finally dump it.

The Army Transport Service built a number of flying stalls (see Figures 1, 2 and 3), into which the animal is led on the dock. These stalls are strong, and will accommodate a fairly heavy artillery horse. The front and rear are padded. In the original stalls, the floors were cleated, but it was found the animals, getting scared, kicked the cleats loose, and experiments are being conducted with split fire-hose. At first the animals were blind-folded, but it was found they seemed much more frightened than those with their eyes clear. The blindfolded animals broke into a sweat as if ice-water had been poured over them when swinging through the air. The illustrations show the eyes for attaching the block and tackle of a mine-planter to the top of the stalls, and also (Fig. 2) the spreaders employed to insure that the animals are not pinched as the crates are hoisted. The end-gates of the flying-stalls, and the iron bars across the top also helped in keeping the sides of the stalls rigid. While in the air the crates kept on an even keel, and the handling by cranes into the launches by the crew of the mine-planter was satisfactory. The one available launch had room for seven flying-stalls, but in order not to overload boats in experimental trips, no more than six were carried at one time.

As soon as the launch received its full complement of animals, it moved away from the side of the mine-planter under its own power to the designated dumping-ground. During the trip of a few minutes the end-gates of the two forward flying-stalls were removed, and bolts loosened on the other stalls. Power-boats were stationed close to the launch when the dumping-ground was reached, so as to keep animals from heading out into deep water, and otherwise to assist as might be necessary. Position was taken about 300 yards from shore, near the Crissy Field dock. Animals were led singly into the dumping stall: the rear gates securely fastened: the front gate opened, and when ready, the trigger was released: the weight of the animal caused the stall to tip, and shot him into the water (see Fig. 4). All animals swam ashore without trouble. When the animals next the dumping-stall had been dumped, the front end-gates of the farther flying-stalls were taken out, and the animals were led through the empty stalls in their fronts to the dumping-stall.

Experiments with the type of equipment shown carry the training as far as it has gone with the 30th Infantry. It was found that, in order to expedite matters,

re-arrangements of the naval launches would have to be made. It was also found that the dumping-stalls were not sufficiently strong to last long in dumping heavy animals. The iron axle, which bore the whole weight of the stall and animal as the latter was being dumped, being of half-inch soft iron, soon buckled and pulled thru its timber supports, which also cracked and became unserviceable. The rear gates were completely kicked out by an obstreperous horse, who didn't fancy his trip. These matters, of course, can be readily remedied, and in future exercises new equipment, modified in the light of these experiments, should obviate the faults previously developed.

At the Presidio of Monterey, the 76th Field Artillery is also conducting training along the lines of this article. They are experimenting both with the dumping-chute used on the deck of a mine-planter and with a specially-constructed sling (see Figs. 5 and 6). In these experiments, although there is no doubt of the animal entering the water from the chute, the height of the rail of the mine-planter appears to give him too much of a drop and subsequent shock on hitting the water. The sling appears to offer perhaps the best solution of actually getting the animals in the water, as it is less cumbersome than the combination of flying-stalls and dumping-stall. Its use, however, would presuppose that a ship large enough to have a crane could get close enough to a hostile shore to place animals in the water within swimming distance. If this be considered feasible, then there would be no necessity for either flying or dumping-stall, as the animal could then be lowered from the transport in a sling to the deck of the mine-planter, and tied on a regular picket line on deck, until it was desired to put him into the water, when he could be slung overboard and forced to swim ashore.

As a third alternative, it is believed, in the interests of simplicity, that flush platforms could be constructed on the decks of naval 50-ft. launches, to which animals could be lowered direct by sling from the transport. On this could be a picket line to which they could be tied until time to be dumped. Then, instead of bothering with a complicated dumping-stall, it is believed they could be forced into the water from a chute, similar to that used in their present training. These methods would save money, time and trouble, and in addition would be easier on the animals.

Number 5 and the Horse

By General Gustavo Adolfo Salas, Mexico

IN equitation, as well as in hippology and in the history of the horse, the number 5 is met with curious frequency. Of course, it is a fact that, sometimes, instead of being 5, it might be 6 or 4, but authors have fixed this figure. Consequently, what follows should not be accepted absolutely. But is there, perchance, anything in life that may be considered as really absolute?

5 are the effects which may be produced by a single rein: 1. opening rein; 2. supporting rein; 3. direct rein; 4. rein of opposition in front of the withers; and 5. rein of opposition behind the withers.

5 are the conditions of the rider's foot in order to be well placed in the stirrup: 1. only a third of the foot is inserted in the stirrup; 2. the feet pointed towards the ears of the horse; 3, heels lower than the toes; 4. the side of the foot corresponding to the little toe slightly raised; and 5. the point of the foot in the vertical line passing through the rider's knee.

5 are the principal qualities of the horse: 1. valiant—nothing frightens him, and he dares to go anywhere; 2. gentle; 3, straight (does not go sidewise); 4, light; and 5, agile.

5 are also his physical qualities which the *charros* express in the following picturesque form: 1. *pechos de casada*; 2, *ancas de viuda*; 3. *cintura de doncella*; 4. *ojos de gasela; y* 5. *cuello de cisne*.

5 are the virtues pointed out by McTaggart; 1. speed of the wind; 2, valor of the lion; 3, elasticity of steel; 4. nobility of a duke; and 5. the proud obedience of the soldier.

In hippology, in treating of the proportions which the well-formed horse should have, it is established that the length of the head is found 5 times in the animal's body: 1. the head itself; 2. from the point of the shoulder to the withers; 3. from the loins to the belly (that is, in a straight line); 4. from the stifle to the point of the hock; and 5. from the point of the hock to the ground.

According to legend, the Arabian horse is descended from the antelope. In the time of Mohammed, the race, which had already become very mixed, was purified in the following manner: In a corral, in front of which ran a stream of water crystal clear, Mohammed caused to be assembled the mares of all the tribes under him. The mares were five days without drinking. Then, the Prophet ordered the gates of the corral to be opened, and naturally the poor animals rushed out towards the water. At this moment Mohammed caused his trumpeter to sound assembly. The majority of the mares paid no attention to the call; but five mares, exhausted, moribund, but docile and obedient, came to him. The Prophet blessed them and designated them as mounts for himself and the four princes: Ali, Omar, Abu Bekr, and Hassan. Furthermore, he gave orders that these five mares should be the origin of the *élite races* and, since then, the purest, handsomest, best horses are from one of the families of those mares, which families bear the names given them by Mohammed: Abaya, Saclaviyan, Kuhailan, Handaniyar, and Habdah.

Reserve Officers' Practice March

By Major Eustis L. Hubbard, Cavalry, Unit Instructor, 308th Cavalry

THE idea of this ride originated with a group of Reserve Officers who had been riding outdoors on Sunday afternoons. Lieutenants Goldsworthy, Thomas and Froede thought of riding to Goldsworthy's cabin about 8 miles south of Ligonier, Pennsylvania, spending the night there and returning to Sergeant Cence's farm the following day, a total distance of about eighty miles. They broached the subject to the Unit Instructor, who was glad to cooperate in interesting others of the regiment. Cence secured and conditioned the necessary horses, and the officers who were to make the march assembled at his farm on the evening of Friday, May 29th. The horse equipment had been borrowed from the 107th Field Artillery, Pennsylvania National Guard.

At 7:00 A.M. on the following morning, Lieutenant Colonel George H. Cherrington moved out at the head of the command. The first halt was at Connellsville, where the group was mistaken for a component of the local Memorial Day parade.

The heat during the remainder of the morning was intense, and more than one longing glance was bestowed on the pop displayed at the roadside stands we passed before we commenced the long grind of lead and walk up the three-mile climb which marked the first stage of our ascent into the mountains. There were, however, no lapses from our self-assumed rôle of seasoned cavalry, and the march discipline continued to elicit the commendation of the regular army officers present. Among these was Colonel Eben Swift, Jr., Field Artillery.

At Jones' Mill, where the noon halt was scheduled, the lunch, which was to have met us at this point, did not materialize, and before long the moment arrived to saddle and bridle again and be on our way. The heat, though still nothing to joke about, had somewhat lessened, and those who had weathered the morning had less difficulty as we proceeded. Halts at Franklin and Hector broke the monotony of the afternoon ride, and at 4:30 we brought our mounts into camp, tired but in excellent condition and capable of considerable further effort, had there been need of it.

When we left the horses, a welcome sight greeted us. In a level space behind the cabin, the table was set for supper. At the sight of food and drink, there was a shout that proved to our host and the cook that their labor was fully appreciated.

The return trip was delightful. The rain had cooled the air, and the clouds which threatened more rain hid the sun. At Jones' Mill we again made a noon halt, where our lunch this time appeared on schedule.

Just before we reached the farm, three officers who had preceded us in a car by a longer but paved route rode out to meet us on horseback. Someone shouted "Charge", and at the end of our 80-mile trip we charged this hostile patrol, scattering it to the four winds, while the "War Correspondent" slid gently over the croup of his rearing mount to the ground, where he sat and observed the action, making notes for the press.

General Remarks on Routine Brigade Supply and Evacuation

In Connection With Brigade Problem November 20th*

THE object of this problem is to prepare this command to quickly take the field with the recruiting allotment actually allowed at this time and to determine just what will be taken, and how it shall be handled to permit the command to function smoothly and without confusion.

This problem involves the 2nd Cavalry Brigade, the 1st Battalion 82d F. A. (less one battery), the 1st Medical Squadron and the 1st Cavalry Division Quartermaster Train. This command will be known as the 2nd Cav. Brig. (reinforced).

This reinforced Brigade is being pushed out in advance of the remainder of the Division, which will remain in Fort Bliss until further orders. In order that the Division can properly supply this detached command it must have from that command a very accurate strength report by organization, showing the number of men, animals, motor vehicles by class, arms by calibre, the amount of ammunition on hand and up to what time the men were rationed and the animals foraged. Since the Brigade has a limited staff, the Brigade Executive has all the above information compiled in a single report, and delivered the day before departure, and at the hour designated by Division. Any changes within the following twenty-four hours will be shown in the daily strength report. In making their reports to the Brigade, organizations must be very accurate, because the Division cannot properly supply the Brigade without the necessary information.

In this problem, the figures of *present* recruiting strength will be used, no matter how many are absent from this particular problem. Because the combat strength in enlisted men of the Cavalry Regiments has been cut down by recruiting allotment to 485 men, it has become necessary to cut down the number of weapons that can be served. Consequently, an organization table to meet the situation becomes necessary, and will be found attached hereto, to be used in this problem.

In order that every one will get a general picture of the routine operation of supply and evacuation, the following general plan is shown. However, different situations often change any routine, and then the plan must be changed to fit the new situation.

Supply—General:

A command which is part of a Division is ordinarily supplied by the Division, by daily routine of supply for Class I supplies. Class I supplies consist of rations, forage, wood, ammunition, and gasoline and oil for motor vehicles.

Ordinarily before leaving camp or bivouac, the men and animals will have had their breakfast.

On the man and horse there will be one reserve ration and a cooked lunch for the man, and a feed of grain for the horse. (The reserve ration will not be consumed by the man without orders from an officer, or in an emergency.) On the kitchen pack is the evening meal for the men. On the spring wagon one feed of grain, three ten gallon cans of water, and wood for the evening meal, also kitchen tent fly and poles.

On ration and forage section of the field train one field ration, one reserve ration, one day of grain and one day of wood. On every motor vehicle one day of oil and gasoline in vehicle and one additional day in containers. On baggage section of field train, authorized tents, officers' bedding rolls, and authorized troop equipment. Field trains should be organized in squadron sections to provide for detachment from the regiment. When possible it must be a rule that there is always a complete day of Class I supplies on the regimental trains in addition to what is on the man and horse, and in the spring wagon.

The above arrangement does not provide for long forage, which should be obtained locally, by grazing, or otherwise provided by Division, because the amount of transportation available to a regiment is not adequate to haul long forage.

On account of the difference in rates of march of the spring wagon and the escort wagon, it is necessary that on the march, whether in the presence of the enemy or not, they shall march in separate columns. It is therefore necessary that the Brigade S-4 place a regimental supply officer in command of all the spring wagons of the command, with instructions to keep them as close to the command as the military situation will permit. All the escort wagons of the command will be formed under the command of the other regimental supply officer and marched as directed by the commander of the troops. Radio communication with the escort wagon section of the field trains should always be maintained by the commander of troops. Spring wagons should be as near the command as the situation will permit, and an agent of that column should be maintained with the commander of troops.

The spring wagons of the regimental surgeons and regimental veterinarians should be at the head of the spring wagon column.

The animal drawn elements of the Medical Squadron (except escort wagons), should also be in the spring wagon column. The Medical Squadron will be released by the officer in charge of the spring wagon column when combat is imminent. The motor vehicles

* 2nd Cavalry Brigade, Fort Bliss, Texas, Brigadier General Walter C. Short commanding.

of the Medical Squadron advance by bounds between the escort wagon column and the spring wagon column.

Thus we find that the men and animals are provided for on the march until reaching their bivouac.

Upon reaching bivouac, the spring wagons are released to their organizations by Brigade S-4 and thus men and animals are provided with their evening meal.

Upon arrival of the escort wagons in bivouac they are usually released to organizations, elements of the baggage section going immediately to their squadrons. The ration and forage section, however, immediately distributes to the troop kitchens one complete day's rations, wood and forage, and before unhitching determines from Brigade S-4 when it must go to the Distributing Point to obtain a refill of one day's rations and forage.

The Distributing Point is the place where the field trains will meet the Division Train, which brings the routine daily supply. This point is designated by the Division. The Division Train, when the distance is not great, will often deliver the daily supply at the bivouac of the troops, but sometimes this is impossible, and the field train may have to back track as far as fifteen miles to the Distributing Point. It is apparent, then, that it is necessary that all vehicles, either animal drawn or motor, have always on them one day's rations for men and animals, and one day's gasoline and oil for the motor vehicles.

It must be apparent from the above that all supply personnel must be conversant with what their unit allowances are, and the weights of each, because at the Distributing Point the allowances will be delivered in bulk by an agent of the Brigade S-4 and one may not get his share if he does not know what is coming to him. Regimental Supply Officers and their assistants must be particularly conversant with the allowances or they will not be able to make the regimental distribution. In addition, all organization commanders, mess sergeants and supply sergeants should be able to state what they should receive within the regiment, or they are liable to get left with a short issue.

Army Regulations 30-2210, September 21, 1931, gives the latest allowances in rations, and the "Handbook for Quartermasters" provides a conversion table, but the changes of allowances in this recent Army Regulation must be noted in working this table.

Supplies, other than the daily Class I supplies, are obtained by requisition submitted through Brigade S-4.

It is the usual procedure for the Division Commander to issue an order prescribing the components of the field ration for a ten day period, showing weights of each article of the ration. With the use of a conversion table, it is easy for any one to figure out what is coming to his organization.

The field ration for this problem is announced in attached memorandum, and a simple conversion table therewith. Drawings and issues (assumed) will be made on this ration.

All organization commanders should familiarize themselves with this table and be prepared to tell what articles they should receive on the distribution. Sometimes the tactical situation or the lack of roads will be such that the field trains cannot come up to the troops, and it will be necessary for the spring wagons or even the pack trains to act as a link between field trains and troops.

With our increased fire power, different weapons, armored cars, and gas warfare, the difficulty of ammunition supply is much increased, and the solution of the problem is worthy of much thought.

There are authorized no combat vehicles for the regiment except one in the Machine Gun Troop. The escort wagon is not fast enough to keep up with mounted troops, and the spring wagon has not enough carrying capacity to provide sufficient ammunition—besides it is tied to roads. Therefore a pack train per regiment is the best solution for a sure supply of ammunition. It is believed that the supply in the cargo of the pack train will meet almost any emergency. It is further believed this solution will solve the lack of sufficient personnel in the troops to provide enough ammunition packs with the guns for the great number of machine guns now in the regiment.

Therefore a pack train will be attached to each regiment, and a regimental munitions officer detailed to command the pack train. He will be charged with the duty of keeping it loaded with the prescribed amounts and kinds of ammunition ordered for this form of Regimental Combat train. This combat train is part of the regiment to which attached, is directly under the orders of the regimental commander and will march with the regiment. It will be sent to the ammunition Distributing Point for refill by the Brigade S-4, but will at all other times be part of the Regiment.

The pack trains should be organized in squadron sections, with a bell horse for each section so that a squadron may be detached with its combat train intact.

Until combat is imminent each trooper armed with the rifle carries 90 rounds of rifle ammunition in his belt, and all carry 21 rounds of pistol ammunition. When a serious combat is imminent, 60 rounds of extra ammunition already in cavalry bandoleers are issued from the pack train, and these bandoleers are either carried on the man or are adjusted around the horse's neck. With each air-cooled machine gun there are 1500 rounds of ammunition; with each water-cooled machine gun there are 1500 rounds; with each 37-mm. gun there are 64 rounds. On the pack train before extra ammunition is issued, there are 105 rounds of ammunition per rifle and 21 rounds of pistol ammunition per pistol, as well as 3350 rounds of ammunition per air-cooled machine gun, 3350 rounds of ammunition per water-cooled machine gun, and 112 rounds per 37-mm. gun.

After combat, or during a reorganization, all expended ammunition with combat troops should be replaced from the pack train by orders from the regimental commander, and at an ammunition point designated by him. The amount of ammunition expended will be promptly reported to regimental headquarters by the munitions officer, and the daily strength report to Brigade will show this change. Thus it may be replaced on the next daily supply of Class I supplies. Since the action of cavalry is not so sustained as that of infantry, it is believed that the quantity which can

be carried on the men and with the guns, and on the pack train, is such that there will never be a shortage that cannot be filled at the Distributing Point at the same time as the remainder of Class I supplies.

Therefore, sufficient pack mules from the regimental train to complete the allowance of ammunition expended will be sent to the Distributing Point at such time as may be directed by the Brigade S-4.

Evacuation—Men:

In this reduced peace strength, the regimental surgeon has a very small detachment at his disposal: actually he has with him only a pack animal for first aid purposes. With the spring wagon column he has a spring wagon with additional supplies.

On the march if a man gets sick or is injured, the regimental surgeon gives him first aid, tags him, turns over his horse to his organization and leaves him at the side of the road, with a medical attendant if necessary, and he is picked up by an ambulance from the Medical Squadron, which is following the column for march collection.

When the Regimental Commander issues his combat order, he shows in paragraph 4 where the Regimental Aid station will be located. The location of this station is usually made upon the recommendation of the Regimental Surgeon. If there is sufficient time, and the place is suitable, the Regimental Surgeon may cause his spring wagon with additional supplies to be brought up to the aid station.

When the combat order is published, or upon the request of the surgeon on the staff of the commander of troops, the Medical Squadron is released and, since there is no Collecting Troop active in this command, the ambulances, when possible, must be pushed up to regimental aid stations to collect cases which cannot walk. Cases that can walk, or ride their horses, should be directed by orders from the regimental surgeon to the Collecting Station designated in the Brigade combat order, where they will be picked up by the Medical Squadron.

A collecting station is an establishment operated by the Medical Squadron and is located in the most suitable place in rear of the Brigade, usually near the boundary between regiments. Its location is given in orders. Its function is the reception of casualties from regimental aid stations for their exacuation by the Ambulance Troop to the Hospital Station designated by Division.

Regimental Surgeons will submit requisitions for expended supplies through the Brigade Surgeon, who will consolidate the requisitions. Brigade S-4 then forwards the consolidated requisition to Division, and supply should come forward with next daily supply column.

Evacuation—Animals:

Regimental veterinarians have a spring wagon, and give first aid to animals, evacuating severely injured animals to a collecting station (for animals) conducted by the Veterinary Troop of the Medical Squadron. This Collecting Station is either designated in paragraph 4 of the combat order, or in the administrative order if one is secured. (An administrative order is an order which gives the administrative details incident to carrying out a field order. It usually accompanies the field order to which it pertains.

In small commands all the administrative data necessary are usually found in paragraph 4 of the field order. In fast moving situations such as concern cavalry commands, the data that would ordinarily appear in administrative order are usually received by dictated orders, or in brief messages issued by the supply officer of the command, who is known as S-4.

Administrative orders cover supply, evacuation, traffic, trains, personnel, and any other miscellaneous administrative details.

In this problem of the 20th all organization Commanders will actually take with them everything that they would take if they were going on extended field service, except rations, forage, wood, and ammunition.

Where forage, rations, wood, or ammunition should be carried either on animals or vehicles, such animals or vehicles will be tagged with the articles and weights.

Regimental and unit commanders must take advantage of this problem to check their units and determine just what should be taken into the field and just how it should be carried.

Regimental Commanders and unit supply officers will have a chance to find out just how much their personnel knows about their allowances, and the supply of the same.

The problem will consist of a march, a deployment for dismounted attack with the regiments abreast, thus permitting the installations for combat to be checked, and a bivouac for the night with distribution of Class I supplies and a refill from a distributing point.

There are enough data attached so that a study along these lines can be made with the minimum of research.

By command of Brigadier General Short:

Verne D. Mudge, 1st Lieut., Cav., (D. O. L.),
Acting Adjutant.

Fort Stotsenburg of Today

By Lieutenant H. Jordan Theis, 26th Cavalry

IN 1902, Fort Stotsenburg, named after Colonel John M. Stotsenburg of the 1st Nebraska Infantry, who fell in action during the capture of Quingua, Bulacan, was established in the upland between the railroad and the Zambales Mountains, eight miles northwest of Angeles, Pampanga. This area was strategically important in the defense plans for the valley of Northern Luzon. At the time it was inhabited by nomadic negritos (Balugas) and ladrones who roamed the wilds unmolested.

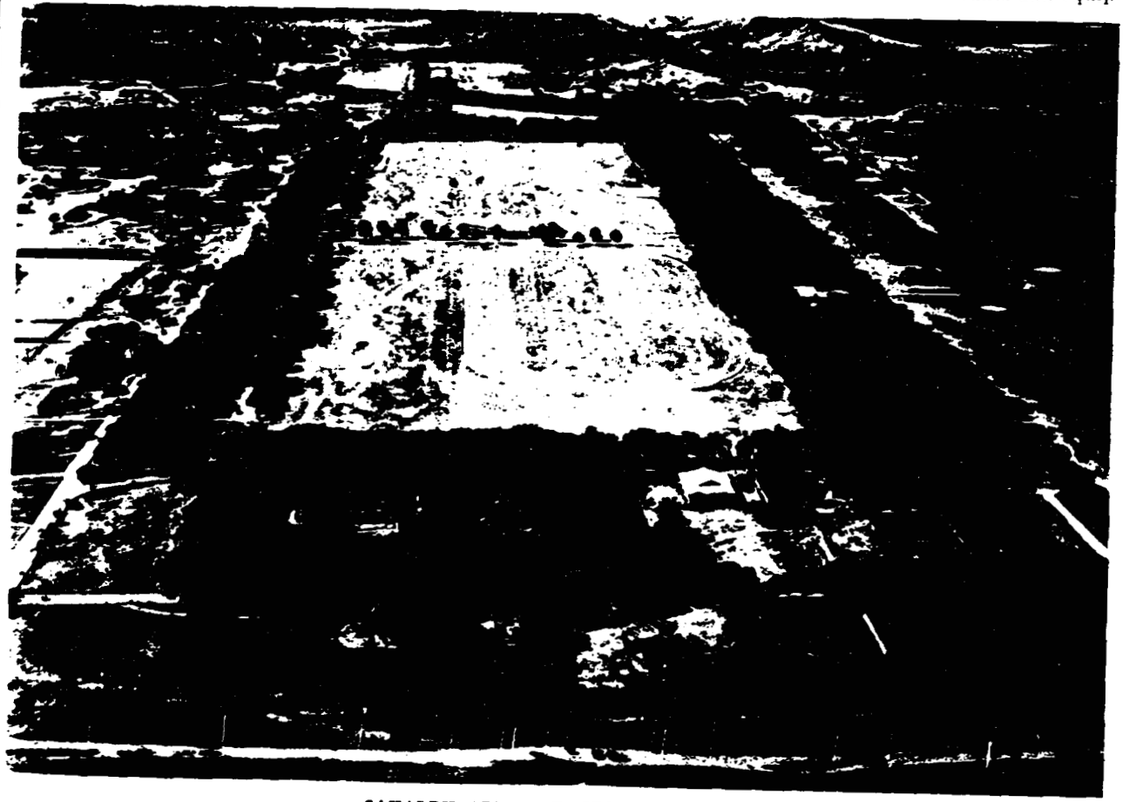
Starting on a figurative shoestring of woven cogon grass, symbolic of the dreary, desolate waste, Fort Stotsenburg has grown in twenty-nine years into a veritable paradise of attractive quarters, paved roads, delightful tropical vegetation with its shady foliage, and excellent facilities for every sport. — polo, golf, tennis, swimming, riding, bowling, dancing, hunting, fishing, and camping.

The Stotsenburg Club alone is practically a country club with its many sports augmented by an excellent series of concessions. Its uniqueness rests not only in its comfort and equipment but in that it provides a center for sports, as well as social activities.

The club is well equipped and possesses a large and airy dance floor. Adjoining it is the new officers' swimming pool done in tiles, complete with showers and dressing rooms. Across the street are three excellent tennis courts and a restful shelter house together with number one tee and the eighteenth hole, as well as a practice green. Golf clubs may be kept at the club where they are cared for and minor repairs made for a nominal sum. Caddies for golf and tennis are always available, the charge for eighteen holes being but twenty-five cents gold.

The golf course offers eighteen holes of varied and interesting play over terrain generally rolling and of such scenic beauty as to assist one to forget lost balls and dubbed shots. The greens are of sand, constantly kept dragged by attendants on duty.

Two polo fields are maintained by the club, one of which is on a par with any fields to be found in the Islands. The regiments furnish the mounts and equip-



CAVALRY AREA, FT. STOTSENBURG

ment and usually maintain two or three teams. The fields are adjacent to the Club.

In addition to hops, receptions and tea dances the Club also sponsors paper chases, controlled rides, treasure hunts, pienics, horse shows, and race meets.

For those interested in bowling, two alleys are maintained at Clark Field, and the rainy season does much to popularize this sport.

The majority of the quarters are of wood and plaster board construction with galvanized iron roofs. A few are of concrete, but all are in good condition and most comfortable. All have wide, commodious screened porches in front and at least on one side which can be utilized for sleeping quarters.

In general, field officers' sets have a living room, dining room and three or four bed rooms with two baths. Company officers' quarters have fewer bedrooms and but a single bath, in most cases equipped with a shower only. Bachelors have two room suites with bath in separate bachelor buildings, but at present a great many occupy married sets, two or three being jointly assigned a set.

The usual amount of Quartermaster heavy furniture goes with each set, as well as dry closets for preserving clothes and other goods during the long rainy seasons.

Yet Stotsenburg is an isolated post, reminding one more of Huachuca than any place else, tucked up in the mountains as it is. As such, it offers opportunities for financial retrenchment so necessary if plans for the China trip at least and consequent acquisition of plunder are to materialize.

Perhaps Manila is just far enough away, a little more than two hours by motor. It is, of course, the real shopping center, offering everything to be found in a fair sized American city in addition to curios, rugs, furniture, linens, and embroideries. The Army & Navy Club is the jumping off place for all from the hinterland and as such is of the greatest convenience.

Baguio, a most restful place, is some four hours' drive to the north. In the last few years it has grown into a typical American resort. Camp Hay has been transformed by skilled landscaping combined with its priceless setting high in the pine covered mountains into a veritable paradise. The newly completed Bell Circle Mess and Dormitory outrivals the finest hotels to be found in our southwestern resorts and is a place that instantly fascinates one.

Those given to riding trails will find Stotsenburg a land of endless delight, for it is to be doubted if any other reservation offers such diversity of terrain, such splendor of view and such interesting places. Particularly, rides to the outlying Baluga villages are of interest. These little negrito tribesmen are actually the last vestige of the aboriginal man and are but four to five feet tall, usually dressed in a G-string and armed with bow and arrows. They lead a nomadic existence and may be numbered among the few real curios of the Islands.

The post maintains, thru the courtesy of the 24th Field Artillery, a delightful rest camp all its own high up in the Zambales mountains hard by the base of famed Mt. Pinatubo. Camp Sanchez is on the Artillery's trail to the China Sea sixteen miles from the post proper. A huge lodge furnished with rustic furniture, glassed windows, equipment for cooking, showers that actually afford hot water, veranda, and concrete floors on which to pitch the tents all add to the pleasures and comforts of a delightful stay. From the Camp parties work out to scale Pinatubo and from its misty heights view the gorgeous yellow river winding its course far, far below!

Trails nearer the post are studded with jumps to delight the interested horseman. Their variety is great, and the trails actually take one places.

Nor does one fall off professionally. Here, and here alone, has the conscientious officer an opportunity to observe and study pursuit aviation, mountain artillery, (one battalion of which is motorized) and a defensive cavalry regiment unique in being divisional cavalry organized into two rifle troops, two .30 caliber machine gun troops and one .50 caliber machine gun troop together with a headquarters troop. Pack animals are mules, riding animals horses. The essential elements of all of which would, during an emergency, be motorized with impressed vehicles, while the balance of the regiment with its animals would march as best it might.

Lastly, from an educational standpoint, service at Stotsenburg is inspiring. Contacting Navy people, Coast Artillerymen guarding Manila and Subig Bays, Infantrymen from Manila and McKinley, is not without its broadening aspect. Too, working with native troops and the language difficulty entailed force one to revert to that simplicity from which we are all too prone to deviate in our modern civilization.

When it is realized that the policy existing encourages officers to take advantage of the detached service authorized so as to become better informed on Island affairs and conditions obtaining on other military posts to say nothing of recuperation at Baguio, the stage is set. In addition to ordinary leave which accrues and may be spent in China, Japan, the Malay States or Indo China, a total of one month per year is authorized for detached service together with one month during the tour for the Southern Islands trip and ten days for the venture into Northern Luzon.

But this is written for mounted officers, and the mount is not forgotten. In a country where surra and other deadly diseases are often times rampant, the problem of conserving the animals may well give one pause—and it does. Polluted streams, contact with carabao and other native stock, improper forage which has a harrowing effect by producing that deficiency disease, osteomalacia, among the herds, call for constant watchfulness, experimentation and foresight—all essential in the successful mounted officer. What has been done before may be done again—even in an improved manner.

A welcome awaits you at Stotsenburg.—come, make the good days last!

Military Motor Transport Required by the Army for War

By Lieutenant Colonel Brainerd Taylor, Q. M. C.

Strategical Mobility

MOTOR transport has already revolutionized military strategy because of the greatly increased mobility it has given to armies. In the civil War strategical maneuver depended upon rail or water transport, followed by the slow marches of foot troops and animal transport. Military operations were not only extremely slow and limited, up to and including the Civil War, but the officers who planned and executed them were seriously handicapped, in the eyes of modern strategists, by the halting movements caused by loading, unloading, and reloading in necessary changes from one gauge railroad to another. Eleven different gauges of railways had to be reckoned with in the theatre of operations of the Civil War. Too frequent loading and unloading of supplies, troops and tactical transport upon faster moving rail, water and motor transport, still handicap the military strategist in the theatre of military operations. Standardization of railway gauges, accomplished after the Civil War, materially changed the character of strategical movements in military operations. The effect of railway standardization upon warfare and commerce stimulates speculation as to the further changes that might result from standardization of motor transport and its coordination with standardized rail and water transportation. If standardization of rails physically unified the United States and multiplied its power in commerce and war a hundred-fold, what might not be expected from standardization of motor transport in coordination with our national railway and international water transport systems?

In the World War the general character of motor transport procured for our Army consisted of 274,000 vehicles representing 216 different makes and models. The truck transport consisted of 86,000 vehicles of $1\frac{1}{2}$ to $5\frac{1}{2}$ ton, 4 cylinder, solid-tired types driving on the rear axle only; 57,600 trucks, 2 and 3 ton, 4 cylinder solid tired types driving on front and rear axles, and 21,400 light trucks 1 ton and less, 4 cylinder, pneumatic tired, driving on rear axles only. The practical or average operating radius of our war time motor transport was from 50 to 75 miles per day on good roads, and the average speed of convoys was eight miles per hour, with slowing up and elongation of columns on grades and poor roads. Notwithstanding the difficulties of controlling military traffic on road nets congested by eight miles per hour motor convoys, four miles per hour tanks, two and one-half miles per hour animal-drawn transport and foot troops, the strategical mobility of the Army had taken a great step forward in its new use of motor transport.

In the World War long distance troop and supply movements by truck convoys characterized military operations that a decade before would have had to rely upon railways and long, hard marches. Even in the stationary phases of warfare, that predominated in the World War, motor vehicles passed far beyond the scope of animal-drawn transport and replaced, without doubt, much short haul railway transportation.

Since the World War motor vehicle design and construction and the rapid development of hard surfaced roads have still further advanced the value of motor transport as a means of strategical mobility. The modern truck and bus are powerfully engined with six and a few eight cylindered motors. Solid tires have been replaced by pneumatic tires of great efficiency and durability. The road performances of 4 wheel, 2 wheel drive vehicles which still represent over 98% of the motor vehicles of commerce have increased the potential radius of action of motor transport to 200 and 300 miles per day and more. With modern braking systems and straight, wide, hard-surfaced highways motor vehicles can travel safely at 50 to 60 miles per hour. The average rate of speed that can be developed in convoys made up exclusively of modern trucks and buses may in small convoys be as high as 30 miles, and for large convoys 20 miles, with some slowing up for grades and poor roads but much less elongation of columns. The effect that such motor transport will have upon the strategical mobility of future armies operating in the field is tremendous. It can best be realized by consideration of the present effect of modern motor transport upon commerce, formerly carried on by railways the traffic of which is now so depleted as to constitute one of the most serious of the economic problems puzzling the entire world in this period of business depression. Not only has motor transport replaced all but a small percentage of animal transport in commerce, it has replaced or crippled a great portion of our branch line railway operations and threatens to cut deeply into trunk line railway traffic, and further to jeopardize our arterial railway systems which still form and always will form, the back-bone of our national and international commerce and of our National Defense. In commerce existing railways and a rapidly expanding motor transport constitute an over-capacity in our mechanical means of transportation far in excess of our immediate transportation requirements. Lacking greater demand rails or motors must yield in competition or be coordinated, because of the immutable law of supply and demand.

For strategical movements in any theatre of military operations, modern wheeled motor transport offers the greatest flexibility and therefore freedom of action and the best means of mobility of any form of transport now existing, except under certain military conditions wherein track-laying or animal transport must still be used. With commercial types of motor vehicles, driving on rear axles only, military troop and supply movements may be made in any direction, at high speed, at the rate of 200 to 300 miles per day in areas covered by a net work of good roads. The power of modern wheeled motor transport has been so developed as to eliminate many of the loading and unloading operations necessary in the use of short haul rail transportation. As compared to rail transportation with the time, labor, and cost of truckage or cartage at both ends, motor transportation within certain economical distances, considering time, labor and transportation costs, offers advantages that are too great to be ignored. These advantages, in local fields of general transportation, coupled with the fundamental importance of retaining, unimpaired, trunk-line railroad service, have apparently been ignored by railroad executives or by legislative bodies whose responsibility it is to coordinate the nations transportation system with public convenience and necessity, until now we face a serious transportation situation in which the welfare of other great industries is involved. In this revolution of commercial transportation is to be found the counterpart of the revolution to be expected in military operations.

The existing type of commercial motor transport that best meets strategical requirements, irrespective of questions of maintenance, of sustaining the power of strategical mobility and of general motor transport administrative economy is the commercial bus and truck representing the most quickly available commercial motor transportation. Ninety-eight percent of this type of transportation is not suitable however for tactical use. Its power of mobility cannot be long continued without excessive costs in automotive supply, repair and replacement. Satisfactory maintenance of this type of motor transport, in a prolonged war, especially overseas, will be impossible of accomplishment. In short, motor transport composed of a great diversification of commercial types, makes, and models of vehicles, would ultimately break the back of any major military operation and end in the early immobility of any army that depended upon such a conglomeration of motor transport, for either strategical or tactical mobility. Only a motor transport designed to meet both operating and maintenance requirements can be relied upon to insure the success of any great enterprise that is based upon motor mobility.

Tactical Mobility

World War motor transport had little or no cross-country ability and therefore was not suited to use as a means of tactical mobility. Notwithstanding the fact that G. H. Q. published in orders to the A. E. F. the conception that motor vehicles merely replaced animal drawn vehicles, reliance for tactical mobility still rested upon the animal, except in the case of motor-driven tanks, which moved on the track-laying principle, and a few combat vehicles of the then crude 4-wheel drive type.

At St. Mihiel and in the Argonne the limitation of the horse and mule in relation to time and distance factors, the importance of which are more and more emphasized in modern warfare, began to be apparent. Keeping pace with the development of warfare, experimental development in the use of motor vehicles for organizational equipment has gone steadily on since the World War, stimulated by the lively interest taken by all military powers in the subject of "motorized" and "mechanized forces." The motorization of animal-drawn elements of combat and technical troop organizations is also stimulated by the greatly increased speed and distance abilities of motor vehicles as compared to animals and by the rapidly increasing power of motor vehicles to satisfy military performance requirements as a means of tactical mobility.

Limited by War Department policy to responsibility for the development and procurement of wheeled types of motor vehicles only, the Motor Transport Branch of the Quartermaster Corps has endeavored to increase the cross-country ability of all wheeled types that might be required to produce tactical mobility, without sacrificing the already highly developed road performance required for strategical mobility.

Commercial vehicles driving on one or more rear axles that are used in road building, excavation work, mining and agriculture possess considerable cross-country ability, but commercial multi-wheel vehicles driving on both front and rear axles have developed ability to negotiate sand, mud, steep grades and underbrush, to such an extent as to supplant the animal off terrain heretofore pre-empted by animal drawn transport and to challenge the track-laying tractor in its pet wallows. These types of super-cross-country wheeled vehicles are, however, produced in commerce by comparatively few companies and in very limited numbers. The combined capacity of existing producers of 4 wheel, 4 wheel drive trucks is nowhere near that required to produce the motor vehicles suitable for tactical motor transport required by the Army in the early phases of a major war, but neither is the entire industry prepared to produce in quantities required by the Army any type of truck above 2-ton capacity. Therefore it will be just as expedient for the industry to expand for production of heavier trucks of military types as it will be to expand for the production of the heavier commercial types driving on rear axles only.

Ever since the World War, engineering tests on nearly all the important types, makes and models of commercial trucks have been conducted at the Holabird Quartermaster Depot and models, representing the best of these from a military point of view, have been turned over to the arms and services for extended service tests by their service boards and other field agencies, under the direction and supervision of their chiefs.

The Cavalry, the Coast (Anti-aircraft) and Field Artillery, the Infantry and Air Corps, and the technical services that go to make up divisions, corps and armies, not to mention experimental motorized regiments and mechanized forces, have in the last few years been rapidly developing their military vehicle

Fig. 1. Group I 1¼-ton, 4-wheel, 4-wheel-drive chassis, standard military type, with Continental water-cooled motor, under cargo body. Chassis and all unit assemblies interchangeable with chassis and unit assemblies in armored car, Fig. 2.

Fig. 2. Group I—1¼-ton, 4-wheel, 4-wheel-drive chassis, standard military type, with Franklin air-cooled motor, under cavalry armored car. Chassis and all unit assemblies interchangeable with chassis and unit assemblies in cargo truck, Fig. 1.

Fig. 3. Group II—2-ton, 4-wheel, 4-wheel drive standardized military type chassis, procured in fiscal year 1931. Principal unit assemblies as named below or interchangeable equivalent sold by any commercial purveyor. Motor: Continental or Hercules Motor Companies. Frame: Parish Pressed Steel Company. Steering gear: Ross Tool and Gear Company. Transmission and clutch: Brown-Lipe Company. Universal joints and propeller shafts: Blood Bros. Radiator: Young Manufacturing Company. Wheels: Budd Wheel Company. Rims: Firestone Steel Products Company. Brakes: Westinghouse Air Brakes. Other parts and accessories from various parts manufacturers. All unit assemblies interchangeable in all vehicles of this group regardless of type of vehicle or maker of parts.

Fig. 4. Group III—3-ton, 4-wheel, 4-wheel drive, standardized military type chassis with cargo body, procured in F. Y. 1932. Principal unit assemblies, as explained in Fig. 3.

Fig. 5. Tactical Mobility: Grade-climbing performance typical of all standard military types. A Group III, 3-ton, 4-wheel, 4-wheel drive, with normal capacity load climbing a 65% grade. Strategical Mobility: Standard Road Performance—Radius, 300-400 miles per day. Maximum speed, 60 M. P. H. Maximum sustained speed, 52 M. P. H.

Fig. 6. Tactical Mobility: Cross-country performance typical of all standard military types. A group I air-cooled or water-cooled engine, 1¼-ton, 4-wheel, 4-wheel-drive chassis plowing through deep mudhole filled with water. Note absence of chains or other cross-country devices.

See article "Military Motor Transport Required by the Army for War."

performance requirements and planning to carry out their own missions and to develop their own motorized and mechanized tactics and technique. In this the Motor Transport Branch of the Quartermaster Corps has endeavored to advise and assist with its greater experience in motor transport operations and maintenance, and through its closer touch with the automotive industry. However, in accord with the Quartermaster General's belief that it is extremely unsafe to interfere or dictate to the arms and services concerning the military characteristics of vehicles required by them, advice only has been offered. Vehicles have actually been developed to meet performance requirements as directed, maintenance requirements only being provided for by Motor Transport Branch plans. Assuming that the military characteristics of vehicles envisioned by chiefs of arms and services are necessary in tactical transport, regardless of differences that may exist between such vehicles commonly used in commerce, the Quartermaster Corps has translated envisioned vehicle characteristics, performance and tactical requirements made known to it, into specifications and drawings from which vehicles of extraordinary cross-country ability have been produced, utilizing standard commercial unit assemblies available in the automotive industry.

Where unusual ratios of rated payload to vehicle weight appear to exist, it is assumed that excess weight, caused by the combination of road and cross-country ability in one vehicle, and its more than ordinary ruggedness, is necessary in designating capacity ratings of military types of vehicles. These differences between military and commercial ratios of vehicle weight to pay load weight are purely fictitious however. There are no commercial standards. The military 1¼-ton for instance is the equivalent in these ratios and in cost of production. to commercial trucks of 1½ to 2-tons capacity, the military 2-ton is the equivalent of commercial trucks of 3 to 4 tons and so on through the military list. On a comparative cost per pound basis of construction and in estimated maintenance costs military types developed at Holabird and produced with equal ease in the industry or at Holabird show up most favorably.

Extended service tests with modern vehicles have been held by the arms and services at such places as Fort Bragg, Fort Riley, Fort George G. Meade, Fort Eustis, Fort Benning, Air Corps fields and other stations where their field agencies are located, and where all kinds of terrain that must be negotiated in combat operations impose collectively the most varied and difficult conditions to be met in tactical motor transportation. These developments and service tests of commercial models of 4 wheel, 2-wheel drive and multi-wheel drive trucks have been reported from time to time to the Quartermaster General by chiefs of arms and services. These reports, accompanied by detailed reports and recommendations of their service boards, have shown performance requirements, mechanical defects and weaknesses developed in unit assemblies of various vehicles, and the failures and successes of the vehicles tested.

These reports and recommendations have clearly shown that standard commercial vehicles driving on rear axles only and used in accordance with commercial ratings do not possess the cross-country ability and sturdiness required for tactical mobility. On the other hand, these reports have shown that multi-wheel drive vehicles driving on front axles, as well as rear, have developed such a high degree of cross-country ability as to make certain that they are a satisfactory mechanical means of tactical mobility in all arms and services. It has also been shown that greater vehicle weights in ratio to rated payload capacity are necessary in tactical or cross-country transportation as opposed to road transportation.

Strategical and Tactical Mobility Combined

In military operations all transport assigned to the arms and services, including the equipment that represents their tactical mobility, must be considered in every strategical road movement involving the transport assigned to divisions, corps and armies and to G. H. Q. reserves. Tactical transport, if it lacks the operating radius or road performance of the motor transport troop and supply columns that make up the mass of strategical movements, will complicate and limit such movements. Slow moving tactical transport, because of its limited road performance, will affect the time element and control of traffic over the road nets, or it will have to be loaded on faster moving rail or motor transport, and unloaded, often at critical points, in the approach to or development of tactical dispositions. In either case time is lost, heavy labor required, and a duplication of transport equipment, in an area already congested, will result in one and the same transportation effort.

All truck chassis of military types recently procured possess a very high degree of tactical mobility and are capable of operation in all modern strategical motor transport movements in accordance with the best road performance of the present day. What is more valuable from a military point of view, they can be easily and economically maintained.

Strategical motor ability is the connecting link between rail and water trunk line transportation and tactical operations. It should be able, if its full military value is to be realized, to extend rail and water trunk lines on the one hand and to develop, without halting, tactical operations on the other hand. In other words, the interruption of movement, due to different vehicle characteristics, that now exists between strategical and tactical transport should and can be removed in military motor transport by "combining standard road performance with maximum cross-country ability" in one and the same vehicle. This all-embracing military characteristic was voiced by the Secretary of War in his first directive to purchase modern motor trucks for tactical training in the Fiscal Year 1930.

Motor vehicles that combine the standard road performance of commercial motor transportation with the maximum cross-country ability required of tactical trarsport will greatly simplify, economize in and speed up military operations. Provisions of ways and means to procure and successfully maintain the mobility of motor transport that combines tactical and strategical

ability is all that is required. This is the principal objective of the Quartermaster General in his experimental work looking to the development of military types of motor vehicles required in war.

In short his plans contemplate utilizing the engines, radiators, frames, axles, wheels, transmissions, steering and braking systems, universal joints and other unit-assemblies now used in the production of standard commercial vehicles to produce in time of war standard military types. His plans contemplate specifying military performance requirements, and the quality of materials and sturdiness of design that military experimentation and development determine as necessary. In addition his plans seek the maximum interchangeability of unit-assemblies, in vehicles of different types and makes but similar in size, in order to insure a workable maintenance system under the conditions of war. In this the approval and assistance of the automotive industry, that did its utmost to advise and assist the War Department in meeting the motor transport requirement of the Army in the World War, have been sought. In response to this appeal the Society of Automotive Engineers and the National Automobile Chamber of Commerce have organized committees representing all branches of the automotive industry to consult with the War Department and study military requirements and the plans to meet them. These committees have recently met in Washington and New York, have visited Holabird and inspected a number of military types of vehicles in demonstrations of war time strategical and tactical requirements. Drawings and specifications are being mutely studied by both committees with a view to determining the extent to which coordinating military requirements with the policies and resources of the automotive industry is practicable.

Motor Transport Resources

With the combination of tactical and strategical mobility in view in vehicles procured for the Army in time of war, it is interesting to contemplate the country's resources from which such transportation may be obtained. As a background, we have the following commercial situation:

Commercial truck and bus producers range in character from two or three truck manufacturers, who design and manufacture their own vehicles and most of their own unit assemblies, to truck assemblers who assemble vehicles according to the user's requirements or their own design, utilizing generally in both cases unit assemblies manufactured and sold throughout the automotive industry by so-called parts manufacturers. The ratio of truck manufacturers to assemblers is about 1 to 20 in the United States. The largest and best known truck producers who manufacture, purchase nearly all of the unit assemblies with which they build up a vehicle around their own engines and other units covered by their own patent rights. Many parts manufacturers are as well known today in the automotive industry as the truck producers to whom they sell their products.

Parts manufacturers are recognized specialists in their lines. Their products are known to possess superior qualities. The skilled unit and parts manufacturers form the bed-rock of the automotive industry. From them directly, or purchasing through truck and bus manufacturers and assemblers, the large fleet operator of today can procure any type, model or size of truck his business requires. Through selection of unit assemblies he can dictate the performance and the quality of materials and ruggedness of design best suited to his service. By adhering to dimensional standards in all units that are used to construct or repair his vehicles, he can lay the foundation for maintenance and replacement economies that will prove a major factor in the success of his fleet operations. The coordination of the performance and maintenance requirements of the Army as a fleet operator with the automotive resources which are available are among the most important objectives sought in the very beginning of any war time production of motor vehicles for military purposes.

The manufacturing plants of unit assembly manufacturers can be expanded, and if necessary can change their tooling set-up to meet war time requirements much more easily and rapidly than can truck and bus manufacturers. The unit manufacturer has but one unit plant to expand, whereas the truck manufacturer has many departments of his greater plant, each manufacturing units required to build his special make of vehicle. These being already arranged as to production capacity, location and inter-plant transportation with relation to each other, cannot be expanded as a rule without encroaching upon adjacent departments thereby making it necessary to set up new plants requiring road or rail transportation and this causing delays and disproportionate costs of production.

In procuring motor vehicles, interchangeability of unit assemblies, provided for by specifying dimensional standards, is obviously the key to economical maintenance and to the continuation in use of serviceable vehicle units and parts, representing a material percentage of an original investment, long after vehicles which do not possess the interchangeability feature are scrapped. This road to successful motor transportation, with profitable operations to the user and to the producer alike, is wide open to all fleet operators including the Army. These advantages are recognized and plans are being made to develop them in connection with the procurement of experimental fleets so that the Army may avail itself of the best procurement, operation and maintenance practices that exist at the time when war breaks out. That a major war will sooner or later force the production of motor vehicles which meet military requirements, both as to performance and maintenance, is indicated by the history of military motor transport in the World War. In war time the advantages of combining strategical and tactical mobility in all vehicles intended to operate in the zone of combat, and the solution of the vehicle maintenance problem, which must be viewed as a military necessity, will be the principal motor transport considerations.

For those who are interested in this subject of standardization of military motor transport in which the use of dimensional standards is required of all who furnish war time motor vehicle equipment to the Army.

it would be well to study this problem as it was handled in the War Department during the Punitive Expedition and in the World War.

Brief History of Military Motor Transport Standardization and Procurement

(Quotations from America's Munitions—1917-1918)

Briefly, as far back as 1914 "the Society of Automobile Engineers, having learned from the experience of European nations then at war that motor transportation is one of the most vital factors in the success of any army, offered its services to our War Department for the purpose of making a complete survey of the automotive industry, in the hope that the interests of the industry and of the Army could be coordinated so that in an extreme emergency the industry might be able to provide the necessary motor equipment for the Army, and that the Army might be able to use such equipment in the most efficient manner."

Not until April 28, 1916, did the War Department ask the "Society's cooperation in issuing revised specifications for the purchase of 1½ and 3-ton Army trucks. In May of the same year, a committee consisting of engineers from five companies manufacturing trucks, from five companies assembling trucks, and an engineer from a truck company not making the types of trucks under consideration, was appointed to cooperate with Army officers in making plans to provide our troops with motor vehicles suitable to their needs." ***"This committee went over the Government specifications for the 1½ and 3-ton trucks, which had been proposed by the Army, and after a few changes had been made, the specifications were drawn up for what then seemed to be the ideal trucks for Army use in these two sizes."

"Trucks at this time were urgently needed for our forces along the Mexican border and for the Punitive Expedition entering Mexico." ** "Early in 1917, revised specification for Army trucks were issued as a result of the numerous conferences that had been held between representatives of the War Department and the automobile industry."

"In May standard specifications for the so-called class "A" (1½-ton to 2-ton) and the class "B" (3-ton to 5-ton) motor trucks were established," showing the fundamental requirements of motor trucks for the Army as they were then conceived.

"After deciding on the requisites of an Army truck, the matter of standardization began to receive definite attention, it being the belief of many of the Army officers that it would be entirely possible and practicable so to standardize Army vehicles that but one type of truck would be sufficient for each size, and it became quite evident if this ideal could be worked out, the maintenance of Army vehicles would be a simple matter. Without some standardization, the providing of the proper stock of spare parts became a problem of extreme difficulty."

Not until the early summer of 1917 was actual military automotive engineering systematically undertaken. At this time "an appropriation of $175.000 was set aside by the Quartermaster Department for the purpose of financing the cost of designing and drawing up specifications for a complete new vehicle, which would become a standardized truck for our military forces. On August 1, 1917, there were assembled in Washington fifty automotive engineers, who had been in touch with the truck needs of the Army, and these men, with the help of Army officers, began the task of designing a sample standardized truck, first centering their efforts on the 3-ton size, as this was at that time most urgently needed by the Army. On October 10 of this same year the engineers had finished designing the new type of truck and had completed the first two sample trucks of this type, afterwards known as the "Standardized B'." *** Not until April 1918, was the necessary military automotive engineering completed and actual production begun on the first 10.000 "Standard B" trucks. In the meantime the buying of motor equipment by five different supply agencies continued. "Each corps had its own ideas as to the type of truck required, and the sum of these ideas resulted in a decided lack of standardization for the Army as a whole, and no complete standardization for any corps as a unit." **"Over 200 different makes of motor vehicles were actually in use by the American Expeditionary Forces." **"The buying of motor equipment by so many different agencies of the Government was not only confusing to the manufacturer, who was selling to five different corps, but it also precluded any possibility of real standardization;" and with a view of eliminating these two evils, Special Order 91, W. D. 1918, and General Order 38, W. D. 1918, were issued. The first created a standardization board and the second consolidated the procurement of all motor vehicles in the Motor Transport Service, which service operated under the direction of the Quartermaster General."

"Under these orders the standardization board was charged with selecting and approving the proper types for the use of the Army, the board being composed of representatives from each of the various corps. In this manner the various ideas of the different corps were coordinated through the discussion of the board," and the final result was the selection of chassis, standardized for use. Four different makes of truck chassis of standard commercial design in four different sizes were adopted as standard, in addition to the Light and Heavy Aviation and Standardized B, and their production in large numbers was ordered. Standard A 1½-ton, and "4-wheel drive TT types, called the 'Militor,' this being a special truck tractor designed by the Ordnance Department," were also adopted as standard but never supplied to the Army. It was determined that "on this limited number of chassis could be mounted any bodies required by the Army."

"While the board was standardizing on the types of vehicles to be purchased in the future for the Army, the Motor Transport Service was being formed, and by June 1, 1918, the consolidation of procurement, inspection, production, maintenance, etc., was well under way."

"The Motor Transport Service found that it was impossible to purchase the trucks standardized by the motorization board in sufficient quantities to meet the overseas requirements. It was therefore decided, after the consent of the board had been received, that certain other types of vehicles should be procured to fill the requirements of the Army until such time as the production of the standardized truck could be increased." Seven makes in five sizes were added.

The following abridged table, made up from a table appearing in pages 502-503 "America's Munitions—1917-18," shows how standardized motor transport was planned and procured for the Army. It also indicates that the War Department can procure from the automotive industry in time of war, just as it did in 1918, vehicles that meet military requirements. In this connection the greatly expanded industrial resources represented by parts manufacturers should be emphasized.

MOTOR TRUCK PRODUCTION 1917-1918

Vehicles Standardized for Overseas Shipment and Production by Several Manufacturers

NAME	CLASS	CAPACITY	Number of Manufacturers to Whom Allocated for Production	Total Ordered to Nov. 1, 1918	Total Completed to Nov. 1 1918	Floated Overseas
Four-wheel, two-wheel drive types:						
U. M. C. Standard Chassis	AA	1-ton	13 different Companies	13,011	5,553	4,001
Light Aviation	A	1½-2 ton	4 " "	3,900	3,210	1,829
Heavy Aviation	B	3-ton	5 " "	3,675	3,099	2,110
"Standard B"	B	3-ton	29 " "	43,005	9,452	7,655
Four-wheel, four-wheel drive types:						
Nash Quad's	TT	2-ton	4 " "	23,684	8,598	7,034
F. W. D.'s	TT	3-ton including winch	4 " "	20,973	7,756	4,745
TOTALS				108,248	37,668	27,377

In reviewing this brief history in the light of experience it should be noted that the causes of failure to provide the Army with satisfactory military types of vehicles required in its military operations were many; chief among these causes were lack of precedents in military motor transportation and failure to comprehend the motor transport problem, in which performance requirements, maintenance and procurement are inseparably bound together in one problem and one solution; failure to accomplish the military automotive engineering involving vehicle development, preparation of specifications and drawings, procurement of pilot model vehicles for engineering tests and pilot model fleets for extended military service tests. It is obvious that all such military automotive engineering should be completed, with a view to revision from time to time to keep up to date, long before war becomes imminent. Finally, peace-time training in the operation and maintenance of military fleets composed of military types of vehicles and the industrial planning required for their war time production are essential to adequate national defense.

Recent Developments

Because of his experience as G-4 of the First Army in France, the present Quartermaster General is in a peculiarly enlightened position to comprehend the relation that the anticipation of motor transport requirements bears to the success of military operations. Under his direction, the following developments have been recently accomplished:

The military automotive engineering (without which the various motor vehicle performance and maintenance requirements of the arms and services cannot be coordinated and interpreted into the motor transport fleet performance and maintenance requirements of the Army) has been brought upto date.

The further military automotive engineering (without which the Army's motor transport fleet performance and maintenance requirements cannot be interpreted for the automotive industry with a view to coordinating military requirements with commercial resources) has been carried to a point that would save the War Department many months of such work and hundreds of thousands of dollars were a war of major magnitude to break out tomorrow.

In this military automotive engineering the basic automotive engineering of commerce has been merely supplemented, not paralleled, just as it had to be in 1917-1918. Standard commercial articles of automotive manufacture have been utilized. Special design has been avoided. The designs of unit assemblies required to produce trucks of military types are strictly commercial, their arrangement in assembling trucks that meet military requirements of performance, sturdiness and interchangeability of unit assemblies is the only automotive engineering attempted.

The drawings and specifications describing military types of trucks from 1¼ to 10 tons military or cross-country capacity, or 2 to 15 tons commercial or smooth road capacity are all outlined and in the case of several types completed in detail.

Experimental models of military types of trucks exemplifying the performance requirements of strategical and tactical mobility combined, in other words trucks that combine "standard road performance with maximum cross-country ability" have been produced, and an experimental fleet of over 300 of these trucks of various types and capacities have been procured and issued to troops.

With this military automotive engineering completed and kept up-to-date from year to year, with changing military requirements on the one hand, and the progress of automotive improvements in vehicle and unit assembly design and construction on the other hand, there should be little doubt regarding the motor transport efficiency of the Army in the event of war. Potentially, so long as the automotive industry of the United

States retains its leadership, the United States Army can be assured of the most powerful military motor transport in the world, provided it procures motor vehicles that combine strategical and tactical mobility, that can be economically maintained, and that are commercially producible, and provided further it develops and practices military motor transportation.

As shown in this article, the standardized military motor equipment recently produced and issued in limited numbers to the Army, chiefly for tactical training, represents seventeen years of military motor transport experiences and development in all arms and services. In the most recent developments history has repeated itself.

In the discussions in the Quartermaster Technical Committee in September 1931, relative to recommending as standard the military types of vehicles experimentally developed, the action in 1918 of the standardization board, composed of representatives from each of the various corps of the Army, (created by Special Order No. 91, W. D. 1918), has been repeated. In the meeting of the Military Motor Transport Advisory Committee of the Society of Automotive Engineers, in the office of the Quartermaster General October 26, 1931, the memorable meeting of such engineers in the War Department on August 1, 1917, has been repeated.

The old solid tired 4 cylindered motor vehicles of limited performance, procured and issued to the Army in the earliest stages of truck transportation, will soon appear to the Army as antiquated and useless as wooden war ships to the Navy. Somewhat as the Navy separates its problems of ship construction and maintenance from the problems of Naval operations, the Army, as a result of its recent development, should be better able to separate its problems of motor vehicle procurement and maintenance from its problems of strategical and tactical motor transport operations.

General References for Collateral Reading

"America's Munitions, 1917-1918", Chapter IV, Report of Benediet Crowell, The Assistant Secretary of War.

"Motor Transportation for War", by Major General J. L. DeWitt, The Quartermaster General, The Quartermaster Review July-August 1931.

"The Transportation Service", by Brig. General F. H. Pope, Q. M. C.

and

"Motor Vehicle Development in the Army Service", by Lieut. Colonel Edgar S. Stayer, Q. M. C. Both articles in The Quartermaster Review January-February 1928.

"A Brief History of Motor Transportation and Statement of Its Functions", by Lieut. Colonel B. F. Miller, F. A., in The Quartermaster Review, November-December 1931.

"Motor Transport in Military Operations", by the author of this article in the S. A. E. Journal, November 1931, published by the Society of Automotive Engineers.

American-Swedish News Exchange Photo

Sweden's Crown Prince inspects Stockholm Troops. Crown Prince Gustaf Adolf, right, with Major General Gösta Lilliehöök watching the Capital's crack regiments pass in review.

The Carden-Loyd Light Amphibious Tank

THE effect of the introduction into modern armies of armoured fighting vehicles, both tracked and on wheels, has been revolutionary in its influence upon the application of tactical principles.

In the future tactical localities will be chosen with a special view to the protection which they afford to attack from vehicles of this nature, *e. g.*, tanks and armoured cars.

Of all the natural physical obstacles which it is possible to select for the protection of tactical localities from attack by tanks, none is so effective as deep water, either sea, lake, river or canal. It is for this reason that Vickers-Armstrongs have directed their study to the evolution of the swimming tank.

Their efforts have met with complete success and they now have a vehicle which affords a triumphant solution to the difficult problem of getting an armed and armoured tank across deep water without the use of a bridge or raft, or of any other aid extraneous to the vehicle.

The Carden-Loyd Light Amphibious Tank posesses all the fighting qualities of the very latest type of

Tank making its exit from the river through mud and reeds.

light tank and in addition is able to cross wide stretches of deep water as easily as it can cross the roughest country .

The above has been made possible by the ingenuity of our tank designers, and now, after several years of research and experiment, we have succeeded in the standardization of tanks of this type, thoroughly proved both as to their cross-country and swimming abilities.

It is not difficult to appreciate the enormous tactical advantages which will accrue to an army containing troops armed with a number of units of these remarkable vehicles. For the establishment of a bridge head at a point where a crossing by a large force of all arms is contemplated, they will be invaluable.

From the Royal Tank Corps Journal (British) December, 1931

Should a Commander desire to make a wide strategical turning movement against an enemy, who is relying on a water line for protection, he will be enabled, by forming a flying column consisting of a

Tank proceeding upstream against both wind and current at a water speed of some 6 m.p.h.

number of these vehicles, to strike from whatever direction he pleases at the flanks of his enemy, and will thus be in a position to disorganize, completely, both his strategical dispositions and his administrative arrangements.

But little imagination is required to appreciate the decisive effect which the presence of amphibious tanks would have on operations involving disembarkation on a hostile beach. The story of the heroic but costly landings carried out by British troops in the Gallipoli Peninsula would certainly be different had they been provided with amphibious tanks capable of entering the water direct from the ships and swimming straight to the shore. In such a case a Commander disposing of armoured vehicles, armed with machine guns, in which advanced troops could be thrown ashore ahead of the main body, would be able to establish safe landing places, free at any

Amphibious Tank negotiating very rough country.

rate from the machine gun fire of the defense, before the principal landing operations begin.

The illustrations, which give a good general idea, of the tank and its capabilities, do not enable us to show fully its agility, its speed, both on land and in the water, nor its remarkable cross-country performance.

A cinematograph film showing the performance of the vehicle across country and swimming in the River Thames can be seen at Vickers House, Broadway, London, S.W.1.

Besides its remarkable amphibious qualities, the

Tank leaving the water where the bank is steep.

Carden-Loyd Amphibious Tank has a maximum road speed of 40 m.p.h. It is able to climb a continuous slope of 30 degrees at a speed of about 6 m.p.h. when fully loaded with two men, machine gun and 2.500 rounds of ammunition.

In the case of short slopes, the tank can easily surmount 45 degrees. It is just as handy as any of the other tracked vehicles supplied by Vickers-Armstrongs and has a turning circle of only 22 ft. The armour protection consists of 9 mm. C.T.A. bullet-proof plate on the vertical front plates, this thickness of plate being proof against rifle calibre ammunition at point blank range and against armour piercing ammunition at a range of 150 metres, under the most unfavourable conditions, i. e., at normal impact. The bullet-proof plate on the sides and back is 7 mm. thick and is proof against rifle calibre ammunitions at point blank range and armour piercing R. C. ammunition at a range of 250 metres.

It may be said without any exaggeration that the vehicle described and illustrated in these pages is unique and without its equal in the world. Its remarkable performance must be seen to be fully appreciated.

Tanks of this design are now available at the Tank and Tractor Design and Experimental Station of Vickers-Armstrongs at Chertsey, only a short distance from London, where they can be demonstrated to intending purchasers both across country and in the water.

A short resume of the weights and other data is given below.

Weight	2 tons 15 cwt.	approx.
Width	6 ft. 10 ins.	"
Length	13 ft.	"
Height	6 ft.	"
Road Speed	40 m.p.h.	"
Water Speed	6 m.p.h.	"
Ditch crossing	5 ft.	"
Obstacle, vertical	1 ft. 8 ins.	"
Climb, angle	30° continuous, 45° short slopes.	
Turning circle	22 ft.	
Thickness of bullet-proof plate:		
Side and back plates	7 mm. C.T.A.	
Front vertical plates	9 mm. C.T.A.	

Active Duty Reserve Training at Oglethorpe

By Guy C. Hamilton, Jr. 2nd Lieutenant, 309th Cavalry

A "BRUSH-UP" on cavalry tactics which slip from memory during the years of civilian life, mount-work, to regain the "feel" of a horse and the spirit of the horseman and enough problems to afford conception of modern cavalry problems were furnished nearly forty reserve officers of the 309th Cavalry regiment last summer during their annual two weeks training period at Fort Oglethorpe, Ga.

Primarily, the work consisted in riding throughout the full hours of each morning, so that these men of the reserve would be familiar with the first principles of equitation and would be able to handle their mounts creditably in case of national emergency, both on the equitation field and in the much more arduous exercise of campaign work. With few exceptions officers, long unused to the saddle, quickly picked up their old habits and after a couple of days of sore muscles were soon riding creditably through the regulation sabre course, taking hurdles smoothly and sending .45 bullets accurately through the targets past which they rode on the mounted pistol course.

A majority of those present were younger men, R. O. T. C. graduates from universities. Old cavalrymen, however, who had seen more serious work with the regulars during war days, were also on hand to keep abreast of ever-changing military regulations and to spend their vacations with the service.

With three reserve majors present, the group was well supplied with officers to lead various squads. Major John C. Carter of Columbus, Ga., was designated as leader of the group during the two weeks of the camp, and Captain Herman Rathjen, D. O. L., regular army instructor of the 309th regiment, acted as supervisor of the entire training program.

As the training period might be considered typical of that furnished all reserve officers throughout the country, an idea of its nature may not be amiss.

The 309th draws its personnel from a large territory, and officers assembled at the barracks which were their headquarters from a radius of many hundred miles on the Sunday of July 26. The great distance which many of them, living in southern Florida, were forced to travel, resulted in the termination of the camp a day earlier so that they might return to their work in time.

A full day was spent on the day after assemblage, while Medical Corps physicians gave thorough examinations to the group and approved them for the strenuous cavalry life. All but two of the number were found satisfactory and were allowed to proceed with field work.

The second day started with a rush, as it was realized that only a limited time was allowed for all sorts of training. The officers, divided into three squads previously, took turns at the equitation ring, were given a taste of dummy pistol work on the mounted range and were initiated again into the mysteries of the sabre course. Sabres felt a bit awkward, the shock of the blade's contact with the dummies was strange at first, but after one or two runs the old swing of things began to return. When record was run, nearly every one qualified in one of the three grades for this course. With shirts dripping wet, and muscles aching more than a little, the group returned to barracks that first morning, to throw themselves gratefully on their bunks before a quick clean up and the dinner that followed. There was one thing about the workout; appetites were on edge, and the steaming platters of meat and vegetables and the big lemonade pitchers moved with the speed of lightning up and down the tables. A brief rest afterwards, then it was off to the field again, but this time by motor car to the dismounted pistol range. Firing was done throughout the afternoon to accustom the men to the kick of an army Colt again. As the shooting continued, the ability to send bullets through the bull's eye increased and the practice was considered a good preliminary to later mounted firing. While some, tired, wrote letters and went to sleep early that night, others more determined to enjoy every minute of the camp, jumped into automobiles after supper and shot off in the direction of Chattanooga, Tenn., seven miles away. The city, with Lookout and Signal Mountains, proved a center of attraction during the two weeks and afforded social engagements to a number of those at camp.

Regardless of how late it plays at night, the army turns out early each morning. At about 5:30 men rolled from their beds up and down the long barracks hall they occupied, shook their heads sleepily at first, then industriously reached for their boot hooks and prepared for another day.

While the first day of active work proved hard to unaccustomed muscles, later ones were less so. As morning after morning passed and riding continued, the reserve men quickly swung into their old cavalry stride.

Sabre practice and mounted pistol work occupied much of the time so that the officers might be proficient in these two weapons by which cavalrymen have established reputations as fighters on thousands of battlefields. But there was equitation and plenty of it, riding over jumps, cross country riding and mounted drill, with various officers acting as leaders. Captain Rathjen and the higher officers were constantly ready to give instructions.

The Sixth Cavalry, long established at Fort Oglethorpe, was invaluable in its demonstrations of pres-

ent tactics which have been introduced into the service. During the stay of the reserve group, the regiment passed in review before its old commanding officer, Colonel Humphrey, who was leaving soon after to take up his new duties as Chief of Staff of the First Cavalry Division.

Taking advantage of their presence in the field, the outfit, which is now at peace time strength, devolved into a war strength troop, and stretching in a long column up and down the long length of Snodgrass field, Chickamauga Park, it maneuvered in that formation under the commanding officer of Troop B, Capt. Raymond Gibbs. Taking the occasion of a passing aeroplane to demonstrate the maneuver, the commanding officer had his war strength outfit break up into small groups, take shelter and hastily reassemble later to show how the cavalry would act if attacked by a fast pursuit plane in modern warfare.

Besides seeing the Sixth Cavalry pass in review, the 309th officers also saw the 109th National Guard Regiment, a cavalry outfit drawn from Tennessee and North Carolina, pass reviewing officers on the occasion of the presentation of a peace time medal to one of their members.

A cavalry officer must not only be able to ride and shoot. He is a leader primarily, and as such must be able to handle his unit with common sense and experience in maneuvers. Cavalry, known as the "eyes and ears" of the army, must be able to do constant advance and rear guard work during advances and retreat, to patrol and scout out hostile territory and to serve as a protecting mask for encamped units. Problems dealing with these functions were presented to the officers on afternoons throughout the camp. Reserve majors and captains were required to work out solutions to their own problems, and lieutenants theoretically commanding smaller units were given orders by these men and required to plan the positions of their own forces. The entire group rode in cars over Chickamauga National Park, while problem leaders, with their maps, moved from point to point, gave their orders for formations, disposed their forces and then executed their orders in theory. At the conclusion of each problem the regimental instructor gave a criticism of its handling, corrected errors and allowed questions to be asked. During the solving of the problems he interjected questions, advice and criticism. In this way a clearer conception of the makeup and functions of "points," "advance guards," "reserves" and the like was afforded, and a better glimpse given of how a cavalry force must be conducted afield when each group has a certain number of men, certain weapons and nothing more. The cavalry leader's problems not only in combat, but in caring for his men, his animals, his weapons and his supplies became more clearly evident.

Fort Oglethorpe is fortunately located at Chickamauga National Park, a wide sweep of beautiful country where fields alternate with open woodland and where one of the major battles of the Civil War was fought. Such a terrain was ideal for cavalry maneuvers.

The last day of active work at camp included a ride of nearly twenty miles to the post rifle range, so that the group could be familiar with the cavalry manner of marching. The return march was made after nightfall, with the column presenting a succession of tall black figures as it trotted swiftly along in the darkness, sparks flashing brightly from the horses' hooves.

Camp was brought to an end after a tour of the Chickamauga battlefield and an explanation of the battle by Lt. Col. Oscar Foley, Chief of Staff of the 63d Cavalry Division. Colonel Foley and Captain Herbert Scanlon, adjutant of the 63d Cavalry Division, had previously been honor guests at a dinner given by the reserve officers in their barracks dining rooms.

Camp unfortunately ended just as legs were becoming used to the saddle and as the methods of cavalry work were becoming more and more firmly established in mind. But those at camp undoubtedly returned in better physical shape, newly inoculated with the cavalry way of soldiering and with a better conception of the cavalry's functions and of their own responsibilities as leaders of men in time of emergency.

Events Overseas

By Lieut. Col. Herman Beukema, Professor, U. S. Military Academy

The Basle Report

WITHOUT a restoration of confidence there can be no return to world economic stability; without a prompt readjustment of German reparations, based on a common accord of all the powers affected, there can be no confidence. Such, in sum, are the conclusions of the advisory experts of the Bank for International Settlements, published at Basle December 24. The committee did not limit its investigations to the reparations question, when it announced that the governments involved "will have to take account of many matters which can be solved only in conformity with economic realities." Prominent among these "many matters" is the linking of war debts to reparations, and the discovery that Germany's favorable trade balance in the past eighteen months is seriously menaced by foreign tariffs, exchange control measures, and other restrictions against the free interchange of goods. A plea, in closing, for the elimination of political considerations. In order that the problem may be settled "on its merits" emphasizes the fact that the question has been treated in this instance from the standpoint of economic realism.

The committee declared bluntly that Germany's resumption of conditional payments under the Young Plan at the expiration of the Hoover moratorium in July is impossible. By implication, the same conclusion appears as to the unconditional payments, although the terms of that Plan act as a bar to the committee's consideration of those payments. Moreover, no future date is set for the resumption of full payments.

Foreign analysis and interpretation of the report showed the interested capitals far apart, both as to present conclusions and as to modus operandi for the future. Berlin purported to see the Young Plan "torn up by its roots," while grieving over the absence of any recommendations for the final burial of reparations. But it chose to regard that long-standing objective as appreciably nearer attainment. Paris and London saw primarily the need of prompt action. On the call of Premier MacDonald a conference of interested Powers was called for January 20. The representatives will gather at Lausanne almost two years to a day after the assembly of experts whose deliberations led to the ultimate acceptance of the Young Plan.

The British Empire

United Kingdom. England enters the new year with greater hopes than were justified a twelve-month back. The retrenchment and taxation policies of the Nationalist Cabinet apparently indicate a balanced budget; the protective tariff gives the British producer an excellent opportunity to develop the home market; textile manufacturers are enjoying a greater activity than at any time since 1920; and stabilization of the pound at a depreciated level is at least in prospect. Parliament stands adjourned until February 2.

In his inaugural speech before Commons on November 3, Mr. MacDonald's conception of his duties under his "doctor's mandate" were announced. Briefly, he intends to keep the budget in balance, restore the balance of foreign trade, and resist price and currency inflation. His program includes a readjustment of war-debts and reparations, acceptance of the proposed Dominions economic conference at Ottawa next July, anti-dumping legislation pending passage of a protective tariff, and approval of the Hoover-Laval efforts to promote a Franco-German accord.

In spite of sniping from die-hards, the government has recorded impressive achievements between Parliament's opening and its Christmas recess.

On November sixteenth, Parliament passed an "Abnormal Imports Act" which gives the Board of Trade authority for six months to levy ad valorem import duties up to 100 per cent on manufactured goods from abroad, excluding the Dominions.

Dominions may export to England, duty free, goods of 25 per cent or more empire content. Application began November 25, with 50 per cent duties on imports, bulking annually $220,000,000. America is affected to the extent of about $12,000,000. The Continent suffers more heavily.

This act is skillfully drawn. While accomplishing its primary purpose, it avoids the counter-vailing provisions of the American tariff, does the least possible injury to Britain's debtors, and maneuvers France into an indefensible position in tariff warfare. The friendly gesture to the Dominions, bolstered by a wheat import quota proposal to give them a 55 per cent monopoly, places Britain in an excellent position for the Ottawa conference.

Continental countries, and France in particular, have voiced no little irritation. At the same time, they have sought to make individual arrangements, but without success. France, Canada, and South Africa have made reprisals, using exchange disparity as an excuse.

Liquidation in substantial amount of the credits extended her by the Federal Reserve system last August has been accomplished in the face of a declining sterling value and a shrinking bank reserve.

Impetus given industry by currency depreciation, and the Chinese boycott of Japanese textiles has resulted in maintaining a steady decrease in unemployment figures at a season when the normal trend is otherwise. The elimination of about 70,000 married women from the benefit roster has diluted the real effect, but has not invalidated it. Textile mill owners, once again approaching full productive basis, retreated precipitately before labor resentment at their endeavor to abolish

the forty-eight hour week. Abandonment of the huge new £6,000,000 Cunarder, however, caused frank dismay. Three thousand men were thrown out of work, and a gallant effort to recapture the mythical "crown of the Atlantic" was nullified.

Junking of the R-100 closes the book on England's major lighter-than-air activities. Increased mobility, closer cooperation between tanks and other troops, and refinement of counter battery in meeting engagements has characterized recent military training.

India. Mr. MacDonald's statesmanship has always been placed in its best light by Indian affairs. Although the conference which adjourned December 1, was a failure, the Prime Minister found no difficulty in placing upon India the responsiility for such affairs, while at the same time having his Indian program acclaimed by an overwhelming vote in a Tory House of Commons.

Gandhi's return to India was the signal for a resumption of the civil disobedience campaign. As a matter of fact, violent disorders had broken out in many sections while he was still some distance at sea. Every element of discord.—Nationalist, Communist, and "Red Shirt"—was involved. But it was left to the eternal enmity existing between Moslem and Hindu to produce the most sanguinary troubles. For once the British Government in India was prepared to counter disorder with stern repression. Gandhi hastily asked for a conference with the viceroy, Lord Willingdon, as to the measures which the government would take. His oft-repeated declaration that "a million Indian lives is not too great a price to pay for liberty" left no further ground for compromise. Gandhi and the Nationalist leaders were clapped into jail, and everywhere, as the new year opened, the population and the government prepared for what threatens to become one of the most serious phases of India's struggle for independence.

R. B. Ransom, *Captain, Infantry.*

Western Europe

League of Nations. With China continuing to lodge protests and Japan steadily advancing its occupation of Manchuria, the League has passed its problem for the time being to a commission of investigation, headed by a British subject, Lord Lytton, and including Major General Frank McCoy (U. S.) All members of the commission have had more or less experience in the Orient. The many difficulties involved preclude the presentation of a report for many weeks. Positive action by the League during the period of investigation is not to be expected, barring unforseen developments between the two principals to the imbroglio.

For the present, then, the League will shift its major attention to a matter of wider international import, the long-heralded Disarmament Conference to be held at Geneva. Anticipated by international gestures of goodwill such as the one-year truce in naval construction, everything possible has been done to blunt the many acute angles facing the diplomats. But the angles remain. Shall the basic formula preface disarmament with security, as France insists, or is there sufficient safety in reversing the order of those elements? And what is to be the yardstick of defense—rifle or dollar? Then again, is a soldier on a reserve status to count as a defense unit, and if so, to what extent? Finally, what weight is to be given to a nation's potential war strength, measured in terms of population, industrial plant, wealth? It will require yet another "honest broker" to find a compromise which will resolve all these angles into a circle of harmony. France has already enunciated a solution in the creation of a super-international police, able and ready to act instantly against any aggressor state. In short, it is once again the League "with teeth," first advanced at the Versailles Peace Conference, and there emphatically rejected.

Organization of the Conference contemplates the naming of five commissions, plus a steering committee. The political issues involved are deemed of sufficient weight to be entrusted to the General Conference Committee, the most important of the commissions. The other four will be concerned with army, navy, aviation, and budgetary matters, respectively.

The League is planning to present to the world a new independent nation early in 1932. Irak, administered under British tutelage for ten years, is now thought to be capable of governing itself. Great Britain has asked to be discharged from its responsibilities under the League's mandate, and the Council's proclamation of independence for the Arab state is expected to follow in logical sequence.

France. The reaction of the French press to the stand taken by the American Congress in setting itself squarely against further reduction of the war debt has been characterized by greater acerbity than has appeared in many months. Several editors seize on the clause in the French accord which gives France the option of declaring at any time a three-year moratorium of her debt. Leon Bailby poses the question.—"If the settlements due next February on German private debts are not satisfactorily arranged, and if on June 1, 1932, Germany does not pick up the reparation payments due to us, have we not the right to notify America that we will declare a moratorium of our inter-allied debts?"

Further evidence that France is feeling more and more the world-wide depression was given in the publication of the trade figures for the first ten months of 1931, showing an import surplus of $413.000.000. That figure is materially higher than for the similar period of 1930. Unemployment totals, though appreciably below those of neighboring states, are mounting at an increasing rate. To meet the situation, Premier Laval has worked out a program for construction of public works, mechanization of agriculture, education, and sundry other purposes. Expenditures will approximate $120.000.000. Such measures do little to allay the resentment of the French electorate against the depression, and the party in power is being made the butt of wide-spread criticism. However, the approach of parliamentary elections works to prevent any effort to overthrow the Laval government.

Contracts have been signed for the construction of four defensive works on the Italian frontier. They are to be located in the region of Menton, Sospel, in the valley of the Vesubie, and near Lantosque. The total cost will be approximately $2,500,000.

Spain. The President of republican Spain may declare war only in accordance with the rules and decisions of the League of Nations. Thus did the recently adopted Spanish Constitution limit the war-making powers of the President. In addition, armed conflict must be purely defensive, and all disputes which involve danger of war must first be submitted to the League for arbitration. No other nation has voluntarily so limited its war-making power.

Other novel features characterize the new constitution. There is to be one legislative chamber, or Cortes, of 440 members, to be elected by universal suffrage of all citizens over 23. A single term is limited to five years, but the Cortes may be dissolved earlier by the premier. Such action must be followed by the calling of a new election.

The president will serve for a six-year term and is ineligible for re-election. Indicative of the present attitude toward the church is the clause barring the priesthood from eligibility to this high office. The president will be elected by the members of the Cortes and an equal number of electors chosen by the people, a method which combines French and American procedure. His salary and allowances are 1.500.000 pesetas ($125.000 current exchange rates) annually, making him the best paid governmental executive in the world. The parliamentary system will be in effect, with the premier representing the majority party or coalition. He may be voted out of office at any time by the Chamber, a provision which may make his official life short-lived, as no party is likely to have a clean cut majority.

The age-old demand for Catalonian self-government is met by granting Catalonia and the Basque provinces certain autonomous powers within the republic. The government may nationalize property and essential industries if the need arises, a provision directed against vested religious orders. Religious freedom is achieved for the first time in Spanish history by abolishing the status of the Catholic church as a state church.

Niceto Alcala Zamora was elected first president and assumed office on December 11. He called on Manuel Anzana to form a cabinet, and a coalition government was formed which will rely for support on the Socialist, Radical Socialist, Republican, Action, Gallegan and Catalan parties. Opposition parties will include the Conservatives, Progressives, Federalists, Agrarians, and a number of smaller factions.

The first decrees signed by President Zamora after taking office was a tariff declaration under which fourteen classes of imports are affected. The duties on these articles are raised to unsurmountable heights, an action clearly reflective of the world-wide movement toward prohibitive trade barriers. Automobiles and telephone equipment are the American items of export hardest hit.

D. A. Fay, *1st Lieut., Inf.*

Central Europe

Germany. The German temperament is apparently adjusting itself to the nation's chronic disease.—trouble. A Continental cartoonist aptly expresses foreign opinion in picturing Chancellor Bruening and President Hindenburg sitting on the lid of a madly boiling kettle. To Bruening's query as to why the lid does not blow off, Hindenburg replies "Perhaps the kettle isn't boiling after all." However, difficulties are not wanting. The rising Hitler tide, the presidential election scheduled for April, the steady fall in tax receipts, the continued flight of capital, and growing unemployment combine to create doubts as to Germany's future. For the present German interest is focused on the remedies to be considered in the Lausanne conference on international debts.

The National Economic Council composed of leading industrialists, bankers, and representatives of labor, called by President Von Hindenburg to lead Germany out of her economic mire has failed to produce results. Whatever good might have come from it disappeared when representatives of labor deserted the conference, asserting that German labor would not accept any recommendations that the council might make.

Hitler has made a bid for popularity outside of Germany by announcing that, though reparations must be abolished, his party will respect the private debts which Germany owes. Meanwhile, Hitler continues his attack against the present German government. Emergency governmental decrees have deprived him of freedom of the press and radio, and Bruening threatens more drastic action if the belligerent Nazis contemplate the use of force. On November 15 in Hesse, Hitler scored his latest triumph by winning a majority of the seats in the Hessian Diet, thereby displacing a coalition of Socialists, Centrists, and Democrats who have controlled the Diet since 1919.

The latest crop of Bruening decrees are tantamount to economic martial law. In many respects they furnish a parallel to the state socialism of Soviet Russia. Such decrees, voluminous in quantity, cover a multitude of subjects ranging from the fixing of commodity prices and wages to the regulation of physician's fees. That they are accepted at all is due to the realization by the populace that a Hitler or a Communist government would march down the same road, and still further.

Italy. Hard-pressed to make national income balance the outgo, Italy still finds the funds for the development and strengthening of its defenses. The most forward-looking project of recent years, compulsory pre-military training of the nation's youth, involves a program of such courses for 1.200.000 youths in 1932. It will provide a great reservoir of personnel well-grounded in the fundamentals of discipline and simple military exercises, requiring comparatively little further training in the event of an emergency to prepare these boys for combat duty. Of interest, in view of the approaching Disarmament Conference, is the completion in organization of the "Wing of the Aegean Islands," stationed at Lero (Dodekanese). It comprises a sea-plane pursuit squadron, two sea-plane bombard-

ment squadrons, and one sea-plane reconnaissance squadron. Italy's total air-forces are stepped up for 1932 to a total of 22,126, an increase over the previous year of 161 officers and 84 men.

The seventh and last 10,000-ton cruiser authorized in the program, which was formulated after the Washington Disarmament Conference in 1921, is the cruiser Pola, recently launched at Leghorn.

Both the immediate and the more distant objectives of the recent visit of Dino Grandi to Washington remain obscure insofar as any statements are forthcoming from either Rome or Washington. Following hard on the heels of the Local mission's trip to our capital, it set tongues a-wagging on both sides of the Atlantic. Grandi vigorously denied any desire to ask a loan for Italy. In general terms he admitted that international peace and comity were uppermost in his mind. Whatever the mission and its results, Fascism gave its emissary royal welcome on his return to Rome.

Grandi's stand on three matters of international interest helps to clarify Italy's probable position in forthcoming conferences. In brief, as to treaty settlements, he declares that not only the "ideas," but the "interests hitherto predominant are now undergoing revision." Again, he places disarmament as the indispensable prelude to security. Finally, he insists that reparations and war debts are one and inseparable. Italy is thus diametrically opposed to France as to treaties and disarmament. On the question of war debts, she accepts the thesis adopted by France and refused by America.

O. L. NELSON, *1st Lieut., Infantry.*

The Balkans and the Near East

Yugo-Slav elections early in November are said to favor the government and its plan for a unified kingdom. At the same time, voting was light, and the opposition contends that the royal manifesto of September has been utterly ineffective in ending the dictatorship, which (they say) continues under constitutional forms. International significance is seen in the visit of King Alexander to Paris, made ostensibly for a medical consultation. The newspapers suggest that His Majesty seeks money as well as medicine, and that the visit may strengthen the association of France with the Little Entente Powers to maintain the post-bellum settlement.

At the same time, the association of Hungary with the Entente is hinted in a conference of Count Bethlen, former premier, with King Carol of Rumania.

Mr. Grandi's visit to the United States was made the occasion of a protest by Greek Americans against the Italian retention of the Dodecanese Islands, held by Turkey until 1912. Oppressive measures of Italization and the fortification of the islands is charged. Meanwhile, permission for expatriated Greeks to visit their old homes and the return of certain relics may indicate an easing of Greco-Turkish relations.

J. F. FISKE, *2d Lieut., Field Artillery.*

Eastern Europe

Russia. The Russian Bear hibernates. The reversion to instinct apparently promises a winter of relative quiet in the land of Soviets, the first since the Bolshevik revolution. Conditions which permit (or compel) hibernation inevitably raise the question as to what may be expected when the bear emerges. Will it come forth emaciated and weak, or, on the contrary, will its appearance display to the world a Russia better able to cope with the serious and growing difficulties which beset it? Typical of Russia, the signs point to both conclusions.

On the favorable side is a wheat harvest which in quantity, if not quality, falls little short of expectations. In line with Stalin's program for raising the standard of living, an increased proportion of the wheat is to be turned into domestic channels. The same policy will obtain in disposing of all classes of manufactured goods classed as immediate necessities. But we must turn to the diplomatic field to find the reasons for Moscow's greatest satisfaction. Rapprochement, in one form or another, has drawn her more closely to Italy and Germany on the one hand, to France and Poland, on the other. The Nazi press in Germany sees Russia, at no far distant time, holding the balance of power in Europe, and even now smoothing the diplomatic channels to that end.

The gloomy side of the picture is found in the major difficulties which are being met in financing the national industrial program: the lack of skilled workmen, excessive and rapid deterioration of tools and equipment; unfavorably distributed natural resources, coupled with a transportation system which persistently falls far short of meeting requirements.

Dismissing some of the doubts which have been voiced abroad, the Supreme Economic Council has announced the conclusion of the Five-Year Plan by the end of 1932. In that event, the original plan will have been anticipated by nine months. However, some of the doubts will not down. Russian figures indicate that the scheduled program of the past year fell seriously short of its goal in many important lines, notably mining, transportation, and production of steel and iron. Moreover, an adverse trade balance grew steadily worse in recent months. As a result foreign exporters grew so fearful of Moscow's ability to meet her obligations that they discounted their Russian paper by as much as 40 per cent. In brief Russian credit has gone from bad to worse. In the face of such obstacles, Moscow writes across the face of 1932 the inscription "Shturmovoi.—the year of storming over the top."

Of military interest is the attention given to aerial development. Russia now has 1654 military planes of all types, including 580 bombers, 550 observation, 447 pursuit, and 77 attack planes. There are in addition 250 commercial planes, easily convertible into bombers. Fourteen airplane factories are now in existence, boasting a peacetime capacity of 100 planes per month, a figure scheduled to be stepped up to 250 in time of war.

G. M. BADGER, *1st Lieut., C. A. C.*

BOOK REVIEWS

LEONARD WOOD. By Herman Hagedorn. Two volumes. 960 pages. Harper and Brothers. $10.

Mr. Hagedorn has written a great book about a great man, a book of peculiar interest to the Army about one of its most remarkable characters. Leonard Wood!—Captain-Doctor promoted General—who made good at every job to which he was assigned and who at the same time ran contrary to all "adopted policies" and brought down upon himself, at one time or another, the bitter animosity of all of his superiors, up to and including the President of the United States.

Mr. Hagedorn had access to General Wood's diary, the records of his voluminous personal correspondence, and manuscripts furnished by those most intimately associated with him throughout his long career. An exhaustive search was made of contemporaneous newspapers and magazines, of public records and of private correspondence between third parties in which General Wood was mentioned.

The author brings into sharp contrast two opposite types, Pershing, who always concerned himself with his own affairs, and Wood, who never freed himself from concern about the affairs of others—that is to say, who was a reformer. He portrays Pershing as a man who followed the strict line of the duty assigned to him, and Wood as a man who was restive when things went wrong and who tried to remedy them whether they pertained to himself, to his subordinates, or to his superiors. He indicates that, in the last analysis, one got the breaks and the other did not—that Baker, a civilian and a pacifist, selected Pershing to command the armies of the United States; that Penrose, a machine politician, prevented Wood from becoming President of the United States.

It seems a pity that he should have attacked the reputation of so many other eminent Americans in defending the reputation of General Wood. He assumes that General Wood was always right and that the others were always wrong. As a matter of fact, some of the things for which General Wood contended have subsequently proven to be fallacious. It could hardly be otherwise. To err is human, and above all things General Wood was intensely human.

He points out the mutual admiration between Wood and Pershing but impugns Pershing's motives and leaves the reader in doubt as to who was responsible for Wood's not going to France—Pershing, March, Baker, or Wilson. He shows that Wood's strongest Army allies, before and after the war, were Pershing's intimate staff officers during the war, but he does not reconcile these differences. The truth is that while a man cannot ride two horses at the same time, he can ride first one and then the other without disparagement to either.

He has shown that General Wood was the storm center of controversy but has failed to show that General Wood, himself, was rarely a party to this controversy. He has shown that many men hated Wood but has not shown that Wood hated no man. To his intimates General Wood's most striking characteristics was his kindly, genial disposition. Whatever he may have written in his diary, neither he nor Mrs. Wood ever expressed an unfavorable opinion of anyone. Sometimes, with a little smile, he gave vent to some mild satire or cynicism, but as a matter of fact, General Wood loved his enemies and often spoke of them in affectionate terms. He admired a bold antagonist, gloated over him when he had him down, and then felt sorry for him.

The author has not given all his attention, of course, to General Wood the soldier. About one third of the text is devoted to his experience and his accomplishments as Governor-General in Cuba and in the Philippines—accomplishments which among high government officials were more appreciated in the West Indies, in Europe and in Asia than in the United States.

Mr. Hagedorn has accomplished a great work, but we are too close to it. In time to come it will be a valuable contribution to American history.

JOHNSON HAGOOD
Major General, U. S. Army.

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BOLIVAR CONDUCTOR DE TROPAS (Bolivar Leader of Troops) by Brigadier General Eleazar Lopez Contreras. 215 pages. Editorial "Elite," Caracas, Venezuela, 1931.

General Contreras of Venezuela, distinguished soldier and military historian, presents an interesting analytical study of Simon Bolivar's campaigns from 1813 to 1821 for the liberation of Venezuela and Colombia. This volume is the first part of a comprehensive historical work which will, when completed, include a study of the campaigns of the great Liberator for the freedom and independence of Ecuador, Peru and Bolivia.

The present volume traces seven distinct campaigns. The first of these covers the operations from Tachira to the capture by the Patriots of Caracas and the capitulation of the Spanish garrison under Fierro. Bolivar conducted this campaign with such consummate skill and rapidity, that it is justly designated as "An Admirable Campaign." The succeeding chapters follow the fortunes of war of the great Liberator in different parts of Venezuela and Colombia, and conclude with the brilliant victory in the second battle of Carabobo, which finally secured independence for Venezuela and Colombia. Although not a soldier by profession and training, the conduct of these operations bears testimony to the prodigious mind, sterling character and iron-will of the great leader whom we honor as the "Washington of South America."

Written in terse, yet fluent, readable literary style, the author treats his subject from a purely military

point of view. He thoroughly orients his reader as to the general and special situations which form the background of each campaign. Sixteen maps and sketches assist the reader in following the operations. Numerous illustrations enhance the interest of the text. The author's critique and apt comments at the conclusion of each chapter are particularly valuable to the student of military history and the art of war. Part II of this valuable and ihstructive sutdy is in preparation.

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THE UNITED STATES AND DISARMAMENT, by Benjamin H. Williams; 361 pages. Whittlesey House. New York, 1931. (Price $3.00).

The author attempts to analyze the issues between the so-called sea-power theory of history, and the methods of pacific commerce, mutual confidence and cooperative diplomacy. He believes that the United States has a great economic interest in the maintenance of peaceful conditions throughout the world. Disregarding the facts of our history, the author avers that "before the war we Americans had been a non-militaristic nation, proud of our pacific intentions, and of the sharp contrast which distinguished us from the armed nations of Europe". In the author's opinion our navy before the World War endangered no one and caused little apprehension abroad; the army was and still is too small to be a factor in the world's military competition. He laments the fact, therefore, that during and after the war "we were swept forward by new impulses until, in the words of President Hoover, we possessed 'the largest military budget of any nation in the world' ". Thus, the author concludes, we have taken the place of pre-war Germany as the greatest spender for prospective wars.

The author marshals his facts and figures and construes and interprets them to sustain his brief in favor of a pacifistic solution of his thesis. Like all pacifists, he places a mess of potage and the precious skin of the individual above national security, self-preservation and self-perpetuation.

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JEB STEWART, by Captain John W. Thomason, Jr., U. S. M. C., with illustrations and maps by the author. 502 pages. Charles Scribner's Sons. $5.00.

Every young cavalier who has not already done so ought to read Captain Thomason's "Jeb Stuart" as soon as he can get hold of it. This biography of a knight *sans peur et sans reproche* is one of the most thrilling true stories ever published in America and should be an inspiration to every cavalry soldier.

Not only was Jeb Stuart the most superb cavalry leader America has ever produced, but as a subaltern in the Old Army, and in every relation of life, he was a model of excellence worthy of any young man's emulation. No d'Artagnan seeking fight for the love of it, but physically and morally fearless. Lying in paroxysms of agony after he was mortally wounded, he refused to take brandy because of a promise he had made his mother twenty years before and because of the wrecks he had seen liquor make of some fine soldiers in the Army.

He had a religious faith as simple and as pure as Sir Galahad's—as different from the austere, lugubrious, puritanical faith of Stonewall Jackson, as day is from night. His was the religion of sunshine, joy, laughter, song. So homely in the face that his classmates at West Point nicknamed him "Beauty", yet so magnetic a personality that he was always of the elect when there was question of choice.

Captain Thomason writes marvellously well. He was wrought a book that one doesn't want to lay down after beginning it, until one has read the last word. The volume is fascinating to read, and a perusal of it cannot fail to stimulate every young cavalry officer to a higher sense of duty and achievement, who has pride and faith in his arm.

If Jeb Stuart was ever whipped, he never knew it. One of his maxims was "that a man cannot be whipped until he admits that he is whipped." "Nothing discouraged him and he was never so dangerous as when his command seemed to be involved in hopeless difficulties." "His idea for the solution of most situations was attack."

He was always fortunate, even in death. He didn't live to see the cause lost for which he had drawn his sabre; which he, like his great chieftain, Robert E. Lee, believed to be right. And how pathetically Captain Thomason has told his death! If there be a man who can read the last four pages of this book—those which tell of Stuart's bidding his young wife goodbye at sunrise (he was himself not yet thirty-two years old); of her frantic efforts to reach him after receiving the message of his wounding; of his watching and hoping and praying for her to come to him ahead of death; of his dying words, "I am resigned to die if it be God's will, but I would like to see my wife"; of her failure to arrive before he was dead—if any man can read those pages with dry eyes, he is "made of sterner stuff" than Julius Caesar was.

MATTHEW F. STEELE.

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THE AUSTRALIAN ARMY MEDICAL SERVICES IN THE WAR OF 1914-1918. Volume I, Australian War Memorial, Melbourne, 1930. Available from the Official Secretary for Australia, 25 Broadway, New York City, at $5.25 post free. Special rates for quantities.

The preface states that this work is not merely a presentation of the experiences of the Australian army medical services but a comprehensive study of the medical problems arising out of the campaigns dealt with. Part I treats of the Gallipoli Campaign, in which the Australian and New Zealand forces played an extremely important part.

"In the Palestine, and, particularly, the Sinai campaigns, the Australian light horse formed the predominant element in the arm most characteristic of these operations—the mounted troops. An Australian officer—the writer of this part—was, indeed, selected to act as D. D. M. S. to the Desert Mounted Corps**. His contribution, it is believed, though concerned but little with the medical strategy of the campaign, presents the detail of medical work with mounted troops in a completeness not hitherto attempted in connection with modern warfare."

Part III is entitled, "The Occupation of German New Guinea."

PROFESSIONAL NOTES *and* DISCUSSION

Our Principal Arm

By 1st Lt. George A. Rehm, 3rd Cavalry

IN looking back over the National Rifle Team Matches since 1905, it seems there must be some particular reason for the failure of the Cavalry to win the match more than once out of twenty-two matches.

We hear all sorts of "alibis" for this: Our branch is too small from which to pick material. We are divided in our interest, using our best men for horse shows and polo as well as shooting. Summer camps play on us heavier in proportion to our strength than they do on other branches. These are all just "alibis." We really should have little difficulty in developing a team as small as twelve men, and in our principal arm.

Let us look over the remark that we have a comparatively small branch to pick from. The following are the approximate strengths of the various branches of the services competing: Navy, 81,000; Infantry, 49,000; Marines, 15,000; Coast Guard, 11,000; Cavalry, 7,000; and Engineers, 4,300.

Here is a resumé of the winners since 1906; and it does not take a practiced eye to see that we are far behind:

Marines: 1911, 1916, 1918, 1919, 1921, 1922, 1923, 1925, 1928, 1930, and 1931—total, 11.

Infantry: 1906, 1908, 1910, 1915, 1920, 1927, and 1929—total, 7.

Navy: 1907 and 1909—total, 2.

Cavalry: 1913—total, 1.

Engineers: 1924—total, 1.

NOTE—The National Match originated in 1903 and was won in 1903, 1904, and 1905 by the New York National Guard.

This information shows us that the smaller branches are not working under a handicap. The service third in strength, the Marines, is the most consistent winner of this coveted match.

All of the branches are armed with the rifle and practice annually with that arm; so we are certainly not below the average there. We are armed with the rifle and we should be able to develop experts in that line as well as any other branch.

We cannot blame our system of training. We train and develop our squad as long as the other branches of the services. We spend the same amount of time in preliminary training with the squad. We fire about the same amount of ammunition, and exactly the same type. We use the same type of guns. Our coaches have as much experience, if not more, in rifle teamwork, as any others. Our teams are not overtrained as shown by the performances of the individuals. We enlist the same type of men, and our officers compare favorably with those of other arms.

There must be some other reason for our inability to develop a super team—a winner; but there is only one more phase to investigate and that is the type of competitor that we receive from the regiments. Are the very best riflemen, the high scores of the regiments, their very best men, sent to the tryout?

First, let us look at former squads and, having been intimately connected with seven of them, I assure you that after the first week of firing thirty per cent. of the men are absolutely deadwood. They show average differences per day as much as from 15 to 30 points out of 300. Some of them develop after several years, but that development should be in the regiment and not cluttering up the squad. We are required to pick a team from a squad where but few men can average a score of 278 points after a season of training; yet we train side by side with other teams who open their season with scarcely a man under that average.

I believe the answer is clear—we do not get the very best material that our regiments afford; we do not get men well trained in rifle work, old shots with experience, yet new men for the team.

The team is limited to five men who have previously fired on it, but they can fire only three out of five years. The remaining five men must be men who have never fired in a National Team Match. Seldom does such a man make the team during his first year, and when he does he is quite superior material. Fifteen per cent. is a conservative estimate of men firing on the team who have never previously been to a tryout.

What type of men do we want? The very best men and officers that our service affords. The best riflemen are the men of a superior type, noncommissioned officers and officers. They usually hold very responsible positions in their regiments and would be missed during a training season. Yet you cannot expect a man to develop into a competitive shot in his first, second, or even third target season a maximum of 505 rounds of firing, any more than you can expect a man to make a first sergeant in the same time—experience plays a large part in the makeup of a team man.

The very best of men must be developed in the regiment; competitive small arms firing, range work and the rifle season are the best training grounds. Then send them to the Cavalry tryout, completely developed by experience and practice, and the 5,000 people at Camp Perry, representatives of all the services and every part of the nation, will again realize that the Cavalry is a formidable competitor.

Observations

THE following observations are the result of active campaign work of cavalry during the World War; that all will agree with the writer is to be doubted but in each instance the observations made have been per-

sonally tested over hundreds of miles of rough, mountainous, arid and desert country.

It was the writer's privilege in 1916, at the request of the British Government, while the writer was an instructor in the Persian Army, to be lent to the British Indian Government to aid the formation of a Brigade of Perisan troops to be called the South Persian Rifles. The purpose of this organization, which was composed of Persian rank and file, Persian officers and Indian officers and non-commissioned officers, was to take the field against the bandits and irregular troops led by Germans operating in Persia. Our headquarters were at Kerman in southeastern Persia opposite British Beluchistan. In the writer's capacity as a staff officer to Sir Percy Sykes he was closely connected with the organization of the First Shah Abbas Cavalry and became its first commanding officer; in addition the writer also at one time actively commanded a force of 350 cavalry in the field. All of the above is mentioned to give a background so that it will be more clearly understood upon what premises the deductions of the writer are made; the writer's cavalry experience in Persia included nearly seven years of which over nineteen months was in the period of the World War with the Kerman Brigade. All seasons of the year were involved as were night marches, marches with long distances between water holes, marches at altitudes of over ten thousand feet, marches in the snow and in the desert and one very hard forced march of a hundred and twenty-seven miles.

The writer believes that cavalry should carry the carbine; that it should be of small calibre, say around .27 to save both weight and to enable the trooper to carry more ammunition. The Persian trooper carries his carbine, or even a rifle, by the sling over his shoulders; the writer has so carried a carbine himself many hundreds of miles, finding that if the sling is kept tight the rider readily becomes accustomed to the weight; the writer's field saddle, fully packed for the field used no saddle blanket but a felt numnah, which in every way is considered better than the blanket; reserve ammunition was carried usually in an extra bandolier hung around the neck of the horse and in some instances an additional bandolier under the horse tied to the girth; this last position was also used occasionally to carry a canvas water bottle, the bottle being hung just back of the forelegs of the horse. It should be noted that all bandoliers were of leather with leather clip pockets, considered to be superior to the web belts used by our cavalry.

It is suggested for consideration that the doing away with the present gun boot and carrying the carbine on the trooper's back would, in a great emergency, release a quantity of much needed leather for shoes and other uses. Some of the Union cavalry in the Civil War carried their carbines on their backs; history records that they were excellent cavalry.

In the writer's humble opinion there is no serious reason for the use of a curb bit in the hands of the average trooper; all cavalry officers know that the mouths of many horses are spoiled by the use or rather misuse of the curb by heavy handed men. In the days when the present Chief of Cavalry was the writer's troop commander in Troop "E" of the Twelfth Cavalry the watering bridle was an useful part of the trooper's equipment; a recruit so equipped would not speedily ruin the mouth of his mount. A bit with a large port and minus the curb is suggested as being feasible.

The three fold leather girth used by the First Shah Abbas Cavalry had an interior filling of flannel which was kept moistened with neat's-foot oil thereby proofing the pliable leather against sweat and hardening; it is considered superior to what our cavalry now uses.

As to the sabre all of the British cavalry officers with the Brigade, including the Brigade Commander, himself a veteran of the cavalry actions of both the Western and Turkish fronts, were for its retention; the First Shah Abbas Cavalry, a regiment of a thousand sabres, four squadrons of two hundred and fifty men each, was in one pursuing engagement where the regiment used the sabre exclusively against a force of some six hundred Persian irregulars. The irregulars fired their rifles from the saddle as they fled; some sixty of the irregulars were killed with the sabre; the sum total of casualties in the pursuing force was one trooper shot in the foot!

One of the writer's pet theories is that the present target season for troops is too concentrated; if the firing, even though not much ammunition was expended, was spread over the entire year, the troopers would be better familiarized with their weapons and, it is believed, better shots would result.

Another suggestion which was presented as long ago as 1920 to the office of the Chief of Cavalry by the writer is that troops in barracks are only too often the victims of excessive post work to the exclusion of training for taking the field; it was suggested that, for the purpose of both training and recruiting, every six months one squadron from each cavalry regiment take the field over a five or six hundred mile course; the squadron remaining at the post should carry on the usual post fatigue; the squadron in the field should live under field conditions of supply; the squadron in the field could make stops of a week or two in likely towns to recruit and to show the civilian population what a squadron of cavalry looks like at close quarters.

With all due respect to the motorized and portée cavalry, whose use in the proper place is readily admitted, the fact should not be lost sight of that in country like the Texas border regions during the rainy season only pack trains and cavalry can "turn a wheel."

John N. Merrill, Major, U. S. A., Retired.

A French Voice About the Modern Army Horse

(Translation from the Deutsche Sankt Georg Sportzeitung, Berlin, 1931, first October edition.)

FRANCE has been up to the present, the ideal country for the use of the thoroughbred horse, the country with the finest thoroughbred stallions. In spite of considerable curtailment during the past years, the French Stud Commission today still possesses 106 English, 43 Arabian, and 99 Anglo-Arabian thoroughbred stallions; the French Federal Horse Brood Institution produces with these a wonderful halfbred horse of a high type, for which, however, there is hardly any demand, since modern conditions require only a very small number of horses of so high a type. Immediately after the War, during the restoration of our warmblood broods, we uttered the view that, for the army horse, a very high portion of thoroughbred would be of less importance than ideal temperament, easy feeding, and practical conformation of the body, as rapid and very rapid gaits ordinarily are seldom used, whereas general efficiency on the march and absolute resistance against the multitude of influences on the army horse are essential. Since the termination of the War the use of the thoroughbred in the breeding of our riding horses has lessened; this does not mean that our army horse has lost in quality thereby. A sufficient percentage of thoroughbred must naturally always remain in the army horse, in order to guarantee mobility. France has now arrived at the same conclusions. A wellknown expert regularly publishes good articles under the pseudonym "Prince Errant" in the "Paris-Sport." He recently also expressed his views on the army horse; the following is a copy of the most important part of his views.

"Much has been written about the requirements to be made of a good troop horse. Of the many qualities that one demands of them, each would be worth the price that one expects to pay for a good hunter. The troop horse must be a weight carrier; he must be able to carry at least 265 pounds cross-country. The military horse must stand and wait while the soldier fights. After being mounted, he must travel speedily and take jumps if necessary. Above everything else, the army horse must be strong and robust. Not enough time has passed since the late War as that one should have forgotten the care of the horse during the War, that is, the lack of care. The horse had to stand around under the saddle day and night, exposed to heat and cold. How often was it necessary to ride by night twice the mileage covered during the day! These are, so to say, the passive qualities that are demanded of the army horse. Now come the active qualities: he must possess a certain manner in the gallop, without which he would not be a riding horse. This quality, to gallop, must be crowned by the ability to move very fast at times, as the occasion might arise on patrols, for which duty horses are not likely ever to be eliminated. In addition thereto, the horse should possess a good temperament, in order not to give too much resistance while in training and not to cause difficulties to riders who serve only one year. Therefore, one demands a horse with blood, to assure the ability to gallop; on the other hand, however, the horse must not be high tempered, as the rider of today cannot handle him. There are such horses, but it is surprising to find them at the prices that are paid today for remounts. Army horses, among themselves, are not alike; the remount commissions buy models of various types. And that is necessary. At the assignment of remounts each officer tries to get those horses for his troop that he likes best. These officers choose according to their personal tastes. As they mostly are horsemen, they are usually attracted by the beautiful riding horse, the beautiful horse which often is not the ideal troop horse. The officer chooses for his organization all horses as if they were meant for his personal use. In such cases the officer is hypnotized by the beautiful form, the horse that approaches the thoroughbred type. The officer, in this case, resembles the man who surrounds himself with neatly appearing personnel and values this quality more highly than the efficiency of his personnel.

The army horse must have short legs and must be near the ground, with much depth and much withers, to keep the saddle in place, sturdy, without any protruding bones, so that the harness will not hurt it. The withers, in particular, must be sufficient, but not too high. On a draft horse rather less than too much withers. Broad shins and joints. Rather too large than too small hoofs. One can also consider a good croup and the necessary angle of the shoulders and so demand a good neck, a well carried head and ears. But this horse will be totally void of pure breeding; he will be an astoundingly ordinary horse.

So much the better with little blood, less elegant: the horse will not be endangered through too great a nervousness and made desperate by a rider who, in spite of good will, cannot be made to forget a short training period. Less sensitive, the army horse will suffer less, but serve better. His sturdy conformation will go hand in hand with his absolute resignation to all unfavorable influences. Less reactive, he will stand up longer under strain. Of course, nothing should be overdone. The choice of our remount commissions is adequate, however, to assure a necessary degree of blood that guarantees the capability of moving at increased gaits."

Motors in Lieu of Cavalry

From SABERS, *Official Publication, 56th Cavalry Brigade, Texas National Guard, January, 1932.*

"SABERS," in accord with the policy of the 56th Cavalry Brigade, favors motorized and mechanized equipment as a part of the equipment for the cavalry regiment.

But, if there be gentlemen in high or humble stations who believe, or profess to believe, that motorized and mechanized equipment can entirely be used as a substitute for the horse cavalry, then such gentlemen could very greatly profit by visiting the great East Texas oil field where units of the 56th Cavalry Brigade are and have been on duty since the middle of August, 1931. Here is an area forty-seven miles long, twenty eight miles wide, covered with a forest of pine, oak, and other trees, rolling hills, sandy and red clay, intersected by rivers, creeks, draws, lakes and canyons. It is analogous to a war front of similar extent. Throughout the area are good highways but in the interior of the field throughout its length and breadth are now 3,700 oil wells which must be visited not only by the operators but by the cavalry on duty. In the dry days of summer, the trails throughout the interior of the field were sandy, dusty. Motor vehicles constantly stalled. They were delayed. They broke down. The United States cavalry horses ridden by the Texas

Cavalrymen made the fields by day and by night. Now the drab winter months are here. Rain, rain, rain. Rivers are out of bank; creeks are flowing full and spreading throughout the low lands. Motor transportation of necessity had to be abandoned. Twenty-eight team mules or giant draft horses are required to move on and transport the average oil field boiler. The moving contractors have camps all over the area with thousands of mules and draft horses. The oil operators themselves use the saddle horse. Agents of the railroad commission, equipped with Fords, are weather bound. The Texas Cavalry still rides by day and by night. They swim streams; a patrol starts out, horses groomed, uniforms clean, leather equipment fine, and returns after an eight hour tour caked with red mud—red clay. But they carry on in the drizzling rains, the cold northers, by day and by night, while motorists stand parked everywhere except on the hard surfaced highways.

Because the situation in East Texas is so analogous to a war zone, entailing as it does the movement of men, the movement of supplies, the transportation of equipment, the lines of communication, distribution of messages, all this by both operators and military forces. In all seriousness, "Sabers" believes that the War Department could, with profit, send officers into that area to inspect and observe. Never elsewhere except after a war is on or under a future similar situation will there be afforded to the War Department experts such an opportunity for real investigation of problems that always interest the Army.

On the Cost of the Army

By Lieut. Col. Kinzie Edmunds, Cavalry

BILLIONS, raised by taxation, are being expended throughout the world on armies and navies. It is natural to conclude that these expenditures are a crushing burden on the people concerned; that their removal would be a blessing to everyone; and that, diverted into other channels, they would restore prosperity and raise the standard of living. We are all familiar with the cartoon of the "Common Citizen" bowed down under a load of cannon, rifles and war ships. The figures as to the amount expended for defense are probably correct. The conclusion, that these expenditures constitute a burden which can be removed, is false. The conclusion would be correct were soldiers and sailors being held out of productive work, but they are not. They are merely being held from idleness. The conclusion would also be correct if idle workmen were allowed to starve or die of exposure, but again they are not. In one way or another, they and their families are supported at the expense of the Public.

A little reflection, even by one unversed in the intricacies of finance, leads to the startling conclusion that, for an industrialized country, it costs little more, and perhaps less, to have a large defense force than to have none. This is from a purely economic standpoint with no reference to the military perils involved. The fact can best be illustrated by England, for that country has taken the logical step of supporting her idle millions through taxation rather than through charity and the loss of rent. Would it cost England any more to support her idle, or their substitutes, in a large army? I think not. It would cost less in one way, since single men are usually taken for an army, and families as well as idle workmen must be supported by the Dole. It would cost more only if the "keep" of a soldier exceed the amount of the Dole, and in that materiel must be bought for an army in addition to food, shelter and clothing. However, this materiel (cannon, rifles, ammunition, airplanes, tanks, etc.) involves production which in turn supports labor.

Is it a coincidence that the two countries which have the largest standing armies, France and Russia, have also the fewest unemployed? A conclusion is not warranted, but the reasons would bear investigation.

In the United States the cost of the Army is of record, while the cost of unemployment is not. On account of the lack of data no one can figure the latter cost; we do not even know accurately how many unemployed there are; but it undoubtedly runs into the hundreds of millions. Charity, loss of rent, repudiation of debt and loss of values, while not listed, are supported by the Public in just as true a sense as if their cost were computed and defrayed by the Government through taxation. Even where idle workmen are living on their own savings, capital is consumed which is a loss to the country as a whole. The economic effect of the discharge of the, approximately, 200,000 men in the Regular Army and Navy would be simply to swell the ranks of the unemployed by this number, or a greater one, and transfer the cost from one pocket to another. They would either be idle themselves, or, what is more likely as they are, in general, young, able-bodied men of intelligence beyond that of the average laborer, they would take the jobs of the least fit now employed, who would in turn be idle.

Actually, unemployment could be eliminated in the United States, at no additional cost to the country, by putting the Selective Service Act into operation and raising a draft army large enough to absorb the surplus of labor. Possibly the cost would be less for it is to be noted that the Selective Service Act would take from industry young men, without dependents, whose places could be filled—would have to be filled—by the present unemployed, many of whom are older men with families. If there are 6,000,000 unemployed in the country, the total number now being supported at public expense is probably nearer 12,000,000. Also, it would not be necessary to enlist as many as 6,000,000 since an army is a heavy consumer of goods, necessitating greater production and, hence, stimulating employment.

Of course it is useless to advocate such a system for this country, as we are not educated to the principles of compulsory peace service. To place such a plank in any party platform would be equivalent to political suicide; imagine the yelps of anguish from the Pacifists! From a military standpoint the system is not desirable. For the soldier, it would substitute in place of the spiritual forces of patriotism, service and sacrifice, the purely material one of belly-filling and would turn a conscript army, uninspired by a call to arms or the necessities of national defense, into a gang of convicts.

A varying amount of unemployment seems to be unavoidable, and even necessary, in industrialized countries; necessary as a reservoir from which industry can draw labor when production is stimulated by demand. It would be interesting to speculate if our Government will ever follow England's example and support such a reservoir and what form such support might take, but this would be a digression from the subject. However, the use of a large army for the purpose is theoretically practicable. The French Army, undoubtedly though unintentionally, serves the purpose to a degree, as did the German Army before the World War. An army is cheaper than the Dole, has other useful functions, can be readily expanded or contracted in accordance with the Dole, has other useful functions, can be readily expanded or contracted in accordance with the needs of the situation, and has the immense advantage over the Dole of providing work for its members. Its work has the singular virtue of being non-productive and hence, of not competing with industry. To any productive form of government work there is the same objection as applies to marketing the products of convict labor.

The question arises if there is any practicable method, other than an army, of maintaining surplus labor without idleness. Possibly it could be accomplished by the subsidy of industry to pay additional labor and, at the same time, to limit production by shortening hours without reducing wages. Such a system is liable to grave abuse but merits study. An advanced form of State Socialism, it would probably be anathema to our Legislators. The surplus of labor would become a surplus of time.

Returning more nearly to the subject, the cost of our Army is one of the lowest in the world in total, in proportion of national wealth, in percentage of total government expenditure and in per capita cost to tax-payers. It is one of the highest, however, in cost per Regular soldier. This is because our standards of living are, in general, higher than those of other countries, because a large proportion of the expenditure goes to National Guard and Organized Reserves who serve only intermittently, and because a volunteer army must be paid. A draft army need be given little but its food, shelter and clothing. A common error is to take the amount of the Congressional appropriation as the cost of the army. This is not exact as the Army sells as well as buys, and the proceeds of sales, as well as any savings on appropriations, go direct to the Treasury and are not used for expenses.

The cost of the Army is largely made up of the pay, subsistence, shelter and clothing of its personnel. The cost of materiel, while enormous in war, is quite limited in peace. However, the latter cost will increase relatively as Mechanization increases, i. e. the substitution of airplanes, tanks, tractors, armored cars and trucks for the arms and legs of men. The cost of materiel is largely in the pay of the workmen who manufacture it and who would, otherwise, be supported in idleness.

The conception of the Army, therefore, as an economic burden on the country is largely illusory. The burden, a light one in the case of the United States, exists but can not be thrown off, even at the peril of national defense, while unemployment also exists. The burden may be reduced by economies in operation and reduction in the cost of materiel. It can not be avoided by reduction in personnel so long as there is a surplus of labor.

Notes from the Cavalry Board

Cavalry Machine Gun Instrument Pack.—In August, 1926, the Chief of Ordnance allotted to the Quartermaster General funds for the development, at the Jeffersonville Depot, of two machine gun instrument pack loads and accessories.

These packs were completed and forwarded to Fort Bliss, Texas, where they were initially tested by the First Cavalry Division Board. Due to excessive weight (226 pounds) that Board recommended elimination of certain articles of equipment and a modification of the packs.

In April, 1929, the packs were sent to the Cavalry Board for test, the modification having been completed.

The Machine Gun Instrument Pack as received comprised a top carrier for the Range Finder with its tripod and lath; an offside hanger for six shovels, E. D. mining, and two steel cases with fire control instruments; and a near side hanger for six pick mattock handles, a steel case with six pick mattocks, and another steel case with fire control instruments.

The cases for fire control instruments each contained one angle-of-site instrument with its carrying case; one protractor, semi-circular; and one boxwood alidade.

After a thorough test of the pack and accessories, the Board was convinced that the load was still excessive and accordingly eliminated the case for the pick mattocks putting them in the case fittings, placed on the hanger in the place previously occupied by the case. As excess of six and one half pounds over the authorized two hundred pound load was still evident. It was found that this modification resulted in a well balanced and a well riding pack load. No ill effect on the pack horses was observed other than some lagging and diminished activity in negotiating obstacles. The motion of the horse had a slight effect upon the halving adjustment of the range finder, making it necessary to readjust it from time to time. It was found that this could be done in a few seconds.

The Board after having completed its test found that the weight was still excessive and that the steel case for pick mattocks was unnecessary and undesir-

able. It was recommended that the hangers be redesigned, made of lighter metal where possible, eliminating excessive metal, and that every effort be made to lighten the entire pack. The Ordnance Department has just completed the redesign at Rock Island Arsenal, and the latest product will shortly be placed in test. It is hoped to expedite the test and to have the instrument packs adopted and issued in the minimum time.

Magazines for Automatic Pistol, Caliber. .45, Model 1911. The Cavalry Board, for the past nine months, has been engaged in studying the various causes which are contributing to the excessive expenditure of magazines for the Automatic Pistol, caliber .45.

In accumulating the data on this subject it was found that at several cavalry posts an excessive number of magazines were turned in in an unserviceable condition during the year.

The commanding officer of a squadron post believed the trouble to be due to the fact that on the present issue web magazine pockets, there is a snap fastener over each magazine which is pushed into the magazine, resulting in denting the sides to a more or less marked degree whenever the man leans forward in assuming the various lunges mounted.

At a brigade post, the Board had the opportunity to make closer observations and to classify what it believed to be the various causes of unserviceability.

Following are the principal defects noted:

Dented tubes from pressure on fasteners on web pockets. Probabaly 90% of these can be attributed to the pocket fastener. The remaining 10% are dented in such places as to make it appear more probable that the dents occurred from other causes, such as dropping the magazine or striking it with some other object.

Spread lips. The lips of the magazine are opened out to such an extent as to make it possible for the point of the bullet to rise too quickly as it is forced forward, and enter the chamber at too great an angle. It will be noted that practically all magazines with spread lips were also dented in the tubes, making it difficult to estimate what proportion became unserviceable due to this cause alone. In addition to the normal wear on the lips, their spreading is due also, in all probability, to failure to press down the rim of the cartridge before pressing it to the rear when loading the magazine.

Split tubes. These splits occur at the top and bottom of the tube. Those at the top—approximately 50%—occur at the upper rear corners of the magazine and, probably, like the spread lips, are caused by forcing the cartridge backward without pressing it down into the magazaine.

Battered or damaged from other than ordinary causes. These were due principally to having been stepped on by horses after having been dropped.

Tubes dented from pocket fasteners included in above. Those shown in this column have the two defects of spread lips and dented tubes.

A further summary of the defects is as follows:

Tubes dented only	15 %
Tubes dented and lips spread	42 %
Lips spread only	18½%
Split tubes	8 %
Abnormal defects	16½%

Observation of troops in running the saber course and in executing the various lunges with the saber has not made it evident that the magazine pockets come in severe contact with the pommel of the saddle, however, no doubt, in exceptional cases this does happen. There are various other ways in which the magazines frequently become dented, such as while mounting restive horses, by dropping the belt carelessly after removing it from the waist, by lying on the magazines when shooting in the prone position, and many others.

The Cavalry Board has recommended already the adoption of a web double magazine pocket with only one fastener in the center to replace the present magazine pocket with two fasteners. When these pockets are issued, upon exhaustion of the supply of the present magazine pockets, at least 50% of the present problem should be solved. However, care in handling the pistol magazines, particularly in loading them, will go a long way towards increasing their life. Troop commanders should make it a point of special importance to see that every man is duly instructed in the proper loading of pistol magazines, and especially that they should press the rim of the cartridge well down on the forward end of the magazine follower before pushing the cartridge to the rear into the magazine. Absolute cleanliness both inside and out also will add materially to the life of the magazine.

CURRENT TOPICS

Maj. Gen. George E. Leach, who became chief of the Militia Bureau, December 1, 1931.

Minutes of the Annual Meeting of the Cavalry Association

Washington, D. C., January 25, 1932.

The meeting was held at the Army and Navy Club, Washington, D. C., this date, being called to order at 8:20 p. m. by the President. Thirty-six members were present in person and 638 by proxy.

Upon motion it was voted to dispense with the reading of the minutes of the last meeting.

The annual report of the Secretary-Treasurer-Editor was read as follows:

Washington, D. C., January 25, 1932.

To: The United States Cavalry Association.

Gentlemen:

There is submitted herewith, as required by the Constitution, the financial statement for the year ending December 31, 1931, and the report of the activities of the Association for the same period.

FINANCIAL STATEMENT OF THE UNITED STATES CAVALRY ASSOCIATION FOR THE YEAR ENDING DECEMBER 31, 1931.

Cash Statement

Account	Receipts	Expenditures
Balance, January 1, 1931	$3,565.85	
Advertising	415.33	
Book Department	10,687.36	$9,820.07
Dues and Cavalry Journal	3,773.74	4,782.82
Interest	953.34	
Postage, Stationery, Incidentals	.25	491.74
Rent	420.00	1,080.00
Saddle Department	240.00	144.96
Salaries		1,595.00
Telephone	96.38	175.64
Telegraph		3.50
Investments	2,000.00	2,131.67
Trophies		308.02
Balance, December 31, 1931		1,308.83
Total	$22,142.25	$22,142.25

Assets (Exclusive of Securities)

Cash in bank, December 31, 1931	$1,308.83
Stock on hand, books	519.38
Office Equipment and Supplies	359.80
Accounts Receivable:	
Book Department	1,841.73
Dues and Cavalry Journal	1,709.60
Saddle Department	65.00
Telephone, F. A.	7.15
Small Cash	1.89
Total	$5,813.38

Liabilities

Bills Payable (Ledger accounts	$375.17
(Telephone, December	12.55
Due Customers on Unfilled Orders	47.52
Net Value (exclusive of securities), Dec. 31, 1931	5,378.14
Total	$5,813.38
Net Value (exclusive of securities), Dec. 31, 1930	$6,158.94
Net Value (exclusive of securities), Dec. 31, 1931	5,378.14
Decrease in Value during 1931	$780.80

Of the decrease of $780.80, $131.67 has been transferred to Securities, leaving actual decrease, $649.13.

Net Value (exclusive of securities), Dec. 31, 1931	$5,378.14
Total Securities, market value, Dec. 31, 1931	9,395.00
Total	$14,773.14

Washington, D. C., January 23, 1932.

We, the undersigned, appointed by the President of the United States Cavalry Association, to audit the accounts of the Treasurer of said Association, for the year ending December 31, 1931, do hereby certify that we have examined the books of account, vouchers, and the foregoing statement, covering said fiscal year, and that the same are correct and true, to the best of our knowledge and belief.

ROBERT J. FLEMING
Colonel, Cavalry
LLEWELLYN W. OLIVER
Colonel, Cavalry
OSMUN LATROBE
Colonel, Cavalry

Securities

The following securities are owned by the U. S. Cavalry Association; the prices paid, the market value as of December 31, 1931, and comparative values of the fund are shown:

No.	Bond	Price Paid	Present Value	Total Paid	Total Present Value
2	Southern California Edison Co., bought April, 1931	105	97¾	$2,100.00	$1,955.00
2	Baltimore & Ohio Ry. Co., bought Feb. 26, 1929	82	57	1,640.00	1,140.00
2	Rio Grande Western Ry. Co., bought Feb. 26, 1929	83⅞	43	1,677.50	860.00
2	Kentucky Utilities Co., bought Feb. 23, 1929	99	75½	1,980.00	1,510.00
1	North Carolina Gas Co., bought Feb. 26, 1929	97	35	970.00	350.00
1	Foltis-Fischer Co., bought Feb. 26, 1929	99½	40	995.00	400.00
2	Consolidated Gas Utilities Co., bought March 6, 1929	97	29	1,940.00	580.00
1	Professional Arts Bldg., Atlantic City, bought Feb. 26, 1929	98	80	980.00	800.00
2	Theatre Realty Co., Easton, Pa., bought Feb. 26, 1929	96	60	1,920.00	1,200.00
1	Atlantic Gas Co., Phila., bought Oct. 18, 1929	98	60	1,960.00	600.00
				$16,162.50	$9,395.00

Securities which were bought for $16.162.50 were worth only $12.859.50 December 31, 1930, and have gone down still further to $9.395 as of December 31, 1931, a decline for the year of $3.464.50 and a total depreciation of $6.767.50.

Net Value (Exclusive of Securities)

The decrease in net value (exclusive of securities), which amounts to $649.13, is due to the disadvantages of operating without paid advertising and to printing costs, which will be materially reduced for 1932.

Investments

My predecessor, Major Oliver L. Haines, collected $2000 for two real estate notes, which had matured. By authority of the Executive Council, he made a reinvestment of $2131.67, purchasing two Southern California Edison 5% bonds (1954).

All securities are paying interest except the North Carolina Gas Co., which has withdrawn its coupons and is paying dividends only as they may be justified by earnings. The company will probably go back to a coupon basis in 1935; in the meantime not much can be expected from this source. The income from the other bonds is $795 annually.

Membership and Subscriptions

The following is an analysis of the Association membership and subscriptions:

Regular Cavalry Officers	847
National Guard Cavalry Officers	258
Reserve Corps Cavalry Officers	337
Other Active Members (Retired Cavalry and General Officers)	90
Associate Members and Subscribers	317
Total Paid	1,849
Honorary Members	3
Life Members	2
Exchanges	67
Total	1,921

The Cavalry Journal

THE JOURNAL, which was operating on a quarterly basis, became a monthly in January, 1931, and also had a monthly issue in February. Paid advertising having been eliminated as a result of legislation in February, the Executive Council, at a meeting March 6, 1931, directed the Secretary-Treasurer to publish the JOURNAL as a bi-monthly commencing with the March-April issue. Publication was continued on this basis throughout the remainder of the calendar year 1931.

GEO. M. RUSSELL
Colonel, Cavalry
Secretary-Treasurer

Upon motion the report of the Secretary-Treasurer-Editor was accepted.

The following were unanimously elected to the offices indicated:

President:	Major General Guy V. Henry
Vice-President:	Colonel Harry N. Cootes, 3rd Cavalry
Executive Council:	Colonel Leon B. Kromer, Cavalry
	Colonel Llewellyn W. Oliver, Cavalry
	Colonel Aubrey Lippincott, Cavalry
	Colonel Edward J. Stackpole, Jr., 104th Cavalry
	Colonel John Philip Hill, 306th Cavalry
	Lieutenant Colonel Henry D. Whitfield, Cavalry Reserve
	Major Alexander D. Surles, 3rd Cavalry
	Captain Lucian K. Truscott, Jr., 3rd Cavalry
	1st Lieutenant Willard A. Holbrook, Jr., 3rd Cavalry

Following the election of officers, the President gave a short talk to the members on recent developments in Cavalry organization and equipment and on the duties of the Cavalry Association in connection with conducting the Equestrian Events and the riding phase of the Modern Pentathlon in the 1932 Olympic Games, Los Angeles, California.

There being no further business, the meeting adjourned at 9:10 p. m.

GEO. M. RUSSELL.
Colonel, Cavalry,
Secretary.

SPORTS

Horses on United States Olympic Squad

LOUD and generous has been the praise accorded the Olympic jumping string of the United States Equestrian Team which competed for the International Military Trophy in the National Horse Show at Madison Square in 1931. Above all, that praise has been merited—there can be no question otherwise. France, Canada, Great Britain, Ireland, and the United States were represented. America won with a perfect score—and no team can do better!

This superb performance will serve as an incentive to the American rider to work harder through the months intervening prior to the Xth Olympiad to be held at Los Angeles, the equestrian sports of which are to take place from August 12th to 14th, 1932, both dates inclusive.

The squad of riders and horses to represent the United States at Los Angeles has been collected at Fort Rosecrans, near San Diego, where training will be continued until next summer when they will move on to Los Angeles. Colonel C. L. Scott is manager of the team, and Major H. D. Chamberlin is in charge of training.

It will be of interest to know something of these equestrian sports.

The horse-loving public of America will have an opportunity of seeing the best of America's horsemen and horses competing with the equestrian representatives of a dozen or more foreign nations—teams from Europe, South America and the far-away Orient.

The Equestrian Sports consist of three separate and distinct events, each complete in itself. One or more of the events will test the endurance, courage and skillfulness of both rider and horse.

FIRST: *The Concours Complet d'Equitation, or Three-Day Event.* As the name implies, the event lasts three days, a different phase being held each day. It is designed to test the ability of a truly good charger or hunter when well trained and in the best of condition.

On the first day, there is a training or schooling test: the purpose of which is to show the suppleness and obedience of the horse and the skill of the rider. The test is not so difficult as the *Dressage* referred to below, but one in which the horse must be shown at the collected walk, trot and canter, and the extended walk, trot and gallop; in backing, changes of direction and two-track work. The horse and rider are marked on the manner in which each movement is performed.

On the second day, there is a 36-kilometer (22-mile) endurance test: the object of which is to test the cross-country ability and endurance of a charger and hunter. The test is over varied terrain with numerous natural and artificial obstacles. 22 kilometers (13 miles) of the test are on roads and trails; a 4-kilometer (2½-mile) steeplechase; a cross-country phase of 8-kilometers (5 miles), necessitating the taking of from 30 to 35 obstacles, and terminating with a 2-kilometer (1½-mile) gallop on the flat. A minimum time is allotted to each of the several phases of the test, as well as a minimum of 2 hours and 5 minutes for the entire course.

On the third day, there is a jumping test over 12 natural obstacles in the stadium of not to exceed 1 meter, 15 (approximately 3 feet, 9 inches), in height or 3 meters, 50 (11 feet, 6 inches) in breadth. The speed at the gallop must be not less than 375 meters (410 yards) per minute. The object of this test is to demonstrate that a good charger or hunter on the day following a severe effort is still able to carry on.

SECOND: *The Prix des Nations, or Jumping Competition.* This is a stadium jumping contest in which the contestants must take from 16 to 20 intricate jumps, varying in height from 1 meter, 25 (4 feet, 1 inch) to 1 meter, 50 (4 feet, 11 inches) and a width of not to exceed 4 meters (13 feet). The length of the course is 800 meters (875 yards), which must be covered at the rate of 400 meters (437 yards) per minute.

THIRD: *The Individual Dressage, a Training or Schooling Event.* This is designed to show the skill and ability of the rider in controlling his mount, and the latter's obedience to the will of the rider. This event is held in an arena (60 meters—196 feet—by 20 meters—65½ feet). The rider must show his horse at all gaits; at two-track work, change of lead at the gallop, on the circle and on a straight line at each stride, and at such high-school movements as the *passage* and the *piaffer*.

Each event is open to teams of 3 riders and 3 horses from each competing nation. Team and individual prizes are awarded.

While interested in the riders and in a knowledge of the conditions of the equestrian events, readers of the CAVALRY JOURNAL will no doubt be more greatly interested in what sort of horse-flesh is to represent America. The following tabulation gives a description of each horse in the squad at Fort Rosecrans and from these animals the final selection will be made:

(See lists below)

These horses have been secured in several ways. A few have been generously donated by civilians; some are private mounts of army officers; the great majority, however, are the property of the U. S. Army. These again represent horses developed in our regiments scattered throughout the length and breadth of

our land, at the army equitation schools at Fort Riley and Fort Sill or through individual efforts of interested officers or citizens.

From a breeding view point the list is very interesting as it is conclusive proof that the years of constant effort by the Remount Service to improve breeding and type have not been in vain—practically every horse is one-half bred or better. The former well-known and prepotent sire "Unk" has only three of his get on the team! This is indeed most gratifying! Likewise the list stands as a tribute to the resourcefulness, skill and training ability of the American army. To take the horseflesh at their disposal and develop, train and condition these animals for the gruelling events on the equestrian sports program of the Olympic games is indeed an accomplishment worthy of praise. Such tests if carefully watched cannot but furnish lessons for breeders of horses.

THREE DAY

Name.	Color.	Sex.	Foaled.	Height.	Weight.	Breeding.	Sire.	Dam.	Owner.
Chandler	C	G	1925	16.2	1160	T.B.	Sand Marsh	Katherine V.	Mrs. D. S. Rumbough, Ft. Sill, Okla.
Honolulu Tomboy	C	M	1926	15.2½	1050	T.B.	Honolulu Boy	B. M. 334.	Government.
Lord Russel	B	G	1925	16.2	1200	T.B.	Gordon Russel	T. B.	Capt. D. A. Danforth, F. A., Ft. Sill, Okla.
Aeronaute	B	M	1926	16. ½	1000	T.B.	Out of the Way	Kaachia	Government.
Squire	Br.	G	1923	16	1100	½ T.B.	Esquire	Unk.	Government.
Va. Navarre	B	M	1926	16.1	1140	¾ T.B.	McDonno	¾ T. B.	Government.
Jenny Camp	B	M	1926	16	1000	½ T.B.	Gordon Russel	B. M. 392.	Government.
Frills	B	M	1926	16	1050	T.B.	Thunderstorm	Mabel Clarkson	Government.
Miss Neill	Bl.	M	1926	16	1160	T.B.	Fitzgibbon	Miss Nell	Government.
Sparkler	B	G	1923	16.2	1150	T.B.	Ft. McLeod	Florence Campbell	Government.
Don R.	B	G	1925	16	1060	¾ T.B.	Gordon Russel	½ T. B. S. M. 392	Government.
Merrimac	Gr.	G	1921	16.2	1160	T.B.	(French) T. B.	(French) T. B.	Government.
Directorix	C	M	1925	15.1	1050	T.B.	Honolulu Boy	T. B.	Government.
Pleasant Smiles	B	G	1924	16.1	1100	T.B.	Transvaal	Bread Winner	Government.
Yala	C	G	1925	15.2	1025	T.B.	Crogin Gordon	Pretty	Mrs. B. O. Hickman, Louisville, Ky.
Sun Magic	B	G	1925	16.1	1175	¾ T.B.	Magic II.	Dam by "Octagon"	Maj. H. D. Chamberlin, Cav.

DRESSAGE

Name.	Color.	Sex.	Foaled.	Height.	Weight.	Breeding.	Sire.	Dam.	Owner.
Olympic	B	G	1924	16.2½	1225	T.B.	Radius Rosa	Odette VI.	Capt. H. E. Tuttle, Q. M. C.
St. Murray	C	G	1927	15.3	1000	T.B.	Bunting	Scrub Lady	Capt. H. E. Tuttle, Q. M. C.
Highbrow	Br.	G	1927	16.2	1200	½ T.B.	Massa Hughes	Std. B.	Government.
K K K	C	G	1924	16	1175	½ T.B.	K. of K.	Unk.	Government.
American Lady	B	M	1921	16	1025	T.B.	Prince Henry	Half a Sovereign	Government.
Thurston	C	G	1924	16.3	1200	¾ T.B.	Magic II.	¾ T. B.	Government.
Water Pat	Br.	G	1924	15.3	1100	T.B.			Government.
Trouble	B	M	1924	15.1	969	½ T.B.	T. B.	Std. B.	Civilian owner, Mrs. Yawkey N. Y.

JUMPERS

Name.	Color.	Sex.	Foaled.	Height.	Weight.	Breeding.	Sire.	Dam.	Owner.
Sir Noel	C	G	1924	16.2½	1170	T.B. Hack			Maj. H. D. Chamberlin
Jock	Br.	G	1924	17. ½	1450	Irish			Maj. H. D. Chamberlin
Red Mary	Bl.	M	1926	15..	1100	¾ T.B.	Esquire	½ T.B. B. M. 45	Government.
Sa[illegible]	Br.	M	1[illegible]	16. ½	1100	¾ T.B.	Gordon Russel	¾ T.B. B. M. 484	Government.
Ur[illegible]	B	G	1926	15.1½	1000	Unk.			Government.
[illegible]	C	G	1921	[illegible]	1075	½ T.B.	Civenic		Government.
Ty[illegible]	B	G	1919	15.1½	950	Unk			Government.
[illegible] Boy	C	G	1921	15..	1075	T.B.	Brother Compton	Princess Olga	Capt. F. W. Koester, Cav.
P[illegible]	Pnt.	M	1925	16	1150	½ T.B.	T. B.		Capt. F. W. Koester, Cav.
[illegible]	Br.	G	1926	15.1½	1050	½ T.B.	Yarek	Unk.	Government.
Av[illegible]	B	G	1924	16.2	1170	¾ T.B.	Trial by Jury	½ T.B. B.M.—C. 16	Government.
P[illegible] Pat	B	G	1926	15.1	1100	½ T.B.	Serf Savin		Government.
Tu[illegible] Antony	C	G	1921	15.1½	1075	T.B.	Irak	Lady Eunice	Government.
Ba[illegible] W	B	G	1929	15.2½	1175	½ T.B.	Henry of Navarre	½ Coach	Government.
T[illegible] Bark	Bl.	G	1926	15..	1100	Unk.			Government.
Sh[illegible] Girl	Gr.	M	1924	15..	1170	T.B.	Stress	Chanata	Capt. F. W. Koester, Cav.
Jack Waring	B.	G	1927	16.1½	1200	¾ T.B.	Walking John	Miss Possum	Government.
Jo[illegible] Alcestre	B.	G	1929	16.1	1200	½ T.B.	Red (S. B. McDonald	T. B.	Government.
W[illegible] Oak	Gr.	G	1925	15.2	1025	½ T.B.	Heart of Oak		Mr. Fred Pabst
[illegible]	B.	M	1921	15.2	950	½ T.B.	Red (S. B. McDonald	T. B.	Government.
Su[illegible]	Rn.	G	1929	16.1	1100	Unk.			Government.
Mary Bank	B.	M	1926	15.3	1050	T.B.	Bank	Wee Mana	Government.
Sarah Lackey	Br.	M	1926	16.0	1125	½ T.B.	Gordon Russel	Unk.	Government.
Kat[illegible]	C	G	1928	16.2	1200	T.B.			Lt. A. A. Frierson, Cav.
John Barry	B	G	1926	16.3	1200	½ T.B.	Scene Shifter		Lt. J. W. Wofford, Cav.
Dep[illegible] at	Pr.	G	1928	15..	1100	T.B.			Lt. J. W. Wofford, Cav.

Pentathlon prospects.

Members of the 1932 U. S. Army Olympic Equestrian Squad mounted on horses sired by remount stallion, Gordon Russel.

The Horses of the United States Army Horse Show Team

SET forth in tabular form herewith is some interesting information on the ninteen horses that composed the United States Army Horse Show Team which competed with horses and riders representing the armies of England, France, Canada, and the Irish Free State this past Fall. The group represents the nucleus of the *Prix des Nations* Team for the 1932 Olympic Games Equestrian Teams. Ten of the horses were exhibited for the first time with the show team; this is in keeping with the policy of the Chief of Cavalry of developing new blood to replace "old galloping hoofs." The column labeled "Breeding" discloses the gratifying influence of our far-sighted Remount Service and its constant endeavors to improve the breeding, type, and quality of Army mounts —fourteen of the show team horses are one-half bred or better. The original source of all the public-owned horses is, of course, through the Remount Service, either by purchase or by depot breeding. It is interesting to trace the military career of some of the show team horses from their entry into the service until their passing through the gilded portals of Army horsedom's inner circle. Seven of the horses were developed by regimental organizations scattered throughout the country. It is a big leap from drilling in the ranks as a lowly trooper's mount on the plains of Kansas or the mesquite of the Texas border, to parading and exhibiting as a super-horse in the magnificent show rings of Madison Square Garden, Boston, and Toronto—such, however, was the proud record of *Ugly*, late of the 13th Cavalry. *Ugly* blazed his name in glory on the front pages of New York's greatest dailies. Prior to this his name had been hidden on his animal descriptive card. *Ugly* entered the equine hall of fame by being one of the three horses to represent the United States in the International Team Event—to him was accorded the honor of "lead off" horse: *Ugly* turned in a perfect performance. Later, *Ugly* won the International Individual Military Championship open to officers and horses of all nations. Four of the horses on the team are products of the Cavalry School, starting in as remounts for their preliminary training and winding up on the show team. Others, like the veteran *Proctor*, *Miss America*, and *Babe Wartham*, have been on either the U. S. Army Show Team or on past United States Olympic Equestrian Teams.

The nineteen horses of the U. S. Army Horse Show Team accounted for a total of 113 ribbons, of which thirty-one were blues. The competition was of the stiffest nature, including not only the cream of our civilian horseflesh but also the wonderful horses belonging to our foreign army visitors.

Outlined below is a special table giving the results of the strictly international military competition between teams representing the armies of the United States, England, France, Canada, and the Irish Free State.

SHOWING MADE BY THE HORSES OF THE U. S. ARMY HORSE SHOW TEAM DURING THEIR EXHIBITIONS AT THE FOLLOWING HORSE SHOWS

St. Louis Horse Show, St. Louis, Mo., Oct. 12-17, 1931; Boston Horse Show, Boston, Mass., Oct. 22-31, 1931; National Horse Show, New York N. Y. Nov. 5-11, 1931; Royal Winter Fair, Toronto, Can. Nov. 18-20, 1931.

1 Horse	2 Experience on Army Team	3 Breeding	4 Obtained from	5 Number of Classes Entered	6 Number of Ribbons Won	7 Number of times won 1st	8 2nd	9 3rd	10 4th	11
Ansonia	First Year	½ TB	1st Cav.	27	5	2	2	1		
Suzanne	Previous	½ TB	3rd Cav.	25	14	5	4	2	3	
Ugly	First Year	Unk	13th Cav.	19	12	3	4	4	1	
Show Girl	First Year	TB	Officers Pvt. Mt.	24	14	5	7	1	1	
Peter Pan	First Year	½ TB	Sig. Tr. 1st Cav. Div.	23	4	1	1		1	
Avocet	Previous	¾ TB	Cav. Sch. USAHS Team	23	5	1	1			
S-3	First Year	Unk	7th Cav.	17	4	1	1	1		
Tyrol	First Year	Unk	1st Cav.	16	9	2	3	3	1	
Miss America	Previous	½ TB	USAHS Team	15	7		2	2	2	
Tan Bark	Previous	Unk	USAHS Team via Cav. Sch.	23	13	6	2	4	1	
Joe Aleshire	Previous	½ TB	USAHS Team via Cav. Sch.	12	2	1				
Clysmic	First Year	½ TB	82nd F. A.	14	7	2	3	2		
Burkaroo	Previous	Unk	Civilian owned	12	6	1	3	1	1	
Knockshegowan	First Year	½ TB	Civilian owned	9	2			1		
Proctor	Previous	TB	USAHS Team	10	2					
Dick Waring	First Year	? TB	Cav. Sch. USAHS Team	3	1			1		
Babe Wortham	Previous	½ TB	USAHS Team	7	3				1	2
Rinkie	First Year	½ TB	Civilian owned	3						
Geraldine	Previous	½ TB	USMA	4	2		1			

USAHS—United States Army Horse Show Team

The Foreign Military Press

Reviewed by Major Alexander L. P. Johnson

MEXICO—*Revista del Ejercito y la Marina*—October, 1931.

"The Next War," by Brig. Gen. Napoleon Cabrera.

The science and art of war experienced rapid development since the World War. Another conflict would imperil civilization. Notwithstanding, the predominant obsession of the world today is WAR. All great powers are preparing for the next conflict. The peace which followed the last holocaust is but an armistice while the combatants gird themselves for the next round. The League of Nations, disarmament conferences, anti-war pacts are mere Utopias. The first article of the Treaty of Paris is already a dead letter. Japan bluntly rebuffed all attempts of the League to intervene in the Manchurian imbroglio. "What Japan is doing today to the Chinese, the Yankees will be doing unto us tomorrow. Who can doubt that? ..... Alerta Mexicanos!"

It is indeed regrettable that General Cabrera's commendable patriotic appeal to his countrymen for greater preparedness for national defense should be actuated by a fear of American aggression. Nothing is more foreign to the American people than a desire to inflict the least injury upon their neighbors south of the Rio Grande. In the light of the general world situation the timeliness of General Cabrera's appeal is or should be patent to all who place national security above the bauble of pacifistic slogans. Even in more normal times a reasonably adequate, efficient and well-organized military establishment would unquestionably redound to the benefit of the Mexican State and Nation.

The United States Army, ever ready to share its facilities with others, has time and again welcomed officers of the Mexican Army to its service schools and garrisons for professional training and experience. This, as well as contacts in the field of athletics and sports have well served to cement bonds of close friendship between the armed forces of the two republics. We hope that these pleasant contacts may multiply manifold in the future. It is likewise our most sincere hope and wish that the Mexican and American armies may never face each other as enemies, but should the occasion arise, that they may march side by side in the defense of their common heritage: Liberty and Independence.

URUGUAY—*Revista Militar y Naval.*—April-May, 1931.

"The Cavalry Division in the War of the Future," by Barrien-Balle.

The principal mission of cavalry, the author believes, will be the supplementing of air reconnaissance. It will verify information supplied by the aerial observer, and secure more specific detailed intelligence. The important function of cavalry to gain and maintain contact with the enemy will remain unchanged. The charge by large bodies of cavalry is a thing of the past. In the future, cavalry will act largely as infantry differing essentially in point of mobility. Cavalry divisions and corps will enable higher commanders to move more rapidly to, and throw into action at a critical point an "élite" force. For this reason, the author believes, cavalry combat training should conform more closely to that of infantry. To make for greater effectiveness, the author advocates a cavalry division of three brigades, two cyclist battalions, one motorized battalion, one regiment of light artillery (3 how. btries and 3 gun btries.); one heavy artillery regiment (3 heavy how. btries and 2 btries of 10cm. guns). Two of the howitzer batteries and one 10cm. gun battery, the author believes, should be horse-drawn, the remainder motorized. The cavalry should also include one company of motorized engineers, one divisional bridge train, an observation squadron, a bombardment squadron, artillery observation planes, and one tank platoon. The entire personnel of the motorized artillery, in the author's opinion, should be mounted excepting the gunners who should ride on the limber. This would relieve them of the burden of caring for the horses and keep them fresh and in condition for action after prolonged march.

AUSTRIA—*Oesterreichische Wehrzeitung*—October 23, 1931.

Military Information.

According to official figures submitted to the League of Nations, the French military establishment consists of 38,209 officers, and 763,352 men with the colors. The total available manpower is computed at four million men. France has 51,000 machine guns, 4,300 light field guns, 2,400 heavy guns, 3,500 tanks and 4,200 airplanes. The French navy is credited with a total tonnage of 628,603.

The League of Nations credits Poland with a standing army of 17,895 officers and 265,980 men. In addition there are 36,985 men in other militarized services. Other formations with military organization account for 102,946 additional personnel. Poland has 700 airplanes. The Polish government regards this force as inadequate for national defense in view of the political and geographical situation of the country, and it is expected that appropriate representations will be made before the disarmament conference.

Militarwissentschaftliche Mitteilungen—November-December, 1931.

With the current issue this distinguished bimonthly publication concludes the 62d year of its existence. In spite of the economic crisis the editors found the means to enlarge and otherwise improve this excellent journal. The volume for 1931 contains 1216 pages of text, 97 illustrations and 28 separate maps and charts. Its contents are valuable contributions to practically every phase of the art and science of war.

BELGIUM—***Bulletin Belge des Sciences Militaires.***—November, 1931.

"The Kellogg Pact," by C. D.

After a brief sketch of the history of the Kellogg Pact, the author cites M. de la Pradelle's comment to point out that this historic document is after all but a restatement of the views held by Grotius and the canonists before him, that while war is an attribute of sovereignty, to be justifiable it must have a legitimate cause, such as self-defense. The author notes that the pact does not actually prohibit recourse to war except as "an instrument of national policy." Thus, in the case of an international dispute resort to arms to enforce the decision of an arbitral tribunal against a recalcitrant party would not be deemed a "resort to war as an instrument of national policy," but some sort of mandate to enforce the judgment rendered in the case. Under the Kellogg Pact war would still be possible in the following instances: 1. among non-signatories; 2. between a signatory and a non-signatory power; 3. civil war; 4. against a violator of the pact; and 5. in self-defense.

The failure of the pact to define what constitutes "aggression" and "legitimate self-defense," are serious deficiencies. The Anglo-American interpretation of self-defense is regarded as sufficiently elastic to permit almost any kind of war as long at it is camouflaged as a war of defense. The failure to prescribe a system of sanctions is a further source of weakness in the pact. Such is also the failure of the document to prescribe a definite procedure of arbitration.

The Kellogg Pact is essentially an act of good-will. It is but a step in the direction of eventual outlawry of war. It will not be effective, however, until individual states surrender their sovereign right to determine for themselves what constitutes aggression, and what is legitimate national defense. A system of sanctions is necessary to provide for some form of joint action against an aggressor nation. At the very least, signatory nations must pledge themselves not to render any kind of assistance to a nation which had transgressed against the terms of the pact.

GERMANY.—***Wissen und Wehr.***—September, 1931.

"Protection of the Civilian Population Against Aircraft," by Alfred Giesler.

The problem of protecting the civilian population against aircraft in war is receiving increasing attention in all countries. In some, the responsibility for providing proper safeguards is shouldered by the authorities; in others this important matter has been left more or less in the hands of private organizations.

France undertook the initial steps in 1923. Little was, however, accomplished until 1928, when the "Aviation Commission," under the chairmanship of Marshal Lyautey got hold of things. A complete defensive program had been mapped out which is to be completed by January 1, 1935. Parliament readily appropriated the necessary funds which, in 1930, amounted to 400 million francs exclusively for A. A.-defense purposes. Last February Marshal Pétain, by Presidential appointment, became the active head of the organization with the title of "Inspector General of the Territorial A. A.-defense." The defensive plan contemplates the organization of a series of observation belts echeloned at approximately 80 kilometers with listening posts at intervals of 10-13 kilometers. A thoroughly organized network of signal communications will permit the rapid transmission of the alarm. Furthermore, important war industries are to be decentralized. It has been decided to install near the coast, in subterranean bomb-proofs, oil tanks with a total capacity of two million tons of fuel oil to supply the French navy in an emergency.

Great Britain, thanks to her war experience with air raids, encountered less public and private apathy towards the development of an effective anti-aircraft defense. London is, of course, the nerve center of the United Kingdom; the south of England is second in importance. The capital of the British Empire is surrounded by three concentric observation belts with watch posts at 10-13 kilometer intervals. As in France, a thoroughly organized communications net serves to make the system effective. The south of England is divided into seven defensive zones, each with a separate message center. These are connected by means of special wires with the headquarters of the A. A.-defense installed in a bombproof in one of the suburbs of South London. It is contemplated to use subway tunnels as bombproofs to shelter the civil population in an emergency. In districts remote from the subway system, the construction of special bombproof shelters is planned. Children in all schools receive regular instruction in what they are to do in case of an aerial attack.

Italy organized a special Volunteer Militia of National Security (M. V. S. N.) for the anti-aircraft defense of the country. It is composed of youths of pre-military age. Older men, and those not physically fit for field service may also enlist. The "balilla" (fascist boy scouts) are required to train 9000 "avant-guardists" for service with the A. A.-defense. Responsibility for the preparation and organization of the defensive plan and in all technical matters rests exclusively with the general staff. Observation posts have already been installed along the entire frontier at intervals of 8-10 kilometers. Each group of five or six posts is served by a special message center. For the time being the ordinary communications net serves these outposts. It is planned, however, to install a special A. A. signal system. As in France, important war industries have been transferred from western Lombardy to less exposed districts south of the Apennines.

The smaller countries of Europe are similarly active in organizing. Austria and Hungary have particularly well organized A. A.-defense systems.

Poland and Russia, and some of the smaller Baltic countries have left the initiative in this important field of national defense to private endeavor. In Poland the "League for Anti-Aircraft and Anti-Gas Defense" receives the patronage of the government. Its appeal for public support is similar to that of the American Red Cross. Its work is still largely in the stage of propaganda. In Russia, the "Ossoaviachim" performs a similar function as the League in Poland. Subsidized by the Soviet government, "Ossoaviachim" has taken complete charge of the development of the air and chemical weapons as well as the defense against them. Instructional exercises and maneuvers are regularly conducted with the active cooperation of the Red Army, Navy, Red Cross, as well as the railroad system and fire departments. Last March, such a maneuver on quite a pretentious scale was conducted in the vicinity of Leningrad.

—*Militar-Wochenblatt*—November 11, 1931.

"Clausewitz," by Major General von Cochenhausen.

November 16 marked the centenary of the passing of one of Germany's outstanding military thinkers, General von Clausewitz. His great knowledge and studious habits, misunderstood by his contemporaries, made Clausewitz an unpopular figure in the Prussian army. Military men of his day regarded all intellectual endeavor out of the ordinary on the part of an army officer as something wholly superfluous, perhaps even deleterious to the army. They looked upon Clausewitz with contempt, and regarded him as a mere theorist. Frequent rebuffs from his superiors caused Clausewitz to leave the Prussian service. He entered the Russian army to serve in the campaign against Napoleon. His lack of knowledge of the Russian language was a serious handicap and prevented him from making his influence felt in the service of the Czar. In 1815 Clausewitz reentered the Prussian army. Fate was against him. He never was given the opportunity to apply his great knowledge and to display his skill on the field of battle. Although he filled the office of corps chief of staff in two armies, unfortunately for him, his corps were invariably relegated to some unimportant minor rôle. His failure to obtain professional recognition wounded him deeply. Retiring from active service, he devoted himself to his studies with even greater assiduity. During the years of peace following the Napoleonic wars Clausewitz produced his literary masterpiece, "On War." A classic in the field of military literature, it has made Clausewitz's name known to soldiers of every land and clime. His fame will endure as long as a knowledge of the art of war is indispensable to the nations of the world.

GREAT BRITAIN—***The Army Quarterly***—July, 1931.

"Reshuffling the Cards in China," by Brig. Gen. C. D. Bruce.

Reviewing briefly the history of recent civil wars in China, which according to the testimony of the famous Sun Tzu were just as common in the Celestial Kingdom in his own day, some 2000 years ago, as they have been since the dawn of the present century, the author sets forth a number of basic facts which, in his opinion, must be given full consideration in any estimate of the Chinese problem. These are: the immense size of the country, about 3,000,000 square miles; lack of transportation facilities; total railroad trackage about 7000 miles compared with nearly a quarter million miles in the United States of approximately the same territorial extent; the firm and widespread hold of Bolshevism upon the interior of the country; the precarious financial condition of the central government. Although these facts are not the sole obstacles in the way of pacification, they are, in the opinion of many well-informed authorities, well nigh insurmountable.

—*Journal of the Royal United Service Institution,*—May, 1931.

The Royal United Service Institution celebrated the hundredth anniversary of its existence and commemorated that event by issuing the May number of the Journal as a special Centenary number. Representative of all arms and services, the Royal United Service Institution, unique among military organizations, can boast of a record of signal achievements. The centenary number of the Journal is dedicated to a retrospect and review of the events of a century in the growth and development of His Britannic Majesty's land, sea and air forces.

ITALY.—*Revista Militare Italiana*—June, 1931.

"Infantry Fire," by Lieutenant Colonel Hugo Sprega.

Analyzing the problem of infantry fire, the author lays down three basic principles for the effective employment of infantry fire: 1. delay in opening of fire as long as possible, closing in upon the enemy by rushes without firing; 2. use of infantry fire only when unable to advance otherwise, and then only within the following ranges: Infantry cannon and heavy M. G. 1000 m. or less; light M. G. within 500 m.; rifle-grenades between 20 and 200 m.; hand grenades between 20 and 40 meters. 3. no firing of any kind beyond actual necessity. Superiority of fire must be attained with a maximum of economy of ammunition. The infantry rifle is only complementary to the automatic weapons. In conjunction with these, the rifle may be used at ranges up to 400 m., otherwise not beyond 200 meters.

The mission of infantry is to take and hold the objective of an attack. The fire of supporting artillery is not altogether adequate. At the critical moment the infantryman must depend upon his own resources to drive home the assault. The author examines the different infantry weapons, and the method of training employed in their use. Some features of the training system he regards as obsolete. He advocates that training in rifle-marksmanship be made the principal object of the pre-military training made obligatory upon all youths by a recent statute. It would leave more time for instruction in the use and operation of other infantry weapons during the period of active military service. This training should conform to modern tactical requirements. The author proposes certain proficiency tests for individuals and units and he believes that the efficiency of officers can be determined from the effectiveness of the instruction which they impart to their troops in this field.

Organization Activities

1st Cavalry

Fort D. A. Russell, Texas

(Contributed from outside the garrison)

Those who have been fortunate enough to receive the "Black Hawk Bulletin" will learn with regret that the issue of December 30. 1931. is announced as the last. It has been a very cheerful and snappy publication. True. the fact that the author of some of the puns (e. g. "Knee-o-fight" for "neophyte") has not been shot proves that the frontier is passing—they'll be carrying canes on the streets of Marfa yet.

As stated in its swan song. the "Black Hawk Bulletin" has "never departed from its proclaimed policy of featuring praise and appreciation in preference to sensations and criticisms."

"From its columns the great newspapers of the country • • • were wont to glean rich literary gems from their own pages; that is, they were welcome to do so. and perhaps did. or could have. or would have. had they space available."

3d Cavalry (Less 1st Squadron)

Fort Myer, Virginia

The Honorable Frederick H. Payne. Assistant Secretary of War. was the guest of honor at the first Fort Myer Exhibition Ride of the 1932 season. at 2:50 PM, Friday, January 15th. A week later the Chief of Cavalry was similiarly honored. On the 29th. the ride was given in honor of Major General Paul B. Malone. Commanding 3d Corps Area. and on February 5th for Secretary of the Navy Charles F. Adams.

There are some marked changes from last year's program for the rides. The large riding hall has been equipped with screens and flood lights, so that daytime performance may have all the colorful lighting effects previously confined to night shows of the Society Circus. This alteration also permits the 16th Field Artillery to give its battery drill with the electric light studded gun wheels and harness, heretofore used only at night. Six hundred electric lights are used in this drill, which was a feature of the recent National Horse Show in New York City.

Troop "F" has this year trained its tandem riders to drive two horses in front of their own mounts. and Troop "E" starts its spectacular sheik rides with the daring jump through a circle of fire.

The Society Circus for the benefit of post recreational activities will take place April 1st and 2d. afternoon and evening—four performances.

4th Cavalry

Fort Meade, South Dakota

The outdoor winter sports in this locality were short lived, the continued warm weather and a couple of rainstorms. unusual occurrences for this time of year. have taken away most of the snow on the surrounding hills and made roads in this section of the country difficult for traffic but has slightly improved the water condition here (January 12th).

The Post Exchange at this station recently made arrangements with an Omaha produce company whereby fresh vegetables may be obtained bi-weekly for the members of this command.

M. G. Troop, 10th Cavalry

Fort Myer, Virginia

On January 15th. this troop escorted the Assistant Secretary of War from the Commandant's quarters to the riding hall for the first of the 1932 exhibition rides. The 10th Cavalry carry on lances the yellow guidons bearing a black buffalo commemorating the regiment's long service in the West.

14th Cavalry (Less 1st Squadron)

Fort Des Moines, Iowa

On January 20. 1932 there was held in the post riding hall a series of boxing bouts. and one wrestling bout for the championship of Fort Des Moines. The winners in the different events are as follows:

Light weight: Kranowitch. F. 17th F.A.
Middle weight: Richardson. F. 17th F.A.
Welter weight: Constant. E. 18th F.A.
Heavy weight: Flynn. Hq. Btry.. 18th F.A.
Light weight: Thrap. Hq. Btry.. 18th F.A.
Welter weight: Lynch. M. G. Tr.. 14th Cav.
Light heavy weight: Pickett. E. 18th F.A.
Welter weight: Masterson. Hq. Btry.. 18th F.A.

1st Sergeant Benjamin Andrews. Battery E. 18th Field Artillery won the wrestling championship and was presented with a gold medal donated by Captain R. H. Slider. 18th Field Artillery.

Considerable interest is being shown in the small bore rifle team. which is being picked to represent this post in matches against Fort Snelling. Fort Benning and other posts throughout the Army. The squad is in charge of 1st Lieut. S. C. Page. 14th Cavalry.

There has been organized at Fort Des Moines a mens' riding class for civilian riders from the city of Des Moines. There are about 20 members in this class and it is hoped that sufficient interest will be aroused to be able to start a Hunt Club later in the year.

305th Cavalry

Philadelphia, Pa.

The Regular Wednesday noon and Wednesday evening conferences are proving highly useful in preparing officers of the regiment for the tactical work expected in camp this coming summer. The tactical problems worked out and given by Reserve officer instructors are very interesting and are considered in no small way responsible for an increasing interest and attendance at these meetings.

A considerable number of new young men have come into the regiment and are very active in both the Extension School work and in active training and are doing much to infuse new life into the regiment's activities.

For the three months the Extension School has been operating, this work has increased more than 50% per month in comparison with the same periods last year. The revision of the courses has added to the interest on the part of all students.

Undefeated Football Team of the 2nd Squadron, 10th Cavalry, West Point, N. Y., 1931

306th Cavalry

Baltimore, Md.

Interest in the inactive training for the present school year is excellent. and more officers are attending the conferences and rides than at any previous time in the history of the 306th Cavalry. A two-sided map maneuver involving offensive action of Cavalry versus Cavalry was begun in December and will be continued for several months. Part of each conference will be devoted to discussions by reserve officers of assigned military subjects.

Due to weather conditions and the lack of a riding hall at Fort Hoyle. Md., instruction in equitation for the Baltimore reserve personnel has been discontinued and will be resumed in the spring.

2nd Squadron and Machine Gun Troop 306th Cavalry

Washington, D. C.

The Secretary of War. Mr. Patrick J. Hurley was the principal guest in whose honor the 2nd Squadron and Machine Gun Troop of the 306th Cavalry entertained at dinner at the Racquet Club on Wednesday evening. December 9. 1931.

Other guests of honor were: Representative Edward Wheeler Goss of Connecticut: Maj. Gen. Guy V. Henry. Chief of Cavalry: Col. Maurice Fitzmaurice Day. Military Attaché of the British Embassy: Col. Harry N. Cootes. 3d Cavalry. Commanding Officer. Ft. Myer. Va.: Maj. Alexander D. Surles. 3d Cavalry. Capt. H. J. Fitzgerald. 3d Cavalry: and Capt. G. I. Smith. 3d Cavalry.

Col. John Philip Hill. Commanding Officer of the 306th Cavalry presided over the evening's festivities.

Fifty-three members of the 62nd Cavalry Division attended the dinner.

The conferences are being conducted according to a new plan. Care is taken to make the instruction and discussion alive and interesting and to "tie in" the conference work with the equitation class held on the following Sunday at Ft. Myer, Va. "Doctrines, Principles and Methods", "Cavalry Armament" and "Leadership" have been the subjects of interesting talks at recent conferences. The attendance record speaks well for the success of this method. Starting with 53 officers and men present at the first conference held in October, attendance has grown to 78 officers and men present at the last conference.

The Sunday equitation class at Ft. Myer, Va. has been divided by the Unit Instructor into 4 groups, each under the instruction of a qualified reserve officer. This provides for a progressive course in equitation and enables all officers and men to secure instruction in accordance with their needs and proficiency.

307th Cavalry

Richmond, Va.

The inactive training period is well under way with a larger percentage of officers enrolled in the Extension School than ever before.

Applications are being received for the detail to the Cavalry School, Fort Riley, Kansas.

Major General Paul B. Malone, gave a most interesting and inspiring talk before the Reserve officers of Richmond and vicinity on December 9th. General Malone was accompanied by Colonel George T. Bowman, Chief of Staff, 62nd Cavalry Division.

Major David H. Blakelock, Cavalry, and Major James R. Mullen, 307th Cavalry, were visitors at Regimental Headquarters during the month.

3d Squad. and M. G. Tr. 307th Cavalry

Norfolk, Virginia

The outstanding event of the Fall was a meeting held at Fort Monroe, Va., on December 10, 1931, for Major General Paul B. Malone. The details of this meeting were arranged by the Unit Instructor of the Squadron, and officers from Norfolk, Portsmouth, Newport News, Hampton and Fort Monroe, Va., were present. This was the first time the Commanding General of the Third Corps Area had visited tidewater Virginia in the interest of the Organized Reserves and the visit was greatly appreciated by all. Over two hundred and fifty were in attendance at the meeting which included Regular Army, National Guard and Reserve Officers, and civilians.

General Malone delivered a most inspiring talk in which he traced the development of the economic and political leadership of the world from early times to the present and coupled this development with the causes of the wars which have occurred thru the ages.

Inactive duty training for the fall months has progressed in a very satisfactory manner. Due to the fact that the personnel of the Squadron is scattered over a large area, conferences and equitation classes have not been well attended, but the enrollment in the Extension Courses of the Cavalry School have exceeded last year's and a great deal of interest has been shown in them. The honor man in the Extension Courses is Pvt. Simon E. Leverett, Hq. Tr. 307th Cavalry, who is working hard to prepare himself for the examination for 2nd Lieutenant Cavalry Reserve.

The schedule for the winter months includes tactical problems involving the Squadron and Regiment in various situations. These problems will be worked out on the map with the various officers solving situations appropriate to their grade. In addition use will be made of the Army Motion Picture Service.

The 307th Cavalry is fortunate in being able to send one troop officer to Fort Riley for the period March 9—June 15, 1932.

308th Cavalry

Pittsburgh, Pa.

Polo enthusiasts are again practicing at the Hunt Armory for a tournament which will probably begin after New Year's. Among the teams who will compete are the 308th Cavalry, 107th Field Artillery, Pittsburgh Polo Club, and the Vangs.

Colonel George T. Bowman, Chief of Staff, 62nd Cavalry Division who is also in charge of Reserve affairs at Headquarters Third Corps Area, Baltimore, Maryland, recently visited Pittsburgh inspecting the 308th Cavalry and 99th Division while here. Keen interest is being shown in the Army Extension School this year. Enrollments continue to increase.

Riding classes at the Hunt Armory on Wednesday evenings from 6:30 PM till 8:00 PM and on Sundays from 9:30 AM to 11:30 AM continue to be well attended. The ladies' class on Tuesday afternoons also are well attended.

During the period of inactive training this year we are devoting considerable attention to Combat orders in preparation for next summer's active duty training.

862nd Field Artillery, Horse

Baltimore, Md.

The inactive status training of the regiment has continued during the past two months with two conferences and two riding classes per month (one riding class during December). The latter have been suspended for the winter and will be resumed in the spring. The interest in these conferences and classes has been well sustained. The reserve officers themselves are conducting most of the conferences.

It has been impracticable to resume pistol practice this fall on account of the fact that the building previously used for this purpose has been deemed unsafe and there is no other available. There is considerable interest in this firing among reserve officers and they are awaiting with some impatience the completion of the Post Office and Federal Court Building which has in its basement an excellent pistol range of dimensions ample for record firing.

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Organized November 9, 1885

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THE CAVALRY JOURNAL

VOL. XLI MARCH-APRIL, 1932 No. 170

The Trend of Organization and Equipment of Cavalry in the Principal World Powers and Its Probable Rôle in Wars of the Near Future

By Major General Guy V. Henry, Chief of Cavalry

IF I were discussing the organization, tactics and powers and limitations of infantry or artillery my readers, either at home or abroad, cavalrymen or noncavalrymen, would have nearly the same mental picture of my subject: but when I write on cavalry my readers have no such uniform mental picture. The reason for this is that infantry and artillery are fairly uniform in the armies of the world. Such, however, is not the case with cavalry. The cavalries of various armies are armed in a radically different manner, ranging from those whose horse elements are merely reconnaissance groups, carrying saber or lance and an ineffective carbine, to the heavily-armed United States Army Cavalry. This carries on its horses alone a greater small arms fire per man when engaged in dismounted combat than does most infantry.

American Cavalry, (because of its ability and tendency to fight dismounted), was classed by pre-war European standards as "mounted infantry." A similar classification pertains today in a less degree where purely mounted elements of our own and foreign cavalries are concerned.

Due to these differences, military men of different countries have no common conception of what basically constitutes cavalry; therefore in studying their writ-

(Photo by Signal Corps, U. S. Army)

Cavalry Heavy Machine Gun, U. S. Army. Average Time Into Action From a Gallop, 20 Seconds

ings one should try to obtain the author's basic conception of cavalry—knowing this one can more justly evaluate his writings.

Broadly speaking, in European armies the term "Cavalry" means mounted troops possessing great mobility, little dismounted firepower carried on its horses alone and past traditions for use of the *arme blanche*: while in the United States Army it means mounted troops possessing great mobility, heavy dismounted firepower carried on its horses alone and little tradition for the use of the *arme blanche*.

This different basic viewpoint added to the fact that in no two armies is cavalry armed or organized alike, is largely responsible for the differences of opinion expressed and the exaggerated statements of some, that cavalry is a thing of the past.

If cavalry is less important today than it has been in the past, of what are we speaking? No one knows, for there is no standardized conception of cavalry.

All military men agree that with present means of rapid transportation, communication, air service and long-range fire, an army needs now more than ever before some force capable under modern conditions of efficiently performing the textbook rôle, now and in past wars, allotted to horse cavalry. That horse cavalry as heretofore armed, equipped and trained cannot always perform with maximum efficiency this rôle under modern conditions, is equally agreed: therefore all nations are more or less seriously engaged in providing some force that will. To provide such a force will be a process of evolution, but I prophesy that within ten years military thought will be as crystallized on this line as it is on the infantry of today. When it crystallizes we will and must have a highly mobile force, capable of independent action and able to close with the enemy. These are the characteristics essential for the security, information, detached independent duties and the mobile reserve forces of a modern army.—in other words these are the characteristics of modern cavalry whose armament, organization and means of transportation must be adapted thereto.

Let us now see what the various armies of the world think on cavalry, what they are doing to reorganize it, and then deduce what will be its rôle and armament in the wars of the near future.

I will take Great Britain and France first, as these two countries have progressed farthest in mechanization and reorganization.

Great Britain.

The British Cavalry consists of 22 regiments; of these, two have been converted into armored car regiments. The horse regiments are armed and equipped much as is American Cavalry, except that there are attached thereto a number of Austin scout cars and their machine gun squadron (troop) is mechanized.

The conversion of these two horse regiments into armored car regiments seems to be as far as Great Britain has gone in the mechanization of horse cavalry.

The Secretary of State for War recently made the following statement in Parliament:

"Mechanization is being carried on with due caution. When a type can be fixed and its efficiency thoroughly proved, then it will be time to build up a stock. Until the War Office is convinced that horses can be dispensed with absolutely, the cavalry will remain as at present."

However, the above does not mean that Great Britain has not experimented extensively with mechanization; for, on the contrary, she has experimented more extensively than any other nation.

The British divide their troops into:

a. Mobile Troops.
   (1). Cavalry brigades and cavalry divisions.
   (2). Light armed brigades.
b. Combat Troops.
   (1). Infantry divisions.
   (2). Medium armored brigades.

Thus she links the rôle of light armored brigades with cavalry (organized as at present).

A light armored brigade consists of:
Headquarters and Signal Section.
Two or three battalions of light tanks.
One close support tank battery.
One armored antiaircraft battery.
One armored car regiment if necessary.

This linking together of light armored brigades and horse cavalry is also expressed by Sir David Campbell, G. O. C. M. C., Aldershot Command, in the 1930 winter maneuvers: "Cavalry and armored fighting vehicles are complementary to one another. Cavalry is immeasurably superior for reconnaissance; armored fighting vehicles have offensive power. It follows that both types of mobile troops should be used together. There may be exceptions to this rule, but a commander would be justified in using his armored fighting vehicles alone only when time is of vital importance, the distance involved too great for cavalry, and the importance of the object to be achieved compensating for the heavy losses to be expected in the armored fighting vehicles to which their inability to reconnoiter adequately must render them liable."

The above expresses the trend of British opinion from which we can deduce that for wars of the near future British cavalry will consist of armored car and horse regiments, the horse regiments with heavy firepower and both used in combination with light armored brigades. Light armored brigades will not be called cavalry, but with cavalry are classed as mobile troops and considered complementary one to the other.

France.

We recently had a very distinguished French soldier as guest of our nation at the Yorktown Sesquicentennial Celebration—Marshal Pétain.

Marshal Pétain has said: "During the course of battle, thanks to the modern increase in the firepower of cavalry, it may perform work of the most varied nature. Cavalry remains the favored arm for reconnaissance and screening before battle and for the exploitation of success after battle."

Another distinguished French soldier, General Weygand, says: "The rôle of cavalry far from being diminished will appear on the morrow, if there is another war, as great as we deemed it to be in the past. It will hold its importance as long as speed and surprise hold their value on the field of battle."

As General Weygand is now vice president of the Superior War Council, we may well assume he will use his great influence to prepare the cavalry of the French Army to carry out his prophecy. It is therefore most interesting to study what France is doing in organization and armament of her cavalry.

France divides her cavalry into two classes: Cavalry Divisions and Divisional Cavalry. Divisional Cavalry are squadrons of horse cavalry permanently attached to the infantry divisions, primarily for close security purposes. The French cavalry division is now organized as follows:

Strength: 350 officers; 10,000 men.
Headquarters.
Two horse brigades.
One Portée Dragoon Regiment (Squadron in Peace) (Riflemen transported in Kegresse-Citroen cross-country cars.)
One Regiment Field Artillery 75s. (horse).
One Group 105mm. Portée.

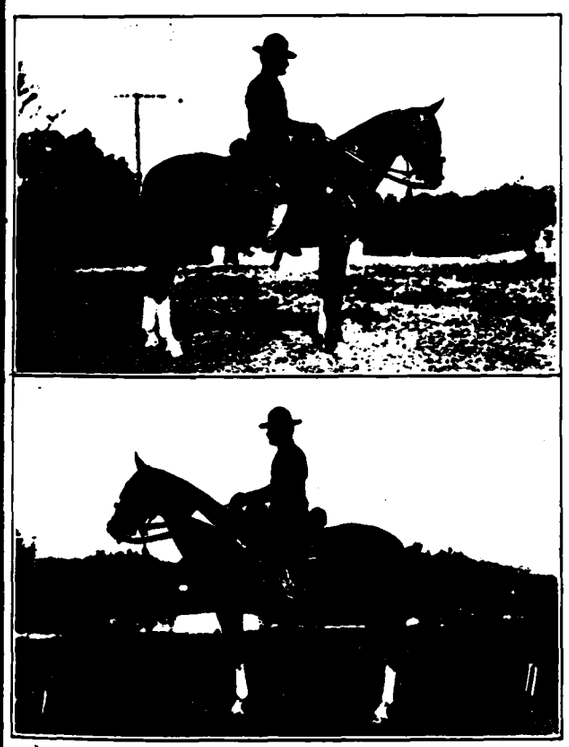
Above—Cavalry Combat Car, T-5, U. S. Army. Below—Cavalry Light Machine Gun, U. S. Army. (Average Time into Action from Gallop, 20 Seconds.)

One Regiment Armored Cars (36).
One Observation Squadron (air).
Sappers, Bridge, Supply and Medical Troops.

France has been greatly increasing the amount of mechanization and motorization within the cavalry division and places great reliance on the mechanical groups (Portée Dragoons) to increase the firepower of the horse elements. Recent maneuvers indicate that due to different rates of march, different cross-country ability of the two, and various other reasons, the combination of the two within the cavalry division is not satisfactory. Considering this and also the wonderful road net and the terrain in general in France's probable theater of operations, we may expect that she will probably in time completely mechanize some of her cavalry divisions. However, her cavalry for the near future will be a combination of mechanization and horse, and all information indicates that it will have a rôle similar to that of horse cavalry of the past. What final form its purely mechanized cavalry will take is not yet known, but we may be sure it will be equipped with the best cross-country vehicles available.

Germany.

The German Army is limited by the Versailles Treaty, as is its progress in mechanization. However, about 16% of such active army as Germany has is Cavalry. The percentage of cavalry in France and Great Britain is about 7%. Germany's 18 regiments are armed with the saber, carbine and light machine gun carried by the trooper and heavy machine guns in pack. In no European army have the heavy machine guns in pack the mobility of similar guns in pack in the United States Army, nor do the individual troopers of any of these armies have the proficiency in the use of rifle and pistol that has the American soldier.



Cavalry Trooper, U. S. Army. Arms—Rifle, Pistol and Saber

Due to the treaty restrictions on mechanization referred to above, we can only surmise what Germany would do towards re-equipping its cavalry if these restrictions were removed.

Lieutenant General Von Kaiser, (Recently Inspector General of Cavalry) has said: "Every new means of transportation appearing seems to be followed by a cry for doing away with the cavalry. Thus in a book which appeared in 1871 I found many persons considered cavalry superfluous, as they claimed the progress made in railway transportation was replacing it. Now it is the same with the motor. The truth is that the progress of technique in all branches of the service—including the cavalry—does not render existing arms superfluous, but improves them. In the case of cavalry the assignment to it of motorized troops is augmenting its possibilities."

General Von Seeckt (Recently Commander in Chief, German Army) writes: "The aviator has come to aid, not to replace cavalry. Close reconnaissance is left to the cavalry whose vision is not dimmed by clouded skies. In combination with airplanes, squadrons of cavalry find new employment."

"The motorization of armies is one of the most important questions of military development. It may be briefly pointed out that for the time being, roads, bridges, forests and mountains will oppose *mass employment* of motor vehicles."

The following extracts are taken from a recent publication: "Moderne Cavalerie" in which the author, General G. Brandt, Inspector General of Cavalry 1926-1931, gives his opinion of what Germany should do to modernize her cavalry:

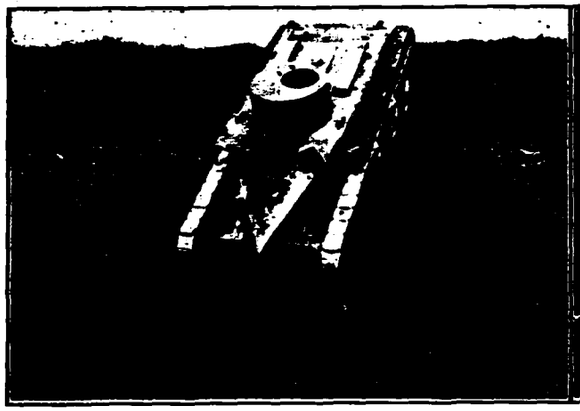
"Modern warfare requires the presence of large bodies of cavalry."

"Today we require a cavalry with strong firepower, including light and heavy machine guns, and regimental antitank weapons. About their importance and necessity no words are spared. Whatever the desire is in this respect the factor that too many of these weapons might decrease mobility must be thought of. Countries having no limitations on equipment will transport them in first-class mechanized vehicles. These vehicles must be able to go across country."

"Cavalry needs for its support reconnaissance detachments of armored cars and light, rapid combat vehicles so armed that they can attack with ease hostile armored vehicles."

We can thus conclude that Germany believes in a heavy firepower horse cavalry to which she would attach armored fighting vehicles if not prevented by the Treaty of Versailles.

The probable rôle of such a cavalry seems laid down



Cavalry Combat Car, T-1 (Christie), Entering a Bomb Crater

French Portée Dragoon Vehicle

in her various manuals and regulations. The latest of these show in general no change from the tasks allotted to cavalry in past wars.

The cavalries of Italy, Russia, Poland and Japan apparently have done little in the way of reorganization or rearmament since the termination of the World War; all have introduced, however, machine gun and armored car units into their cavalry organizations.

United States.

As previously stated, the term "Cavalry" in the United States has in the past implied primarily small arms firepower rapidly transported on horses. The horse has been used to bring this close to the enemy. When American cavalry dismounts it has the small arms firepower and combat efficiency, man for man, equal to that of infantry. Such is not true with the cavalries of other powers, but even with its above efficiency our horse cavalry is for conditions of today inadequately supplied with antiarmored vehicle and antiaircraft weapons, and armored cars. Its trains (transport) also lack the desired mobility. It is hoped that the necessary funds will soon be received to remedy these deficiencies.

The American Cavalry Division has a war strength of:

465 officers and 8,840 men, with an organization of—Headquarters and Headquarters Troop.

Two horse brigades of two regiments each.

One regiment of Field Artillery 75-mm. guns (horse).

One Armored Car squadron—36 cars.

One tank company (Infantry).

Proper proportions of Engineer, Ordnance, Signal, Medical and Quartermaster Corps troops.

Its offensive or defensive dismounted fire power, is that given by—

5,000 rifles.
8,500 pistols.
400 machine guns.
10 37-mm. guns.
24 75-mm. guns.

The Cavalry Division is a powerful, efficient force, combining excellent mobility, firepower, independence of action and ability to close with the enemy. It should be noted that this division contains a limited amount of mechanization in its armored car squadron and tank company; but with a view of securing still greater mobility for cavalry by the application of modern machines to cavalry missions, the War Department has decided to completely mechanize one horse regiment, not to be a part of the above described division. The directive for this follows:

"*a.* The mechanization of one regiment is the first step in determining the application of modern machines to Cavalry missions in war and in developing the technique and basic tactical principles applicable to Cavalry in which the horse is replaced by machines.

"*b.* On favorable terrain, mechanized cavalry should extend the sphere of action of Cavalry to much greater distances and increase the speed of performance of its missions without, however, altering the accepted fundamental missions of that arm.

"*c.* When the development of one mechanized cavalry regiment reaches a satisfactory stage, other elements may be organized and supporting troops developed and attached for operations therewith."

The regiment in question will be stationed at Fort Knox, Kentucky, with a peace strength of 50 officers and 610 enlisted men.

To perform the missions of cavalry the regiment must have mobility, both road *and cross-country;* offensive and defensive power; possess the necessary requisites for independence of action and ability to close with the enemy. With these in view its organization will be as follows:

Headquarters and Headquarters Troop, containing the necessary administrative, supply, repair and communications personnel.

One Covering Squadron, consisting of one Armored Car Troop of 17 cars and one Scout Troop with 7 combat cars (light fast tanks) and 6 cross-country Personnel Carriers, transporting 8 .30-caliber machine guns with crews and 10 riflemen.

One Combat Car Squadron, consisting of two troops of 13 Combat Cars (light fast tanks) each.

One Machine Gun Troop, with 18 cross-country Personnel Carriers, transporting 24 .30-caliber machine guns with crews and 50 riflemen.

With this organization we have in the Covering Squadron an Armored Car Troop whose primary mission is reconnaissance, and in the Scout Troop an organization with sufficient offensive power in its combat cars and defensive or offensive power in its machine gun and rifleman platoon to cope with small parties of the enemy or for limited foot reconnaissance or security.

In the Combat Car Squadron we have an element of great offensive power, while in the Machine Gun Troop we have an element of considerable defensive or limited offensive power. The entire regiment will have extensive road and considerable cross-country mobility.

When this regiment is properly equipped it is the present intention to mechanize one more horse regiment and then form a mechanized brigade of a headquarters troop and the two regiments. This brigade will then be given a thorough test. How much more horse cavalry may be mechanized in the future only the result of this test, appropriations available, and time can tell.

In this development it must be remembered that troops transported in ordinary commercial road motor vehicles (portée troops) utterly lack the necessary mobility on poor roads or cross-country to perform the numerous duties required of cavalry—they are a poor substitute for either mechanization or horse.

The rôle of our combination cavalry (mechanized-horse) in wars of the near future will be the same as that laid down for our cavalry of today. *Each must be used in conjunction with but not tied to the other to obtain its maximum efficiency.* Both horse and mechanized cavalry will have their powers and limitations. The high command must know these and assign missions accordingly.

A few of the points to bear in mind in the employment of this mixed cavalry follow:

The rate of road march of horse and mechanized cavalry is very different; their cross-country rate will in general be about the same.

Mechanized cavalry will be far more road and ground sensitive than will be horse cavalry. The tactical use of terrain by and for both will be vastly more important than ever before.

Armored cars are reconnaissance elements, are excellent for distant reconnaissance and can be dispersed in small groups for this purpose. Horse cavalry is greatly superior to mechanized cavalry for close in reconnaissance and security purposes.

Combat cars (light fast tanks) are fighting elements and must concentrate for this purpose. Herein lies an essential difference between mechanized and horse cavalry. While mechanized cavalry due to its road mobility may operate over great distances, it must concentrate at the moment of combat in order to make use of the shock power of its fast combat cars; while horse cavalry normally attacks and defends on a broad front.

Mechanized cavalry will be very dependent on a base of supply; while horse cavalry can and has lived, even in our recent campaigns, off the country for protracted periods.

Remembering these characteristics we may expect to see at the opening of a campaign, armored car units rushed to the front for distant reconnaissance with other mechanized cavalry units seizing and holding advanced positions—horse cavalry following by the most rapid means of transportation available.

As the opposing infantries approach each other, horse cavalry will be used to maintain continuous contact with the enemy and for screening and close in reconnaissance; while mechanized cavalry guards the flanks or is held awaiting a favorable opportunity justifying its employment.

During battle both classes of cavalry will guard the flanks of their own army, operate against the enemy's flanks or rear or be used as a mobile reserve. When used as a reserve mechanized cavalry will most likely operate in offensive combat alone or augment infantry tank units; while horse cavalry will act defensively or offensively to augment or replace infantry.

In breakthroughs both cavalries will be pushed forward as conditions warrant. In pursuit mechanized cavalry will be most useful for distant parallel pursuit and horse cavalry for the less distant parallel pursuit.

In retreat horse cavalry will be most useful in covering the direct retreat, while mechanized cavalry protects the flanks.

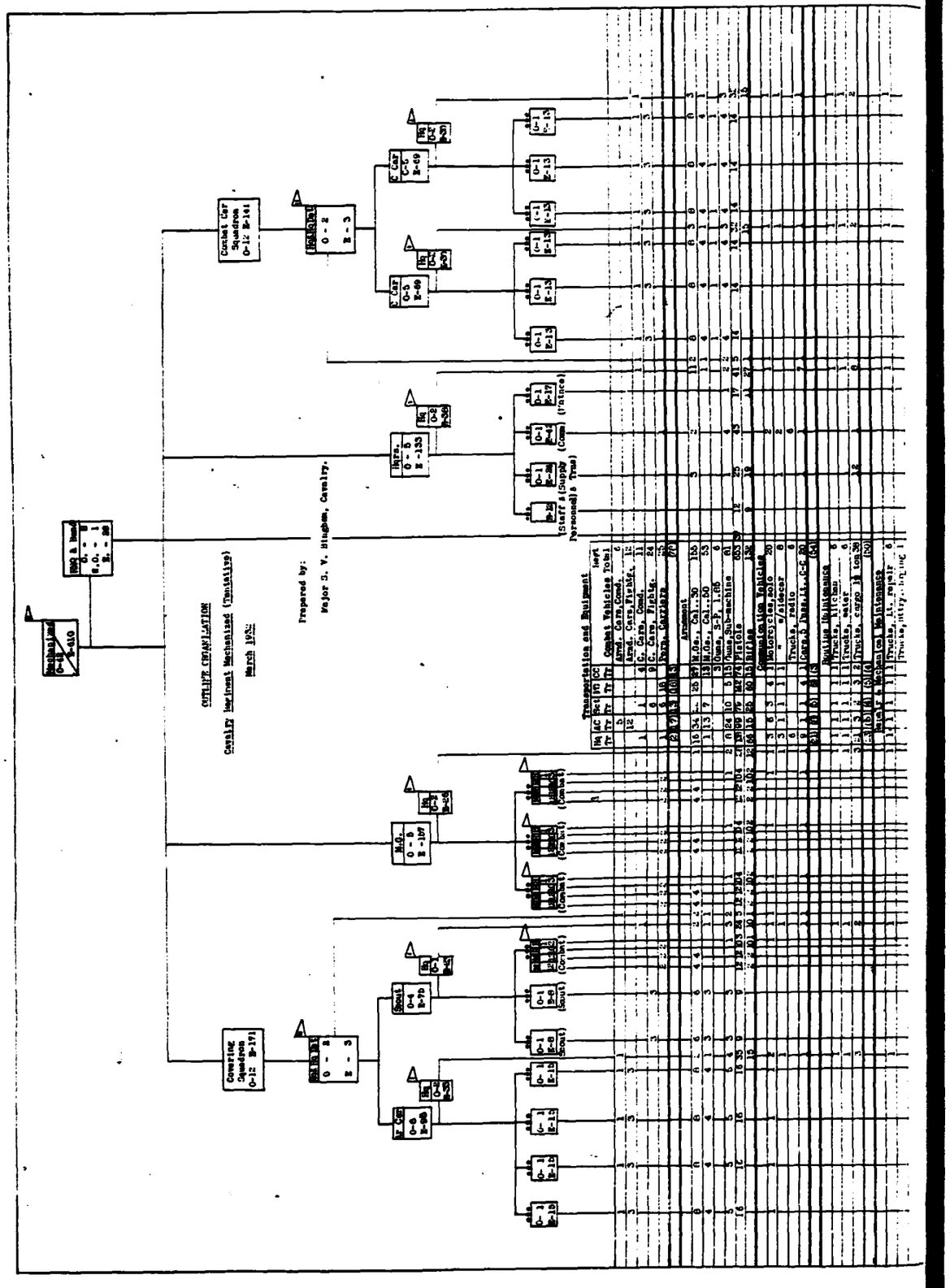
In zones of action horse cavalry should be assigned to terrain least suitable for mechanized cavalry.

I have only briefly indicated how these two types of cavalry both fulfill the missions of cavalry within their respective powers and limitations and how they should be used complementary one to the other. I am convinced that the War Department is right in incorporating completely mechanized units within our cavalry and also that we have today by tradition, armament and training, a most efficient horse cavalry.

Our cavalry officers are sincerely interested in mechanization.

With proper financial and official support they may be relied upon to develop efficient mechanized and horse cavalries suitable to our needs and also to arrive at a correct balance between "mechanization" and "horse"—both manned by men of the same tactical training, quickness of thought, courage, élan, and determination to close with the enemy that for centuries has been the spirit of cavalry.

This accomplished it then remains for the high command to use that composite cavalry in such a manner that it may be able to acquit itself with maximum efficiency in any wars of the future.



The Cavalry

Major General Lytle Brown, Chief of Engineers, United States Army

IN time of peace it is the fashion to predict what is going to happen in the next war, what is to be obsolete, what is to be the most effective, what this, that, or the other will accomplish, and, in general, how the war is to be won and lost.

Recently there has appeared in print an article ridiculing the performance of cavalry in the past.

To every student of war there appear in all wars of which we have record two forms of action. These are called, or have been called, fire action and shock action. The former is characterized by the throwing of missiles, and the latter by the coming of hand to hand, whether on foot or on horseback. Likewise, there have been recognized in all war two kinds of power in troops, both essential to fighting power, namely, fire power and mobility. We do know that the fire power of infantry and artillery has increased immeasurably in the days since Napoleon. The mobility of infantry and artillery has in general not increased at all. The mobility of cavalry still leaves it in its same relative position with the other arms, just as valuable in its special role as ever in the past. Let us review with a very wide, sweeping glance the past of the cavalry; review enough to enable us to appreciate that fact that it was not chivalry, imagination, fal-de-ral, or other nonsense that caused the eminent soldiers of the past to include mounted forces in their armies.

The time of Alexander the Great is about as far back as it seems necessary to go. He is generally recognized as one of the world's eminent soldiers. We have read that he displayed before his father, Philip of Macedon, quite a little flair for horsemanship. The name of his favorite horse is found in the records along with his own. The decisiveness of Alexander's victories rests not with the infantry phalanx, but with his cavalry. The phalanx cracked the opposing force into fragments, his cavalry ground those fragments to dust. Great soldiers are only those who destroy their enemies by a proper combination of the means at hand, or who destroy all resistance by making further resistance an invitation to inevitable destruction. Alexander was such a one, and has therefore been called "The Great."

Hannibal is generally considered to have been a great soldier. Considering the fact that the enemy he had to combat was probably the staunchest body of fighting men that this world has ever seen, some believe that Hannibal, the Carthaginian, was the greatest military genius that ever lived. He and his father before him studied deeply both the strength and the weakness of the Roman legion, an organization so famous in history as to give its name to any body signifying strength, numbers, solidarity. Nothing in the ancient world could stand the forward lunge of the Roman legion. Its sustained fighting power was unequaled by any other organization of its time. Its superiority was resident in the moral qualities of the Roman soldier, in iron discipline, and in a deep formation which gave a reservoir for the fighting front that fed it continuously with fresh force, increasing in toughness, durability, and skill to the very end. Last into action came the Triarii, tried soldiers whom no terror could daunt, and before whose eyes the younger men had to show their quality, and exhaust their stamina.

But even the legion had its weakness like all things human. It had only the mobility of very heavily armed foot soldiers; it was rigid, not flexible; it was organized mainly for action straight to the front; the cavalry that protected its flanks was heavy and cumbersome; it was strong for shock action, but was woefully weak in missile-throwing power. These things Hannibal fathomed, and decided to hinge action upon them in his means and his operations. He recruited the best of slingers from the Balearic Islands—a man can throw harder and further with a sling than he can with the arm unassisted, however brawny the arm. He formed his famous Numidian cavalry, the lightest of the light, the most mobile of the mobile. For a saddle there was a piece of leopard skin; bridle there was none. The well-trained horse needed only the pressure of the rider's legs and a slap on the neck for guidance. Mobility in the highest degree was the essence of this cavalry. His heavy foot troops were organized on the basis of the Roman legion; nothing better could be devised. Hannibal was too sensible a person not to borrow the best, even if he had to borrow it from the enemy.

History tells the tale. The wonderful Roman legion was cut to shreds mainly by flanking action; more than that, it was utterly destroyed on the battlefield; and Cannae to this day is a better symbol of utter defeat than is Waterloo. It is the symbol of annihilation. By the aid of his mobility and foraging power, which he owed to his cavalry, Hannibal maintained his army in Italy, practically out of communication with his home country for fifteen years. At last he had to leave the shores of Italy because of a cry for help from Carthage. His army had to step into the narrow confines of the galleys. Those cavalrymen slew their horses on the beaches, and without them Hannibal started overseas for Zama to witness the triumph of Scipio Africanus.

The introduction of fire-arms was a condition that might be supposed to cause a great change in the value of cavalry. Yet after Frederick the Great had greatly increased the rapidity of fire, we see Seidlitz,

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his cavalry leader, contributing to the decisiveness of his victories. The reputation of the Prussian cavalry lasted till Napoleon's time. Before Jena, Napoleon's chief anxiety about the approaching contest with Prussia was the efficiency of the Prussian cavalry. He knew the value of mobility, and feared to be overmatched in that quality. The Prussian cavalry may have been superior, but the Prussians lacked the leadership of Frederick. The finest tools are not effective in the hands of unskilled workmen.

Napoleon's use of cavalry made historic the names of Murat, Kellermann, Montbrun, and others. Without its aid, the name of Marengo probably would carry a different significance now, and the names of Austerlitz and Friedland would not be known outside of the narrow confines of their communities. In many of our galleries of today, the picture of the Scotch Greys at Waterloo is the best reminder of the force that completed the wreck of the hopes of the Little Corporal. It is likely also that the Prussian cavalry again came to the memory of the men that considered them before Jena when the wreckage of Waterloo began to drift past, and to that war-experienced man, there came the thought of the inevitable pursuit by the cavalry directed by that old dragoon, Blücher.

But the use of cavalry in the open fields of old Europe did not produce, through all of the fighting there, the modern arm of cavalry. That was done in America. In the days of the pioneers, practically every man was a horseman because there were very few roads suitable for wheeled traffic. In war, the pioneer was opposed by the most nimble footman that ever trod the path of war, the most mobile of all. The American Indian of the country east of the Mississippi was a skirmisher, a bush fighter, unexcelled. The white man on foot was no match for him outside of the stockade. Witness the Braddock affair before the Revolution, the St. Clair affair after the Revolution, and many another fight when even the best of the pioneers ran into the enveloping ambush of the Red man.

It is surprising that there was no greater use of cavalry during the Revolution by the Americans. Perhaps the idea of European use of the arm was in the minds of American generals, and common sense could see that it would not be effective. Perhaps they were without any necessity of recourse to horsemen; so superior were they to the immobile British, that the use of more mobility seemed unnecessary. One British soldier in the South taught them a trick or two; this was Tarleton. By swift movements he effected more than one surprise. He certainly impressed one timid soul, Thomas Jefferson, at the time far from war's alarms as Governor of Virginia,—with his celerity of movement. There are certain marks shown on the hall floor of Monticello said to be the shoe marks of Tarleton's horsemen close in pursuit of the fleeing Thomas. In the South, near the end of the war, came a little but decisive victory of American horsemen. At King's Mountain there came a swiftly moving body of American horsemen that surrounded and destroyed a considerable detachment of British, and the memory of that feat has long survived.

After the Revolution, Anthony Wayne defeated the Indians of the Lake Region at the Battle of Fallen Timbers. With his force, operating on its flank and threatening the flank and rear of the Indians, was a body of Kentucky horsemen. This mounted force certainly had a decided influence on the Indians even if it did no great destruction. The Indian knew enough to be quite sensitive of any threat that might get to his line of retreat.

In Tennessee, during pioneer days, John Sevier used mounted men almost exclusively in teaching the Cherokees how to behave themselves. Sevier was well acquainted with what was done at King's Mountain. He was educated there.

The most successful action against any of the eastern Indians occurred during Andrew Jackson's campaign against the Creeks in Alabama, in 1814. With a mixed force of infantry and cavalry, Jackson almost annihilated the warriors of the Creek Nation. He never encountered them in the field without inflicting on them the most destructive losses. Jackson was naturally one of the most gifted fighting men that ever lived in America. He appears to have been the only one who could meet and annihilate a force of Indians on the battlefield. He had a genius for war. His mounted men were commanded by John Coffee, who is worthy of long memory in the annals of America's fighting men.

During the Creek War, one of Jackson's enemies at home, where he had several, approached the Governor of the State of Tennessee, with the object of reflecting as much as was possible on the absent Jackson, and said: "Governor Blount, why does General Jackson kill so many of these poor Indians?" The Goverer's reply was worthy of his name and was: "Because he knows how." There have been not many who have known how, not many who have known the value of a highly mobile force which could be launched with the attack, and in the culmination of the affair be in position to effect complete envelopment of a wily foe who was being held by the grapple in front. The whole combination has to be as it were "on time," neither too soon nor too late with any part of it. Jackson could do this with a foe as elusive as the Indians, and as a result he killed many of them on or close to the field of battle. Such action terminates a war quickly.

Jackson acted strictly in this manner with the British troops when they landed below New Orleans in the latter part of the year 1814. He gave them the surprise of their lives shortly after they had landed on the twenty-third of December. Doubly astounding was the fact that the attack was delivered at night. The British experience theretofore had been that the Americans would not attack at all—simply await attack in some chosen position. Some of those British troops had been educated by their experience at Bladensburg at the time that they so easily came on into the capital and burned the public buildings at Washington. The very man who commanded the British advance guard at Bladensburg commanded the advance below New Orleans, and he had the same troops. Jackson's attack that night was with his infantry straight to the front and his mounted men from a postion well to the flank which they had gained mounted, and from which they moved dismounted in a direction to take the enemy well in flank and rear. A complete envelopment it was, effected by the mobility of mounted men. Had not the British troops been of the staunchest class of regulars, the Campaign of New Orleans would have ended then and there without the necessity of shooting them into submission before the works on the eighth of January, 1815. At the start of this attack, John Coffee made an address to his troops after the custom of the Romans in the days of the legion. Classical it was not, but well adapted to the men who heard it. The troops had dismounted and assembled forward, probably in preparation to deploy on the line of departure. Coffee then spoke in effect—"You fellows have always said that you could fight. Now we will see." That was all.

American cavalry reached a high state of development during the Civil War. A full year elapsed from the beginning before the armies appeared able to do really effective fighting. The cavalry appears to have set the model for the future: only a few little trimmings to increase its fire power seem to be necessary. By study of the Civil War, and by their experience during the Boer War, the British seem to have reached somewhat the same conclusion. Its correctness was demonstrated in the early days in the World War in France and again in Palestine.

Since some of the criticisms that have been aired as to cavalry have been based on the experience of the Civil War, let us look at the record with more particularity than in other cases.

The cavalry of the Confederacy is usually accepted as superior during the first three years of the war. I see but one reason for this. General Robert E. Lee was a cavalryman in the United States Army before the war, and he had very much to say about the organization and the training of the Confederate troops in Virginia. Later he had all to say about how they were to be used. In the west, Albert Sidney Johnston was in command of the Confederate troops in the beginning. He was a cavalryman before the war, the colonel of the regiment in which Lee was lieutenant colonel. There was no reason why the Federal cavalry should not have been fully equal to that of the Confederates in the beginning, equal in quality and vastly superior in numbers and equipment—no reason except neglect. Its value had to be taught to those in authority by bitter experience. Grant had some of this experience at Holly Springs. He may also have figured out in his quiet way the real cause of the surprise inflicted on him and his lieutenant, Sherman at Shiloh, particularly on Sherman. As to the use of cavalry, Sherman seemed blind at Shiloh, and continued blind throughout the entire war. Grant and Sherman were severely criticized for the surprise that they suffered at Shiloh. Some critics claim that they should have intrenched their camp. This is nonsense. There should have been with them a strong aggressive force of cavalry, and it should have swarmed around Corinth, the place of concentration of the Confederate Army, with the avidity of bees around blossoms in spring time. Surprise would then have been impossible. Trenches do not prevent surprise.

There is evidence that Grant appreciated the cavalry situation in the Federal Army before the time that he became the commander of the Federal Armies. One of his first acts was to select a commander for the cavalry of the Army of the Potomac. It was the bold, dashing soldier that Grant saw go over the crest at Missionary Ridge and pierce the Confederate center there after Sherman had failed to make headway in the chosen place for success on the Confederate right flank. When Sherman had failed to cripple seriously the Confederate Army in his campaign from Chattanooga to Atlanta, Grant saw the reason in Sherman's lack of efficient cavalry. He did the best that he could in sending Sherman one of the best cavalrymen of the Federal Army, James H. Wilson, and told the former what he had done for him. Sherman chose Kilpatrick to accompany him on the famous march to the sea, and sent Wilson, up the line to report to Thomas. That was very wise action on Sherman's part for Thomas had the enemy to fight. Sherman's march was a foraging and devastation expedition. Kilpatrick did encounter Wheeler's Confederate cavalry one day, and ran back to get an infantry division to help him out.

In the first battle of the war, Bull Run, the Federal Army was defeated. After the battle, Stonewall Jackson said that if he had a body of fresh troops he could go and take Washington. If he had had a strong and aggressive force of good cavalry, he might easily have done much better than capturing the city of Washington. He might have destroyed the Federal Army close to the battlefield. Then he could have taken Washington and any other place that he desired.

A good part of a year passed after Bull Run before there was anything of importance done in Virginia in the way of fighting. Then McClellan took his new army down on the Peninsula. The Confederates had done much to improve theirs. Stuart had built up the cavalry of the Army of Northern Virginia. Finally, the two armies were in contact close to Richmond. Robert E. Lee had been placed in command of the Confederates. Stonewall Jackson's corps was brought across from the Shenandoah Valley to the main Confederate force for the offensive about to begin. About this time Stuart made his famous ride around the Federal Army. It made quite a noise in the country. Riding around accomplished nothing of itself, but one result from it was of vital importance. Lee learned accurately the situation of the Federal Army, particularly the location of its right flank north of the Chicka-

hominy. Without this definite information Lee could not have planned the operation that resulted in McClellan's defeat and withdrawal to the banks of the James River. The riding all around was not at all necessary for the purpose. The right flank and rear were the vital things to locate, to keep under continuous observation for location and attitude, and finally for the purpose of guiding Jackson's approach accurately and without loss of time to its proper objective. The duty could not have been wholly fulfilled. Jackson for the first and only time in his career appeared to be at a loss, was slow, and did not get home with the blow that he was expected to deliver. It may be that the glamour of that ride around influenced Stuart much more than it should have done. Stuart should have been of inestimable value to Jackson in his movement on the Federal right flank on the Chickahominy if he had been in the right place at the right time. Jackson's own cavalry leader, Ashby, had been killed in action over in the Valley some time before. Maybe, and very probably, that is the reason for Jackson's slowness. No one moves sensibly at high speed in the dark.

Another chance came soon. McClellan's star had set. His great idea had failed. Faith in him at Washington had vanished. Pope with another army was moving from the North down toward the Rapidan. It was a pity that his approach to Richmond was halted so soon. Jackson was sent up to check him, and did so. Lee with the remainder of the Confederate Army followed Jackson as soon as McClellan was seen to be preparing to leave. Stuart was very active on the Rapidan in determining for Lee the situation and attitude of Pope's army. Then and not until then could the plan for the operations that led to the Second Battle of Bull Run be formed. This plan called for Jackson to place his corps in the rear of Pope's army, and for Stuart to screen the movement. Longstreet's corps was to engage the attention of the Federal commander until the movement was well developed, and then rapidly follow Jackson. This sort of thing could not have been done without the aid of superior cavalry, properly used. It was a daring thing at best. Jackson, after gaining the precarious position to which he had been directed, required absolutely superior information facilities in order to act with safety. Stuart's cavalry afforded that information. Jackson's appreciation of what was required of him and his execution of the task assigned was one of the finest pieces of work done during the entire war. He knew that he must bring Pope to battle—but not too soon. Pope was not to be allowed to get too close to Alexandria, the place where McClellan's troops had to come in order to join him. Jackson first occupied Centerville for the purpose of intercepting him, but as soon as it became evident that Pope was seeking battle himself, Jackson drew in his troops to the position near Groveton closer to the point where Longstreet had to come in through Thoroughfare Gap. All of this maneuver depended on the information gained by the mobile troops at the service of the Confederate general, or the results were simply a matter of sheer luck, which, considering Jackson's general, almost continuous, success, is not probable.

The junction of the Confederate troops on the battlefield, and in a most favorable position for successful action, won the battle of Second Bull Run, but with no decisive results. The lack of force, especially highly mobile force, permitted the Federal Army to get away to the shelter of the fortifications of the city of Washington. A move was made to prevent this escape and in the right direction, that is via the Little River turnpike, but it was not fast enough, nor in sufficient force. There was not too much cavalry with the Confederate Army, but too little for really decisive victory.

The Antietam campaign followed Second Bull Run. Harpers Ferry with twelve thousand Federal troops was captured by the Confederates. Only the Federal cavalry there got away. McClellan, called back to the command of the Federal Army, had a piece of good fortune that took the place of an efficient cavalry force momentarily. He found in an abandoned Confederate camp Lee's order that gave the distribution and movements of the Confederate Army. He had a great opportunity that was not earned. It was a fleeting opportunity, however. If Lee went into Maryland for the purpose of finding opportunity favorable for battle, he did not find it. He himself was taken at a disadvantage, his back to the Potomac, and his army scattered.

Possibly the Confederate Army might have been destroyed at Antietam if McClellan had been in possession of a superior body of cavalry. It was possible to have prevented the concentration of the Confederates before they were attacked. Jackson barely arrived on the field in time to take proper position. Stuart's cavalry had to be used to prolong the Confederate left flank towards the Potomac. It was useful for that purpose. A part of the Confederate Army came on the field just in the nick of time to break up the attack on the southern flank of the defenders that promised to be decisive. Its arrival might have been delayed far from the field by the use of a strong force of cavalry. However, there was one feature of that Confederate Army that saved it and made its destruction a very difficult matter in any situation whatsoever, made it very durable, made up for many disadvantages, and was always present with it to the very last gasp. That was its indomitable fighting spirit. It stood firm, it was not afraid of fire, or death; it was always dangerous, and finally those who fought against it found out that nothing but downright fighting could accomplish its downfall, and that that fighting must be well directed.

Fredericksburg gave but slight opportunity for the use of cavalry, yet the cavalry on the Confederate side performed its service in assuring General Lee that the strange thing was about to happen, and that all that was necessary for him to do was to remain in his advantageous position and repulse the ill-advised attack that was about to be made. There was shown on the field the spirit of a cavalryman by a young officer of Stuart's horse artillery. He placed his guns under the overwhelming fire of opposing artillery, did good execution, and by movement saved his own guns from destruction. A few years ago, an old Confederate soldier stood on the gentle rise of ground near where the Telegraph Road crosses the railroad. Hamilton's Crossing, and looked out over the field where Pelham's guns fired on the left flank of the Federal infantry. That old soldier was there with Pelham, when those guns delivered salvos, moved rapidly into new position, and fired again, always firing, always shifting, always opposed with vastly heavier metal. Someone asked, "What manner of man was this young fellow, Pelham?" The old man said: "In ordinary times he was quiet, always modest, but he could see where his guns could do the most execution, and, no matter what the danger, he always placed them there." If any one is interested in where a gallant cavalryman died, he will find on the road north of Culpepper, Virginia, near Brandy Station, a marker on the road side, in the open. There Pelham fought his guns where they could do their best work for those whom he supported, and there passed away one of those whose spirit made the Confederate cavalry superior.

Following Fredericksburg there came Chancellorsville, named for a lonesome crossroads in the wilderness, not for a town as might be supposed from the name. There was wonderful cavalry service thereabouts. The Federal Army had received a new commander, supposedly one of much daring and with a lust for fighting. This lust was satisfied quickly. He was a little complicated in his plans. Starting from the old Fredericksburg rendezvous across the river from the little old town, he moved his great army up the Rappahannock for the fords. Very reasonable and to be expected was that action after the Fredericksburg battle some months previously. For purposes of deception, probably, he had rather a heavy detachment of his army to cross at Fredericksburg as had been done before. That detachment was likely to be wasted if it was not able to hold the main force of the Confederates in place. His cavalry was sent off on a detached mission of no use unless the Confederate commander was deceived thereby. It could not pay for itself if acting altogether alone. It was not put out to delay the approach of large reinforcements to his opponent, but just to raid communications. Raiding communications never produces anything decisive. They must be held if that sort of action is to be of any great benefit to the main operations. Cavalry can delay, but it can not hold. Lee's cavalry was well up the Rappahannock and well able to inform him of any movement that way. With no opposition it could inform him of exactly the character of any movement. It could say: "The bulk of the Federal Army is moving up the Rappahannock." Then Lee could say: "Everything else is just a demonstration, and may be treated as such. Leave only a small force here to cripple the movement across here, and delay its progress in any direction whatsoever, but especially toward the place where I am seeking the decision, up around Chancellorsville." The bulk of the force crossing at Fredericksburg will be wasted, because a very much smaller force will keep it out of the main fight which will settle all things for the time being. The Federal Cavalry gone off on a raid,—what will be done about that? Well, the further it gets away from here, the less it will be able to do to influence the decision, so let it go far away—the further the better. Send a much smaller force against it to insure that it does not come back to bother us till the main affair is over. All this is the prelude to the wonderful success of the Confederate Army around the Cross-roads at Chancellorsville. Lack of Federal cavalry in the right place; plenty of Confederate cavalry in the right place and knowing how to act.

Fitzhugh Lee's cavalry hung off the flank of the "Finest Army on the Planet." It was able to say at all times where it was and what it was doing, also what it looked as if it was going to do. For Fitz Lee to see was for Lee to know, and to decide what to do. As soon as the armies had settled into fighting pose, Lee decided what to do. He had the evidence upon which to act with certainty, and in Fitz Lee the means of keeping the evidence up to date. Jackson is sent for at nightfall and told to move his entire corps through the woods to the left and attack the Federal right while the remainder of the troops attacked in front. Fitz Lee would screen the move. The screening was not the least important of all the things that had to be done.

Jackson started at or before dawn, very early, you see. He had quite a good day's march before him and his twenty-five thousand good fighting men. Just to imagine the suspense and the anxiety of Jackson's mind under the weight of the responsibility that rested upon him all that long May day is enough to unnerve the ordinary man. But stop to think. Jackson knew that Fitz Lee was out there in contact, and would tell him in plenty of time of any threatening change that was taking place in the state of affairs, so that those good fighting men could be placed in a posture where they could take care of themselves. There was really no fear in Jackson's mind except the fear that he might not get to the place where he was going while such very favorable conditions existed. But that was God's business and not Jackson's. All that he had to do was to keep on going, not to stop for any minor consideration. He seems to have had a large measure of faith in God. At last and before dark he arrived at the place from which he was to launch his attack. Fitz Lee met him and guided him to a hill from which he could see for himself. The troops came up at the slow pace of infantry and formed for attack. The attack was launched: Stonewall Jackson's last great maneuver was made: but how many are there who know what the conditions were that led to its inception, and the guarding of it that made its execution possible? No great movement of troops can be made unless the security of that movement is provided for: and certain it is that no troops could have provided security but cavalry.

After Chancellorsville came Gettysburg. Of all the after-the-war controversy about that famous campaign.

that concerned with the action of the Confederate cavalry seems to be the best known. The defeat of the Confederate Army has been attributed to the absence of the cavalry under Stuart during the advance into Pennsylvania. No doubt Lee in going into Pennsylvania hoped to meet the Federal Army under advantageous conditions for battle. He had in the past enjoyed a superiority in mobility and in mobile troops, and it must have been on this score that he based his hopes for securing favorable conditions; this and the prospect that in the enemy's country they would be more certainly drawn into battle. He was strategist enough to know that nothing could be accomplished without battle or the serious offer of battle. Lee was making on a grander scale the same sort of a move that he made to Second Bull Run, and had attempted unsuccessfully at the time of Antietam.

At the start, Stuart was somewhat to the rear, and so was Longstreet. Jackson, the head of the success at Bull Run and at Chancellorsville, was gone the way of most daring soldiers. Stuart received certain orders from Lee that many have criticised as being too general. They were too general this time as the sequel shows. Viewed before the event they were all right—just such orders as an intelligent and loyal subordinate should have received. Stuart proceeded in such a manner that he left the bulk of the Federal Army between himself and his chief. Instead of being the screen that produced darkness for the enemy and light for his own commander, he was entirely out of the scene till the battle was on. All this seems to have come about from the choice by Stuart of the place where he crossed the Potomac—well down on the stream toward Washington. The motive for this action is not known to the casual investigator, and has not been brought out by any one with authoritativeness. There is surmise on the subject, and only that.

Stuart certainly made one mistake before he started and that was to confer with Longstreet about the orders that he had received from Lee. Lee was well forward and not so easy to consult. In that event there should have been no consultation at all as to the orders, assuming that Lee himself was not accessible. Longstreet thought well of his own ideas of strategy, as evidenced by his writings after the war. No doubt all of the Confederate generals had noted Jackson's wonderful campaign in the Shenandoah, and had sensed from it the fear that the Federal authorities at Washington had as to the safety of the capital city. It was not in the same state of defense in 1863 that it was more than a year before, but still it was a sensitive spot. A heavy force of hostile troops moving quite close to the city might have some very decided effect on the movement of the Federal Army, and be productive of considerable confusion and hesitancy in its action. Maybe Stuart and Longstreet had some ideas of that kind in mind. If so, they were radical ideas and should not have been entertained for a moment. Maybe there was some idea of wreaking havoc on the supply arrangements of the Federal Army. Not much in that line can be gained from a force that can not hold on for awhile to a choking grip. A small cavalry force can not hold on long enough to be effective in choking communications. Stuart and Longstreet were too well instructed to make any such mistake. If Stuart did not know of the general location of the Federal Army at all times, he was out of position at the outset of things. That may not have been his fault. His position away to the south after the head of the Confederate Army was well on its way was not advantageous for the action expected of him. He had little room between where the Federal Army actually was and the mountains east of the Cumberland Valley; his situation was not an easy one, however viewed. He should have seen his general in this dilemma if such were possible at all.

All know that General Lee lost the Battle of Gettysburg. He was drawn into it in ignorance of the dispositions of the enemy when he was out looking for the most favorable conditions of battle that could be possibly obtained. The cavalry force that had played an indispensable preliminary part in all of his previous successes was wanting. The strange part of the whole affair is that the conditions as to the handling of cavalry in the Chancellorsville campaign were exactly reversed in the two armies. It would seem that bitter experience gave a lesson, success dug a pitfall. Gettysburg is a poor example to quote by those who wish to minimize the value of cavalry in war. Lee lost. His cavalry was mishandled. Meade won. His cavalry was well handled, apparently for the first time. Well handled it was in the preliminary stages at any rate. The withdrawal of Buford from the left flank of the Federal Army was indeed a serious mistake, and opened the way for the near surprise by Longstreet on the Second of July, when Sickles' corps was all but destroyed, and the Round Tops almost lost.

In Virginia in 1864 a change came about. Grant appeared on the scene. He put Sheridan in command of the cavalry of the Army of the Potomac, though Meade was left in command of the army. Much more energy was injected into the cavalry command, much more boldness. It prospered, and the army as a whole prospered. Desperate fighting was forced upon that staunch Army of Northern Virginia. It met the blows as does true steel. It was finally out-maneuvered to the south of the James. Stuart was killed in battle. The Confederates tried again the old war path down the Shenandoah. Sheridan, wielding a powerful cavalry force, practically destroyed the Confederate Army sent to operate on Stonewall Jackson's battleground. Finally, when Lee had to give up his position behind the lines of Petersburg and march west toward the mountains, the pursuit was too rapid for even the fast marching Army of Northern Virginia. The Federal cavalry outstripped it and cut its line of retreat. The infantry came up with rapidity, and one of the most sturdy bodies of soldiers ever known gave up its arms in the open field. With its destruction, the war was over.

In Georgia, there was a convincing example of lack of results in a decisive way due to the lack of a strong and efficient force of cavalry. Sherman made his campaign from Chattanooga to Atlanta without bringing the opposing forces to a decisive action. He captured Atlanta, but the armed force of the enemy marched away. All through the campaign there appears to have been a succession of frontal engagements and slow moving flanking actions. The Confederate Army would hang on to its positions till the moment that the flanking action became threatening and then would let go and get safely back to another favorable position for battle. The same procedure was repeated over and over again without any decisive results. It does appear that the Confederates would offer battle until a certain point and then refuse it. The Federals would refuse battle and begin to conduct a wide flanking movement that would cause the Confederates to draw back when they were placed at a disadvantage. When neither side would come seriously to grips, there was no chance for a decision in the field. As the Federal Army approached Atlanta and there was a change in Confederate commanders, the Confederates attacked. They were simply repulsed, nothing more. The whole campaign gives the impression that neither side had the stomach for fighting that was so strongly evidenced in Virginia throughout the war, and which brought the war to an end. The Confederates in the Atlanta campaign surely would have been brought to battle by an energetic commander who had the means to move rapidly, and the means and the skill to conceal his envelopping arrangements till it was too late to avoid them. Sherman lacked one element necessary for the purpose—a fine body of cavalry ably commanded. As it was, he had an inferior cavalry that could not trust itself alone in the presence of the Confederate cavalry. His every decisive move was detected in its incipiency, and the blow fell in the air, resulting in nothing much more serious to the enemy than a loss of ground. When the enemy did come out and attack, there was nothing more serious in return than defensive meeting of that attack. There was a waltz around Atlanta. The Confederates saw it in time, through the eyes of superior cavalry, to get out of the place. The place was captured and its capture did one very great thing. It made the country at large think that a great victory had been won. The press of the country made a great fuss over it, and the effect was so great as to elect Lincoln, when without the event to talk about, he might not have been elected. It had very great political effect if not military significance. Grant's dislodgment of Lee from Petersburg did not terminate that way. He pursued Lee's army with great vigor and destroyed it utterly, so putting an absolute end to the Civil War. It was done by maneuver, and the maneuver had as a basis a highly energetic, well-handled, mobile force.

There can be no doubt of the tendency of failure to bring the enemy to battle in a case such as General Sherman encountered in the Georgia operations. Destruction of property and the imposition of hardships on the civil population seems to be the next step. It is an undesirable thing at best. Had it been possible to have utterly defeated Johnson's army at Kenesaw Mountain, there would probably have not been the destruction of property in Atlanta, the deportation of the civil population from their homes, and the further destruction of property across the state of Georgia and beyond.

The Confederate Army moved north from Atlanta. Both Grant and Thomas thought at first that Sherman should have followed it, and the former suggested that action as the proper one to take. Sherman objected and stated that the whole effect of his campaign would be spoiled if he did so. He was right, but somebody had to do some fighting. Tennessee, won by the hardest of fighting and by some of Grant's own successes, beginning with Donelson, could not be abandoned to the Confederates. Thomas was the one to whom the task was assigned. This man had proved himself to be one of the sturdiest soldiers in the Federal Army. While Sherman marched to the sea, Thomas was to overcome the principal Confederate Army in the theatre between the Appalachians and the Mississippi.

General James H. Wilson had been sent to Sherman by Grant for the purpose of organizing the cavalry of Sherman's army. He was turned over to Thomas and did a capital job. Wilson's cavalry did much to aid Schofield's corps on its retreat to join Thomas at Nashville. At the battle of Nashville, Wilson's cavalry corps inaugurated the battle by the envelopment of the left flank of the Confederate Army, seized one of the avenues of retreat, and made a relentless pursuit of the fragments of the defeated force. Hood's army was practically destroyed by Thomas, who was most efficiently aided by the cavalry so ably formed and led by Wilson.

Following the destruction of Hood's army at Nashville and on its retreat from there, Wilson still further perfected his cavalry corps and penetrated into Alabama to Selma. There he defeated severely the redoubtable Forrest, of whose activities Sherman had made many complaints but had done very little to quell.

Wilson's cavalry terminated its activities of the war by the capture of Jefferson Davis, the fleeing President of the Confederate States.

There seems to be little doubt that the American experience with the cavalry arm has demonstrated its worth beyond question in the past. If it be regarded as useless in the future, the experience of the past must give way to speculation entirely.

For speculative purposes, there is resort to the introduction of the motor vehicle and the airplane. It may be well to discuss their uses in war.

We have had abundance of experience with the transportation of troops by rail. Our Civil War gave the first extensive experience of this kind to the world. Railways can transport large bodies of troops and supplies over long distances with great speed. They are the means of land transportation best adapted to the purpose. But the railway is a delicate piece of mechanism. It can not operate in a country that is not securely in our possession for the transport of our troops. Troops are quite helpless in the cars, and a single hostile squad can interrupt the line.

Motor transport of troops under modern conditions of roads is very effective, as was amply demonstrated in France during the late war. But like the railroads, the motor roads must be entirely within our security to be reliable. The question of security is very much the same as it ever was in the past; troops have to be on the ground, and they will have to stay on the ground to fight. Once there, no hostile troops can come on busses or on trains.

Armored cars and tanks can expect to go nowhere alone. One light gun on the ground should be worth several in a tank or armored car.

Now as to the airplane—it must be reckoned with in the future. Those who are not provided with it or are not properly provided with it will surely suffer in the next war. With both sides well provided, there will be a kind of offset in air operations. The superior ground forces will win in that case, and the most valuable use of the airplane will be observation for the ground forces. Air operations directed at ground forces will certainly delay and harass them, but will not stop them or defeat them. Attack of ground objectives is decisive when directed from the ground; attack on air objectives is best directed from the air.

Airplane observation is invaluable, but is it able to replace the operations of cavalry? The answer is apparently, no. The airplane should greatly facilitate and make more thorough the operations of cavalry. From the air, anything that can be seen can be reported. That which can not be seen can not be discovered or reported. No resistance on the ground can be felt out from the air. It can be felt out by the cavalry. In darkness, fog, storm, the airplane can not see, can not guard against surprise.

It can not find what is under cover. These things being true, the airplane can not fulfill the principal duty of cavalry, and that may be stated to be: to draw on the ground a line on which is found the enemy resistance in such strength that all arms are required to penetrate it; especially must this line be so drawn as to show the location of the flanks of this resistance. This being done, the commander in chief knows where the force that he has at his disposal must be directed; this not being done, he can not know. The cavalry is the best instrument known at present to perform this work.

There is one feature of cavalry that is worthy of note. It is not an arm that lends itself easily to transport overseas. Therefore, if our soil is ever invaded, we should be vastly superior to the invading forces in this particular arm. For this reason alone we should foster our mounted forces, maintain to the utmost their spirit, a fine spirit inherited from a past of fine performance, and spare no pains to maintain the supply of available mounts.

There will likely be cavalry, and horse artillery, as long as there are horses for men to ride, and men who are capable of riding them. Also, there will be armored cars or other mobile power-driven fighting machines in great number if the war lasts long enough for us to put them in the field. They will work like cavalry if they can. The job of the cavalry can not be dodged, it will always be there when fighting is to be done. The man on foot is not able to do it, and it remains to be seen if the man in a motor car can do it sufficiently well. We have that question in hand and will rely on the answer of the Cavalry, which is very properly charged with its own problems. It must do its job whether with horses or other more mobile and reliable means.

Will Rogers says:*

Santa Monica, Calif.—Maj. Chamberlin and his troop of crack riders of our Army were just up here at the ranch. They are our representatives in the Olympics. They are at San Diego, working day and night on their horses. He has represented us in previous games, and he says that the horsemanship events are the most popular on the whole program.

You talk about something coming back. Say, the old horse is coming back in a high lope. Thousands of people are riding a horse today that five years ago couldn't sit in a Ford with all doors locked. Polo, racing and horse shows all doing great work to help the farmer and rancher to raise better horses and legalize racing in every State.

Sure, people will bet, but they got to see the horses run, and you certainly can see General Motors and General Electric and General Utility run when you bet on them.

* Washington Evening Star, April 4, 1932

The 30th Infantry in the Hawaiian Maneuvers

By Captain Walter M. Mann, 30th Infantry

FOREWORD

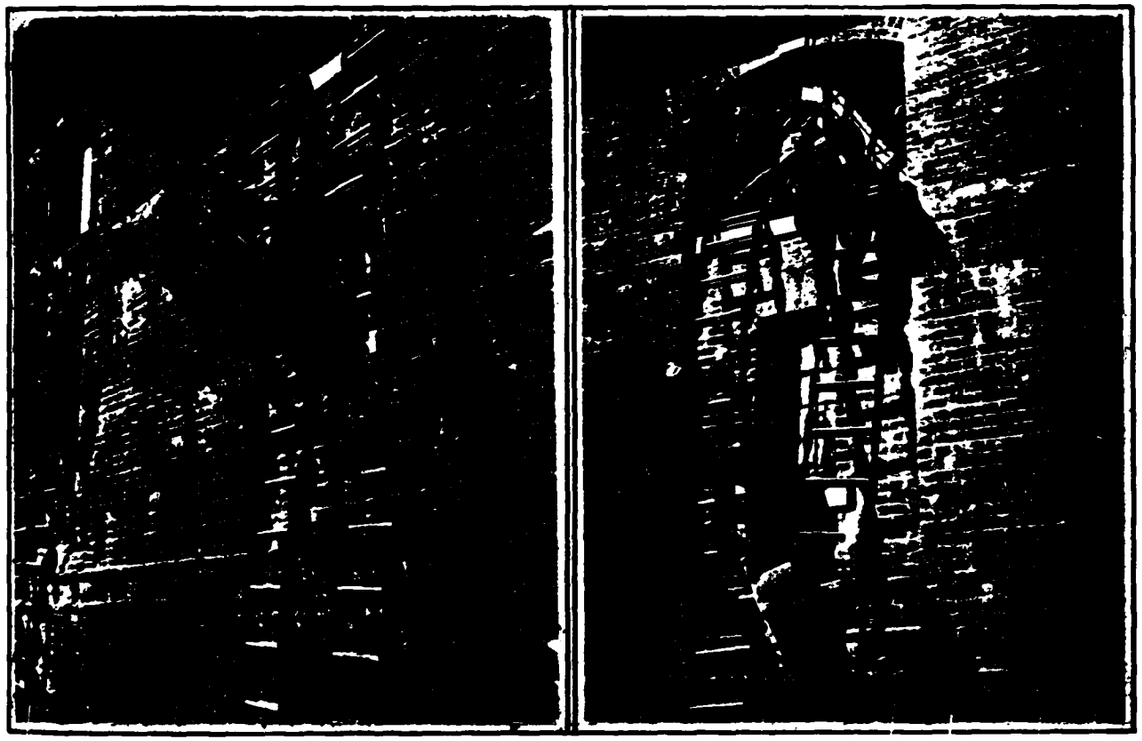
THIS is the story of the practical experiences of the 30th Infantry during its participation in the recent joint Army and Navy Maneuvers in Hawaii.

No attempt will be made to discuss strategical or major tactical questions. Such considerations can be more appropriately left to those who, from their seats on Mount Olympus, looked down with a general staff's-eye view on the scene with vision unimpaired by the trivial details as to how Private John B. Doe was to be specially trained, equipped, embarked, administered, debarked, maneuvered and, last but not least, brought safely home again.

The announced purpose of the maneuvers was to test the defenses of Oahu. However, we believe that the brunt of the testing was borne by the expeditionary forces, for upon them fell the necessity of working out the practical details of an overseas movement culminating with a landing on the beaches of a hostile shore. For the former phase we had recorded precedents; for the latter we found none.

Upon receipt of the directive for participation in the maneuvers, the first logical step was to begin an exhaustive historical research in an effort to find something on record for guidance, and its was surprising—and disconcerting.—how little of actual value could be found in the dusty archives. There were volumes of printed matter on the theoretical phases of overseas expeditions, but no one seemed to have been much concerned about delving into the work-a-day details. Consequently it is felt that the experiences of the 30th Infantry will be of value for reference in future operations of this kind.

Finding the records so barren we had to fall back on those best of teachers, experiment and experience, and develop our own ways and means. It is the purpose of this article to present them in narrative form to those interested, omitting, of course, some details of confidential nature.



30th Infantry Practicing

NARRATIVE

Organizations: **The actual army troops taking part in the maneuvers consisted of the 30th Infantry (less one battalion), with Battery "D", 76th Field Artillery attached.**

The regiment was organized with a reduced command group, communication platoon, transportation platoon and two battalions. Rifle companies averaged two officers and sixty-three enlisted men in strength, and machine gun companies two and forty-six.

The rolling equipment taken consisted of four two-line team wagons; two four-line team rolling kitchens; eight machine gun carts with trailers and two communications carts. Twenty-six animals were taken.

The strength of the battery was four officers and eighty enlisted men. Its rolling equipment consisted of four guns with limbers, four caissons and four wagons, and it was allotted seventy-five animals.

The total strength of the regiment and battery was thirty officers and six hundred and ten enlisted men.

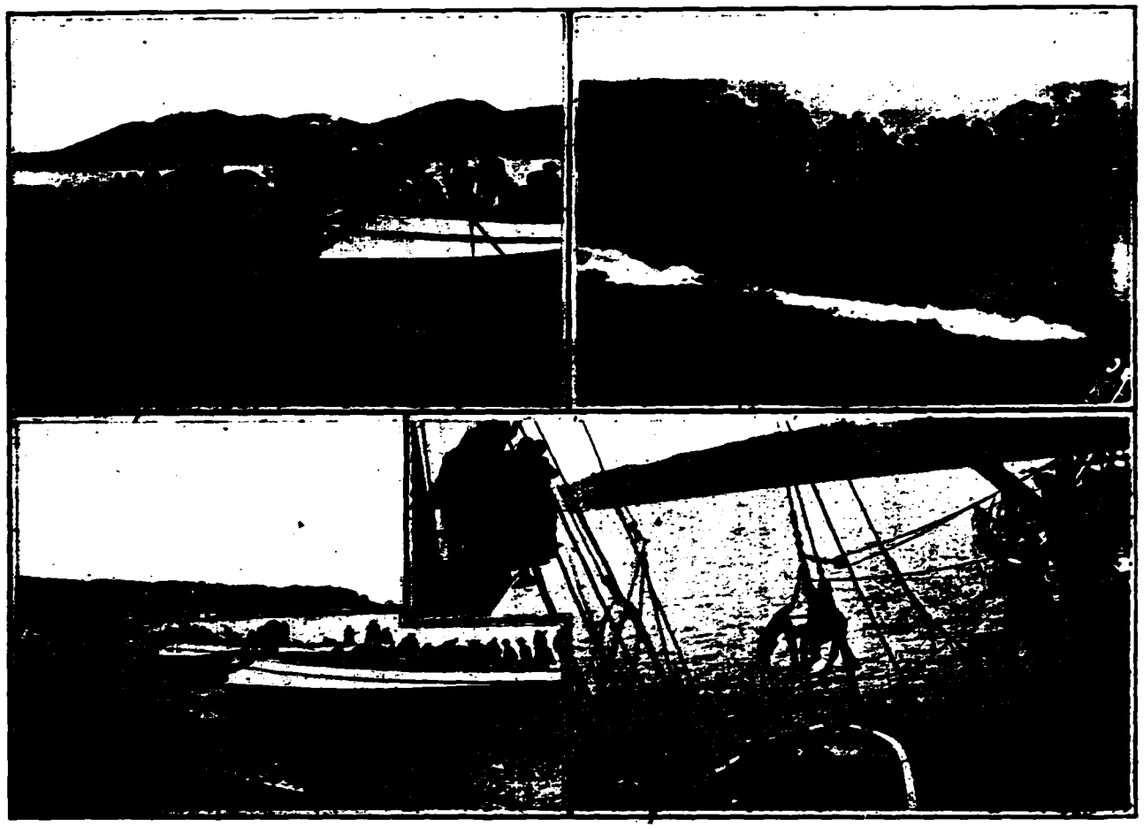
For purposes of record, and possible interest to some readers, the following roster of officers, showing duty assignments, is given:

THIRTIETH INFANTRY

Commanding Officer .....Colonel C. B. Stone, Jr.
Executive Officer and S-1 .....Captain W. M. Marsh
S-2 and S-3 .....Captain P. J. Lloyd
S-4 .....Captain W. V. Rattan
Communications Officer .....1st Lt. J. W. Newberry
Shore Party Commander .....Captain N. M. Walker

First Battalion

Battalion Commander .....Lt. Colonel E. E. Lewis
S-1, S-2, S-3 and S-4 .....1st Lt. D. P. Frissell
Company A
Company Commander .....Captain M. W. Marsh
Company Officer .....1st Lt. H. G. Sydenham
Company B
Company Commander ....Captain P. B. Robinson
Company Officer .....1st Lt. W. E. Smith, Jr.
Company C
Company Commander ....Captain E. J. Curren, Jr.
Company Officer ....2nd Lt. H. J. Van der Heide
Company D
Company Commander .....Captain C. Collins.
Company Officer .....2nd Lt. P. J. Black.



Upper left—Unloading Field Guns from Naval Motor Sailers. Upper right—"Look out, Oahu! Here we come." Lower left—Debarkation Practice on the Beach at Presidio. Lower right—Slinging an Animal from Transport to Mine Sweeper.

Second Battalion

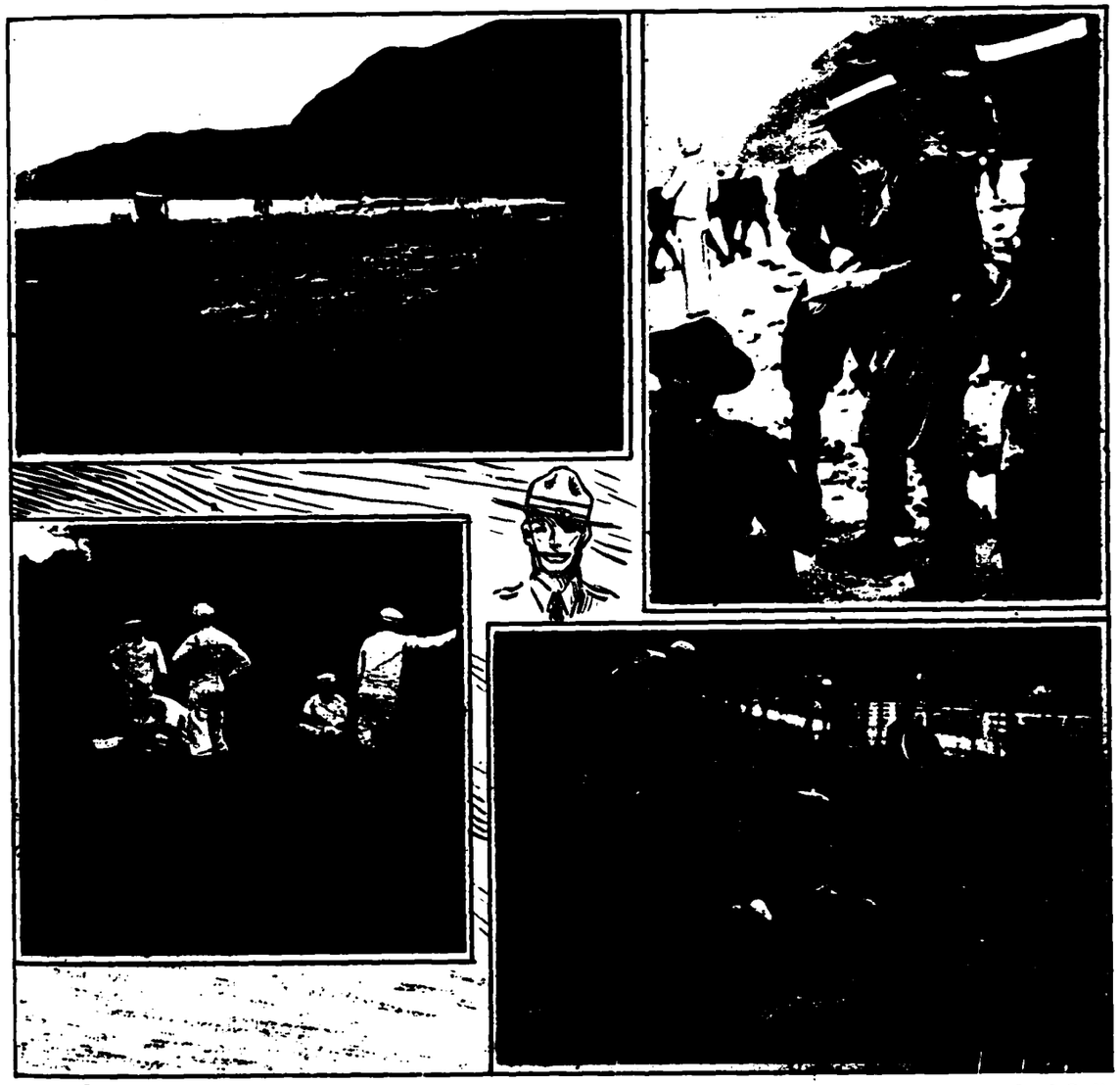
Battalion Commander .....Major W. J. Morrissey
S-1, S-2, S-3 and S-4 .....Captain A. R. Mackechnie
Company E
Company Commander ..Captain P. B. Waterbury
Company Officer (and in charge of flags representing constructive Divisional Units .....
Captain D. P. Yeuell
Company F
Company Commander .....Captain A. W. Penrose
Company Officer . First Lieutenant J. H. Stokes, Jr.
Company G
Company Commander .....Captain H. F. Love
Company Officer ...First Lieutenant E. H. Wilson
Company H
Company Commander .....Captain G. K. Crockett
Company Officer (and Personnel Adjutant .....
First Lieutenant J. C. Odell

Battery D, 76th Field Artillery was attached to the 30th Infantry for the maneuvers. The personnel of this battery consisted of four officers, assigned as follows:

Battery Commander .....Captain J. C. Hughes
Battery Officers: ..First Lieutenant W. R. Schaefer
Second Lieutenant C. R. McBride
Second Lieutenant C. C. Smith;

and eighty enlisted men.

Training: In addition to the normal training of in-

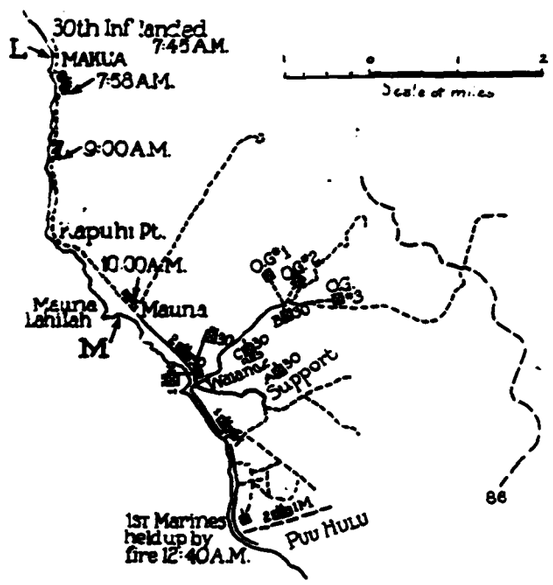


Upper left—The Beach at Makua. Upper right—Col. C. B. Stone, Jr., 30th Inf. at Makua Beach. Lower left—Naval Radio Station at C. P. of 30th Inf., Waianae. Lower right—Regimental Commander and Staff. C. P. at Waianae.

dividuals and units considerable thought and time had to be given to special training for the particular operation in prospect. This training was begun about four months prior to the period of the maneuvers.

As a preliminary step all individuals and animals of doubtful physical endurance were eliminated from the units scheduled to go. The survivors were put through a series of intensive hardening exercises consisting of marches, setting up exercises and rope climbing. This latter exercise was intended to develop muscles that might be needed in clinging to swaying rope ladders dangling over the transports' sides in case feet slipped from ladder rounds or a failure to connect with the launch occurred.

From the beginning the safety factor was always uppermost in the minds of the organization commanders and, in appreciation of the hazards of debarking troops



into small boats in the open sea and landing them through the surf on open beaches, all men were given carefully supervised swimming instruction. At the beginning only sixty per cent of the men were found to be qualified; at the time of embarkation all men of regiment, except nine, could swim at least fifty yards.

The animals were also given swimming exercises. This interesting phase of the training has been covered by another writer in articles previously published.

The debarkation plans called for the troops to go over the sides of the transport into the small boats by means of "Jacob's" (rope) ladders. Accordingly ladders of this type were procured, swung from second story windows and troops required to practice descending until a feeling of confidence in their use was attained.

Working with the navy representatives the following schematic diagram of landing was drawn up which shows in detail the units to be loaded in each small boat, the order in which they would be loaded, and the schedule of their procedure to the beaches:

BEACH X
SCHEMATIC DIAGRAM OF LANDING

	Beach Sector "A"		Beach Sector "B"	
	B-2	B-1	A-1	A-2
3 minutes or 500 to 600 yards		No. 2 (40') Navy 11 Co. F less one Plat 34 Hq. 2nd Plat Co. H 4 3rd Squad Co. H 7 56 9 boxes		No. 1 (40') Navy 11 Co. E less one Plat 31 1st Squad Co H 7 Hq 1st Plat Co H 4 56 9 boxes
3 minutes or 500 to 600 yards	No. 4 (40') 2nd Plat Co. F 28 4th Squad Co. H 7 Shore party Comdr and 16 men 17 52 8 boxes		No. 3 (40') Asst. shore party comdr & 5 men 6 2nd Squad Co. H 7 Hq 2nd Bn 14 2nd plat Co. E 28 55 8 boxes	
3 minutes or 500 to 600 yards		No. 6 (40') 2nd Plat Co G 28 3rd Squad Co. D 7 Hq. 2nd Plat Co D 4 Navy Comm Group 12 51 9 boxes		No. 5 (40') Hq. Co H 6 1 Off 2 men (Arty) 3 Co G less one Plat 34 Co D (1st Sq) 7 Hq 1st Plat Co. D 4 54 8 boxes
3 minutes or 500 to 600 yards	No. 8 (50') Co. B 61 4th Squad Co. D 7 Hq Co. D 5 Regtl Hq. 7 80 9 boxes		No. 7 (50') Co A 61 2nd Squad Co D 7 Hq. 1st Bn 14 82 8 boxes	
3 minutes or 500 to 600 yards				No. 9 (50') Co C 61 Regtl Hq 19 80

The type of boat to be used was the navy motor-sailer, having its own motor. Six of the boats were forty feet long and three fifty feet,—a total of nine required to land the combat personnel of the regiment in one trip to the shore.

It will be noted that in each boat was a complete combat team of either a platoon or company of riflemen and a machine gun squad. The idea was that when the boat reached the beach its load of troops could hit the sand and immediately take up fire and movement on its own until other units arrived and team work was coordinated by successively arriving intermediate commanders.

Early in the training these boat groups were organized and trained to work together. Diagrams of the boats were taped out on the ground at the foot of the rope ladders referred to above, and troops shown how to dispose themselves and their equipment in the boats.

In the tactical training special emphasis was placed on the establishment of temporary beach heads. For this training the exercises habitually started at the water's edge on the Presidio beaches with units initially disposed in boat groups relatively located on the beach as they were scheduled to land, and from such

Part of 30th Infantry Camp at Schofield Barracks, T. H.

30th Infantry Camp—Kohe Kohe Pass in Background

points the exercise developed to the establishment of the temporary beach head. Riflemen were taught to start moving on the run toward their assigned objectives the moment they hit the sand. Machine gunners were trained to go quickly into firing positions on or near the beaches in support of the advancing infantrymen.

The general scheme was for the leading battalion to quickly clear the beach of hostile troops, push them back and contain them until the rear battalion had landed. The rear battalion then passed through the lines of the former and took up the fight—and so on until resistance was dispersed and the march column could be taken up.

Later we had a short practice with the Navy: a so-called "dry run," which proved literally not so dry. For this practice the troops were taken aboard the army transport "Grant" which was moored at the Fort Mason docks. The navy motor-sailer came alongside and the troops went over the ship's side into the small boats by means of the rope ladders. The launches then put out into the bay and landed on the Presidio beach and the exercises proceeded as outlined above.

This rehearsal was invaluable in bringing out errors and unsatisfactory conditions which might have proven disastrous if not corrected before the landing on Oahu.

It was found that the navy boat crews were too cautious in driving their boats up on the sand:—this left quite a stretch of water, sometimes waist deep, to be negotiated by the troops in reaching the beach line, and everyone got thoroughly soaked. The fallacy of troops jumping out of the boats wearing their packs was also proven. It was found that the weight of the pack overbalanced its wearer and frequently deposited him in a ludicrous and uncomfortable position with the water line up around his neck. In subsequent landings the pack and rifle were carried in the hands and served to pull the jumper forward instead of backward.

The debarking of the troops was simple compared with getting the heavy rolling equipment ashore. For this purpose the navy equipped its fifty-foot motor-sailers with steel channel irons, or "I" beams, whose gauge corresponded to that of our vehicles. The latter were swung off the transport and into the launches by means of winches. With luck and a reasonable sea their wheels sometimes connected with the track on the boat. Upon beaching the boats an extension to the track was run out over the bow to the sand and the guns, rolling kitchens, wagons, etc., were manhandled to the shore.

The first experiments with this method were not so satisfactory. It was found that when the boat lifted on the surge of the surf the shore ends of the track would dig into the sand and as the boat settled down again pry it back into the water. This difficulty was met by fixing rollers on the shore ends of the tracks which would then roll back and forth with the motion of the boat.

Under the Plan of Landing the navy was responsible for moving the troops and equipment from the ships to the water line on the beach. From the arrival on the sand the responsibility for further movement passed to the army.

To facilitate and coordinate such landings the navy sent ashore in the first boats a group called the "Beach Party" under command of a naval officer. Its function was to meet the boats upon their arrival on the beach and by means of lines passed to the shore pull them further upon the sand, steady them and unload the equipment. In this group was also a signal unit to communicate between shore and ships.

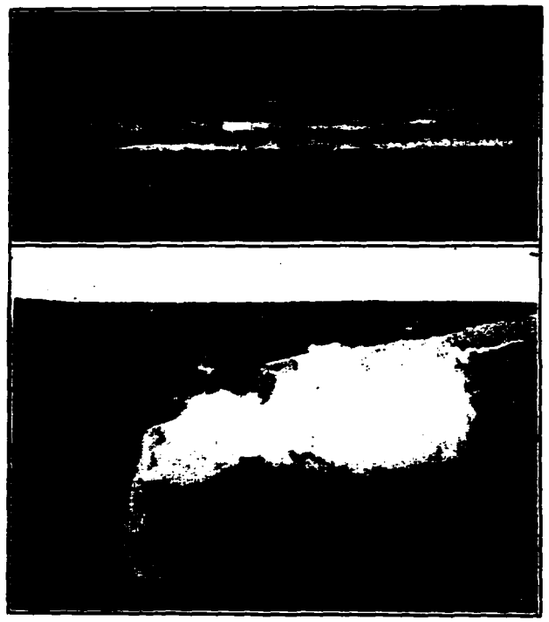
Movement Overseas: Profiting by the disastrous experience of one of our allies in a historic landing on a hostile shore during the World War, the "Unit" loading plan was prescribed for the expedition. This method provides that a complete, self-containing combat team of combined arms with all unit transportation and supplies be loaded on one ship.

The advantage is obvious. It is supposed to ensure that the balanced team can be placed ashore together on the same beach. However, without disparaging this principle, it was found that its advantage was neutralized materially by the comparative time factors involved in landing infantry and artillery. In our experience on Oahu the infantry combat troops had landed and marched seven miles before the first gun was reported in a firing position near the landing beach, and the final objective had been reached be-

fore the battery became mobile. This delay was not the fault of the artillery but was due to the fact that the infantry had priority in debarking, and to the much greater difficulty in getting the animals and heavy equipment ashore. It is possible that better results might have been obtained if the artillery had been on a separate transport and could have begun its debarkation simultaneously with the infantry. Also for sanitary reasons, the advisability of combined loading of troops and animals for voyages of any length in warm weather is questionable.

Our expedition embarked on the USAT "St. Mihiel" and sailed from San Francisco in the late afternoon of January 31, 1932. At noon the next day the transport arrived at the rendezvous of the battle fleet off the southern California coast and thereafter proceeded in convoy. In spite of rough seas, restricted quarters and abnormal living conditions, the men were in fine fettle and eager to play the game according to the rules.

The convoy sailed on a course which took it far to



Above: Thirtieth Infantry Landing at Makua, Oahu.
Below: Smoke Screen Laid By Navy Plane During Landing of Thirtieth Infantry.

the south of the island of Hawaii, the southernmost island of the Hawaiian archipelago and, making a long sweeping curve to the west approached the shores of Oahu from that direction.

Dawn of February eleventh found the transports with their protecting warships off Waimea Bay on the north coast of the island; and considerable excitement stirred up ashore. Search lights blazed out and a hornets' nest of Black bombing planes made spectacular dives at the ships, dropping flares representing bombs; our eight machine guns, mounted on the transports' decks, returned their fire.

When the purpose of the feint had been accomplished and the garrison of Oahu alerted, the ships put out to sea again and spent the day browsing around up north just out of sight of the Island of Kauai. After dark they turned southward, and rounding Kaena Point, made for the west coast of Oahu.

Orientation: Battles may be fought and wars perhaps won without the active presence of generals, but in a maneuver there is always one that is absolutely indispensible. We refer to that old, hardboiled "General Situation," and so:

(In brief) x x x The Blacks had captured Oahu from its defending Blue garrison about three months previously x x x x It was reliably reported that with minor changes they were using the old Blue plan of defense. x x x x x

The Black strength was x x x x thousands and thousands x x x x. The strength of the Blue Expeditionary Forces was "constructively" ditto x x x x.

Think of the possibilities for the staffs! None was neglected. Orders were written for the Army, the Corps, the Division, the Brigade; combatical, logistical and annexical; and all nicely mimeographed.

Disregarding, with this brief reference, these thousands of constructive combattants we revert again to the narrative of the actual troops.

With the main strength and major dispositions of the Black forces our regiment was not much concerned, but we were vitally interested in the locations of their centers of resistance, with their supporting artillery, in our immediate front.

As we numbered among us many officers who had served in Hawaii in the past, and some who had in recent years helped revise the Primary Tactical Plan, the locations of these defensive areas were supposed to be fairly well known. However, there was a question about this, for as brought out at the general critique those former members of Oahu's garrison were probably more practically familiar with the road from Schofield Barracks to Honolulu than with the defense plans of the Island. Be that as it may.

The Landing and Operations Ashore: At 3:45 A. M. February 12th, the troops were awakened and messed. Boat groups were assembled, unit equipment placed at the loading points on deck and all stood by waiting for the small boats. The transport cautiously felt her way in toward the shore with all lights out, and at 5:00 A. M. hove to about two and one half miles off Makua Beach, eight miles north of Waianae.

We had arranged two debarking points on the transport. Six of the small boats (forty footers) were to load from the afterwell deck, in numerical order, and three (fifty footers) similarly from the forwardwell deck. Each boat carried a crew of from fifteen to twenty-five sailors and mounted a navy machine gun in the bow for antiaircraft fire. The first boat was hailed at 5:15 A. M. but proved to be boat Number 6, and it was fifteen minutes later that Number 1 came alongside. The navy furnished the life jackets and they had to be hoisted aboard the transport from the small boats, thereby causing additional delay.

The boat groups filed past the box slings depositing

packs and arms, and while this equipment was being lowered into the launches the men put on life jackets. At the command of the Army Debarkation Officer the troops went over the side by means of two rope ladders at each loading point. The average time for loading a boat with equipment and personnel was about eight minutes. As each boat completed loading it shoved off and moved to a rendezvous point about three hundred yards from the transport. From this point, the boats were started for the beach by the Navy Control Officer in successive waves of two boats each at three minute intervals. The first two boats were scheduled to reach the beach at zero hour (6:30 A. M.).

Sea and weather conditions were ideal; there was very little swell and the sky was slightly overcast. At the start of debarkation the darkness made movement somewhat cautious and slow. The beach selected for the landing was an indentation in the coast line, partially sheltered from the open sea, with a shelving sandy stretch about one-half mile in length, and opening on a little valley of about the same distance in width. This was bordered on all sides, except for a narrow beach road running north and south, by the sheer, unscalable cliffs of the Wainae mountain range.

During the movement of the boats to the shore friendly planes from the warships dropped smoke screens to blind the enemy OP's on the heights. Viewed from the sea the white smoke banks, contrasting with the dark mountain sides, were a sight to be remembered.

Hostile planes were a bit tardy in arriving, and several boat groups were ashore before they swooped down, raining bombs, machine gun bullets and general destruction on the landing Blues. Considering the fact that the AA batteries of the warships were in action against them, and that the machine gunners and riflemen of the landing forces were peppering away at them one could not but be amazed at their daredevilry in flying so low. They dove again and again to within a few hundred feet of the ships, and these repeated attacks also made one wonder what miraculous system of replenishment of bombs and ammunition they used.

But to continue with the story of the infantry.

Boats were beached. Riflemen and machine gunners went over the bows, slung equipment, clawed their way up the sandy banks looking for trouble.—and were disappointed that none could be found. The landing was unopposed. The only visible evidence of the garrison was a medical officer, who with his family, occupied a lonely beach cottage nearby and who had a ringside seat to see the show.

An umpire coming up during the landing remarked: "Well, you certainly 'G-two-ed' them this time. They were looking for you over on the northeast coast"; and, true to the form of all umpires, assessed a loss against us of seventy-five men from plane fire. Our quick thinking "K.O." immediately alloted this loss to our "constructive" third battalion, and the command was "Forward."

Disregarding the lack of hostile opposition, the leading battalion established the temporary beach head as per schedule. The rear battalion, completing its landing, passed through the beach-head lines, and in security-march formation moved on Waianae, eight miles away.

Our mission was to capture this west coast metropolis in order to afford the Marines, whom, without malice aforethought, we have so far forgotten to mention, a place to land. The march southward was over an unimproved, stony road, thickly overgrown with algeroba brush.

The Waianae mountain range on the west coast flings itself down toward the sea in a succession of bold headlands. Rounding the nose of each of these ridges we expected trouble, but to our growing surprise none was encountered until our advance guard began passing through the streets of Waianae. Here, the umpires

30th Infantry Going Ashore in Small Boats.

told us, some 155 HE's were falling from a battery firing from the vicinity of Kole Kole Pass about five miles away.

In passing through Waianae our advance guard captured the only Black troops seen during the maneuvers, a platoon of the 35th Infantry which had been pushed out as a sort of a forlorn hope observation group from its main body ten miles away near Nanikuli. Due perhaps to the fact that we were hungry and that it brought to mind a one-time famous New York restaurant, we remember that the platoon leader's name was Lieutenant Delmonico.

At about 11:00 A. M., as the Regimental Commander and the writer, marching a little ahead of the main body, arrived at the Waianae railroad station, there came sounds of boats scraping on the sandy beaches near by, and bursts of strong language.

We knew the marines were landing!

Contact was made with their battalion CP which "constructively" represented their regimental, brigade and division headquarters, and we made the most of our opportunity to report that "The army has landed and has the situation well in hand." With the landing of the marines our first mission was accomplished and it only remained for us to pull back our advance guard and establish a covering force on Mauna Kuwale which commands the approaches from Kole Kole Pass; and to await further orders from the high command.

So much for the activities of the combat units. Now let us go back to our rear echelon left on the transport to put ashore the animals, rolling equipment and supplies—a man-size job, plus.

The animals were sent ashore by three methods. One, by loading them into the fifty-foot motor boats by

means of a "flying" stall, (see previous articles) carrying them fairly close inshore and dumping (or dunking) them into the water for the swim ashore; another, similarly loading them on mine sweepers for a part-way trip to the shore. This method, which if properly handled by requiring the mine sweeper to come as close inshore as the depth of water would admit would have been the most expeditious way in getting the animals ashore, proved unsatisfactory due to the vessel standing entirely too far off shore. A few selected animals were slung overboard direct from the transport and swam all the way to the beach. The rolling equipment was handled as described during the practice runs at the Presidio.

At 2:30 P. M., a message was received from the rear echelon commander to the effect that all animals, rolling equipment and supplies were ashore; this was very gratifying to the front line troops as they hadn't expected hot food or the blankets until next day.

The maneuvers terminated at 4:30 P. M.

The regiment moved by train from Waianae to Schofield Barracks, remaining there under canvas until it reembarked at Honolulu on February 19, 1932. Sailing the next day, it arrived back at its home station on February 26, 1932.

Retrospect

The Regiment feels a justifiable pride in the fact that it moved its personnel of six hundred and forty, its one hundred and one animals, and its necessary accessories three thousand miles across the sea, landed them on a beach under simulated war conditions, and brought them all home again without a serious casualty or the loss of important piece of equipment. In the process we feel that we have learned many things that will prove of much help in future expeditions of this kind.

In due course of events a considerable portion of the personnel who went with the expedition, particularly the officers, will scatter throughout the service carrying with them the experience and ideas that may be utilized by other organizations in case of need.

In closing, it would be only appropriate to express our appreciation of, and our admiration for, the officers of the navy,—those hard working, capable gentlemen who manipulated the imposing fifty million dollar "battlewagons" with such assurance and ease, and who took us across the sea, deposited us upon the appointed beach at the appointed hour, and in the appointed manner.

And the same sentiment goes also for our own army transport personnel, those good old practical buddies who saw us and our "junk" over the side and back again without a single mishap.

All in all it was hard work, fine experience and good fun. We hope to go again some day.

The Job Done. Thirtieth Infantry Returning to its Barracks at the Presidio

The Verdun Forts

By H. A. DeWeerd, Professor of History, Denison University

"Verdun provides the most valuable lesson of the war in the history of permanent fortifications. The army unquestionably won the battle, but concrete and steel contributed its share."

GENERAL NORMAND.

THE heroic resistance of the French Army has rather obscured the part played by the forts in the epic defense of Verdun. Marshal Petain's recent book contains some very interesting information regarding the resistance value of formal fortifications in the day of modern heavy artillery.[1]

The speed and precision with which the great German siege guns reduced the Belgian fortifications upon the outbreak of war in 1914 came as a distinct surprise to many military leaders. Liège fell after twelve days attack, Namur after six days, while Maubeuge and Antwerp held out for thirteen days. The Russian fortresses fared no better. Kovno surrendered after twelve days, Przemysl after four days attack. These facts caused military leaders to lose faith in formal fortifications and encouraged them to look upon machine-guns, trenches, barbed wire and infantry as the principal factors in defensive operations.

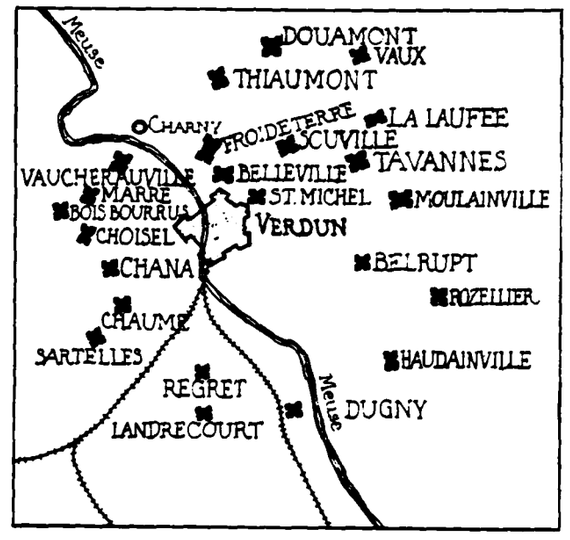
In drawing these conclusions, the military leaders failed to take into consideration the fact, that in the cases referred to, the forts did not have active liaison with a formidable field army. Neither did they stop to determine whether or not the forts had been designed to resist the weapons brought against them. Liège and Namur were constructed to resist shells up to 21 centimeters, but were forced to surrender when attacked by weapons of much larger caliber. The Russian fortress Novo-Georgievsk, which surrendered in 1915, could have resisted the heaviest of Austro-German weapons.

II

Vauban's old circle of forts around Verdun, had been augmented by a series of modern works dating from 1874. The modern forts include: Belleville, Saint-Michel, Tavannes built from 1874-1880; Douaumont, Vaux, Moulainville, Bois-Burrus, and Souville built from 1880-1897; Thiaumont, La Laufée, Froideterre, Charny, and Vacherauville constructed or improved from 1889-1914. These fortified areas were constructed at the cost of 78,000,000 francs, and represented the best work of French engineering and construction. The walls of the modern works were of concrete eight and a half feet thick, using 850 pounds of cement to the cubic yard. In standard European fortifications the proportion of cement to the cubic yard was 550 pounds, while the walls were from five to six and a half feet thick. The main armament of the modern forts consisted of disappearing guns of 155 caliber mounted in turrets, disappearing guns of 75 caliber mounted in turrets for flanking fire, and machine-gun turrets for twelve guns.

[1]Marshal Henri Philippe Petain, *Verdun* (Eng. Trans.) Dial Press, N. Y. 1930.

All these careful provisions for the defense of Verdun were pushed aside, when on August 5, 1915, the French High Command issued an order stripping the fortifications. The artillery of the forts was dismantled and dispersed for use in the field, and preparations were made to blow up the forts in case of an enemy attack. The French prepared to defend Verdun, if this became necessary, with infantry and field artillery. They relied on the natural strength of the area and felt that the Germans would not attack where they felt themselves to be so strong. It was with these facts in mind



that General Joffre steadfastly refused to become alarmed over the warnings of an attack on Verdun. As a consequence, no adequate steps were taken to prepare the area for defense. Petain passes over this negligence on the part of General Joffre in dignified silence. When the evidences of a serious attack became overwhelming, the French made frantic efforts to get Verdun ready for defense, but these preparations consisted in laying out tentative lines of trenches.

The unprecedented severity of the German attack, especially of the artillery preparation caused the French to recoil. Looking on Fort Douaumont as a mere shell trap, the French forces withdrew around it, and made it possible for the German infantry to capture the fortress by the simple expedient of walking into it. They found it virtually abandoned; a company of engineers was futily trying to dismantle some of the remaining artillery. Fort Douaumont was one of the

most important works at Verdun; it dominated the ground around it, provided shelter for the German infantry and armoured observation posts for the officers. Once in possession of the enemy, the value of Fort Douaumont became apparent to the French. For in spite of constant shelling by the heaviest French batteries, Douaumont protected the German forces and provided an admirable sally point for attacks. The French army commander on March 12 ordered that the forts should be defended in every case. He wrote:

> Our experience in recent warfare has given us an opportunity to realize the resistance-value of the forts. They are indeed better organized than hastily constructed strong points on the field of battle, for their sites and plans have been laid out at leisure, the flanking angles carefully calculated, the shelters deeply dug and re-enforced with concrete. The forts can and should be used in every case in the defense of the various sectors.
>
> The guns will therefore be replaced in the casemates, the turrets repaired, the gun chambers cleared of all explosives that have been carried into them in order to destroy them - - -.

Under the existing circumstances it was found to be exceedingly difficult to replace the guns and materiels long missing from the fortresses. The German attack afforded no respite, and the French had all they could do to bring men and munitions enough along the "sacred way" to support the defense. But where the guns were replaced, they showed great value in action. Froideterre offers a good example. The Germans attacked this work on June 23, 1916, after an intense bombardment. The upper works of the fort seemed heavily knocked about and on fire; the German infantry prepared to enter, when suddenly a 75 turret, thought to be out of action, opened on them with shrapnel and a machine-gun turret caught them in its zone of fire. Thus confused the Germans were driven back by a counter attack which developed behind the security of the fort. Froideterre was deluged with some thirty to forty thousand shells, some as heavy as 210 caliber, but the concrete shelters were not harmed and the Germans never captured the fort.

The experience of the French at Froideterre was repeated on July 11 when the Germans attacked Fort Souville after a terrific bombardment. Once again the German infantry seemed on the point of entering the fort, when the fort's defenders sallied in a counter attack and drove them back in confusion. The three fortified hill tops, Froideterre, Souville, and La Laufée, although involved in desperate attacks never once fell into the hands of the enemy. After the French were committed to the defense of the forts, the works took on new meaning to the troops who battled savagely in their defense. The gallant defense of Fort Vaux under Major Raynal in which the whole force succumbed, is a good illustration. The forts became symbols to the troops.

In addition to providing sally points and shelters for the troops, the Verdun forts were also of great value as organizing factors in the defense. Munitions and materiel were stored in their vaults, headquarters for combat groups were formed, telephone and signaling equipment was installed. Petain emphasises the "organization value" of the forts.

III

When analyzed in retrospect, the resistance qualities of the Verdun forts seem a little astonishing. Fort Douaumont for example was struck by 120,000 shells of which 2,000 were of 270 caliber or heavier. (2) But when it was recaptured the tunnels and vaults were found to be undamaged, while one of the 155 caliber turrets although struck twice by shells of 400 caliber "was so little damaged that nothing was needed to put it back into condition except cleaning and greasing." The same turret was later struck while in action by a shell of 280 caliber but was not silenced. Fort Vacherauville was struck by over 8,000 shells, (2) Figures based on French estimates, some as heavy as 420 caliber; Fort Moulainville by more than 8,000 shells of heavy caliber; Froideterre, Souville, and Tavannes, each were struck by at least 30,000 shells, but all the tunnels and shelters remained intact. Gun mountings and turrets showed equal strength. General Descourtis, Chief Engineer, 11th Army writes:

> The war demonstrated that the portions of our forts adapted to active combat—defied the most powerful artillery. Concrete which may have proved unsatisfactory abroad, and which has been too hastily condemned as useless, has given good service in our cases. The Germans tried in vain to blow it to fragments with projectiles whose weight and explosive force was far beyond anything our artillerymen and our engineers could have imagined, but they achieved only the destruction of local and limited areas. The construction of shell-proof chambers was so well conceived, worked out with so much care, and left so much margin for unexpected developments, that as a whole these parts withstood triumphantly the most formidable attacks.
>
> As to the armoured turrets, the heaviest enemy projectiles were unable to destroy any but a small number of machinegun turrets, which made no claim to resist any but light artillery. All our 155 turrets are in good condition, and the only 75 turret which was destroyed fell victim to the explosion of a charge that we ourselves had carried inside.

Marshal Petain believes that if Fort Douaumont had been garrisoned and defended as it should have been, the Germans would never have taken it, and that their advance toward Verdun would have come to an abrupt and early halt. The French paid a very high price for their lack of faith in the Verdun forts, but once aware of their value, they took full advantage of the remaining works. The experience of Verdun makes clear that although a "fortification alone is not enough to check the enemy, it greatly increases the resisting strength of troops who know how to use it."

Ancient Firearms

By Fletcher Pratt

BECAUSE the hand-gun ultimately supplanted the bow and the cannon the catapult, an impression persists that firearms (in the modern sense of a weapon, powerfully affecting the result of battles) were nonexistent before the invention of gunpowder. Nothing could be more incorrect. Ancient and medieval commanders had a wide variety of artillery to choose from, and the ancient infantryman could stop cavalry as roughly as the footman of Napoleon's day and a lot better than the soldier of the days of Marlborough.

Small Arms

Beginning with small arms, four main types deserve notice: sling, javelin, hatchet and bow. Slings need not worry us long. They were always barbarian weapons; threw a stone or bullet little more than 150 yards; could not penetrate even indifferent armor, and had no great accuracy. Slingers needed plenty of room to work in, and could not be assembled in sufficient concentration for combat use. The sling remained merely a fairish weapon for scouts.

The hatchet is equally insignificant. When the barbarian Franks first made their appearance in Europe, a small axe called the *francisca* was their only missile weapon. They were quite adroit at throwing it so that it arrived edge outward, but abandoned it as soon as they got bows in their hands.

The javelin is something else. It was the standard missile weapon of the Roman legion; the Vikings used it constantly in the hardest kind of pitched battles; and Alexander's troops broke down the circling tactics of the desert horse-bowmen with it. A missile capable of meeting such tests deserves respect—but there are difficulties about all these cases.

The trouble is this: The javelin used in modern athletic contests is not radically different from the ancient weapon. Now the world's record for the javelin-throw is only a little above 200 feet. The bow used by the Bactrian horse-archers is also known, and its range is a good 150 yards. Now allowing that Alexander's men had a better balanced javelin and were more skillful in its use, there is still a wide range gap in favor of the Bactrians. The conqueror must have handled his javelin-men with uncanny tactical skill.

The Roman legionary carried five small *(verricula)* and two heavy *(pila)* javelins. The verriculum, purely a throwing weapon, had a three and one-half foot shaft and a five-inch soft iron head; the pilum a five-foot shaft and a nine-inch head, triangular in section and slightly rotated, like the old French bayonet. On the defensive, the verricula were thrown and the pilum was used as a pike; on the offensive all the javelins were thrown and the Romans fell on with sword and shield. But Roman javelin fire was used with the idea of discommoding the enemy, clogging his movements and breaking up the rhythm of his attack rather than doing serious damage. Neither type had much penetrative power against armor; and they failed miserably, time and again, against those same desert horse-archers Alexander's javelin-men punctured so easily. No doubt they made nasty wounds when they struck an unprotected spot, but the Romans had no confidence in any missile weapon as the final arbiter of battle.

In the ancient world, the Romans, with the Agrianians of interior Thrace, and the Armenians were the only javelin-using peoples. After the barbarian invasions it came into more general favor. It is a splendid weapon for mountain and forest work, where the range is short and silence and speed are desired. The Vikings made something quite serious of the javelin. We read of Gunnar of Lithend using a spear as tall as himself (well over six feet) yet later throwing it to a considerable distance and right through a shield and the man behind it. The same people attached a sling of sinew to the staff of a short javelin and thus attained good ranges with it. A modern experimenter has thrown a Norse javelin 270 yards with such a sling.

But the javelin at best was no more than an illegitimate cousin of the bow—the small-arm par excellence of the days before gunpowder. There were three classes—the breast-bow, the crossbow, and the longbow.

Only the first two were known in ancient times, and the crossbow was very little used. As has been mentioned, the Romans did not care about missile weapons, and used archers pretty much as they used slingers—as light troops to harass a flying enemy or flank a column of attack. The Egyptian archers, however, who used a wooden breast-bow (that is, a short bow, pulled to breast and shooting a 24-inch arrow) became justly famous.

The breast-bow reached its highest development farther east, where some genius discovered that a bow built up of layers of horn, sinew, and glue, around a wooden core, had a high resiliency. Persian, Bactrian, Parthian and, later, Saracen and Turkish archers, all used bows of this type. The best horn bows have a very heavy pull—all the way up to 100 pounds—and high penetrative power. Their range, however, is something else.

There is an inscription on a pillar at Constantinople, giving the results of some wonderful shooting with horn bows, the shortest distance thought worth recording being 625 yards and the longest (made by a Sultan, of course) about half a mile. With all due respect to the builders of the pillar, this is applesauce. The longest arrow flight recorded in modern times was a shot made by Inigo Simon at Paris. He used a horn bow,

but it was a built-up horn longbow, not a Turkish breast-bow, and the flight was 459 yards. Dr. Saxton Pope has also tested numerous horn bows. The best distance he got was 196 yards, and both his record and Simon's were made with special bamboo flight arrows.

On this (and general) evidence we may conclude that the eastern horn bow under service conditions did not range much above 150 yards. But this range was quite sufficient, considering that it was used by rapidly moving horsemen, accustomed to hitting their game in

LA BALISTE DE SIEGE.

An excellent picture (from an old French print) of a siege-catapult of the bolt-throwing type. Two bolts lie beneath the machine, as does the spike for loosing the trigger. Note the elevating brace beneath the channel for holding the bolts and the hooks which grip the bowstring.

Editor's Note. French caption calls this "Baliste." This is an error.

a vital spot at anything from 100 yards down. Against close order the effective range would be slightly longer.

Romans and Chinese both invented the crossbow. In its earliest form it was made of wood and the string was pulled back by hand. This form of crossbow, beyond which the Chinese never progressed, ranged only about 100 or 150 yards. When the weapon appeared in Palestine during the Crusades, however, the Saracens applied their horn-bow technique to it, and at once it became a powerful weapon. Horn crossbows had a long popularity in Europe and gave way only on the coming of the crossbow whose motive force was spring steel.

The steel crossbow had a range of from 375 to 380 yards, and a point-blank, flat trajectory range of 65 or 70 yards. The range of the horn crossbow was not much less, but it showed greater dispersion and more mechanical fatigue than the steel weapon. It was also subject to weakening by moisture. Both would drive their bolts (quarrels) through anything but the thickest plate armor.

The usual quarrel was about 15 inches long, three inches of this representing the steel head. They made ghastly wounds, not unlike those of a dumdum bullet.

Early crossbows were wound with a claw at the belt of the bowman, who held his weapon on the ground with a foot rest, hooked the claw over the string, and then straightened up. As the power of crossbows increased various winching devices were introduced instead.

But the prince of all missile weapons before the age of explosives was the English longbow. As early as Hastings it was in use, and when it had become thoroughly acclimatized, the English infantry could stand against anything in the world. It is unnecessary to remind anyone how they time and again riddled the French feudal cavalry with it; or how they broke up the solid squares of Swiss and Scottish pikemen: even Saracen light horse dared not attack longbowmen after the first two or three experiences.

We have specimens of these longbows which have been both duplicated and tested. The extreme range limit of the war bow was above 250 yards; its effective range from 175 to 200 yards: though Shakespeare does say, "He would a' clapt in the clout at twelve score" (yards). It fired a 30 to 33-inch arrow with a steel head from 4 to 5 inches long, and was deadly up to the full extent of its range.

The peculiar deadliness of the longbow was due to the internal bleeding caused by the rotating arrow: very few men ever recovered from an arrow wound unless they got it in the arm or below the knee. Art Young has killed a grizzly with a single shaft. The stories about archers aiming at, and hitting, the gap in the visor of a knight's helmet are nonsense, of course, but a great many knights in armor were killed by arrows, for the bow has a penetrative power seemingly out of all proportion to its strength. The English war head would go right through armor as though it were made of cardboard, unless it were exceptionally heavy and of the very best steel. In a recent test, an arche put a warhead through a perfectly-preserved suit o Damascus, through a layer of padding beneath it through both sides of the wooden box on which it wa mounted, and through the padding at the back.

Only semiroyal personages could afford armor that would stop an arrow at all ranges, and the arrow had far more to do with the decline of armor than the feeble gun of the period. The crossbow, of course, outranged it, but the crossbow was so slow in operation that while its user was winding it up, the longbowman could run the distance to within his own range and still have time to loose off three or four shafts. The way in

which the Genoese crossbowmen were shot to pieces at Crécy and Aljubarrota is illustrative.

Why, then, did the bow give way before the early guns, which could come nowhere near this performance? Speaking as a practising archer, I can assure the reader that it takes ten years to make a good bowman—one who can get a reasonable number of hits at 100 yards. A good arquebusier could be trained in a couple of months. In the days when every Englishman depended on his bow to keep the kitchen supplied, the expenditure of time was not minded, but as the country became industrialized the time investment was too heavy. In France, there were no freeholding peasants to take up the bow; in Italy and the empire, the peasant used the crossbow, and the Spaniard and Scandinavian were javelin-men. Nevertheless, the longbow was so good a weapon that it lingered for a considerable time: James I awarded prizes at archery contests, and in 1785 we find Benjamin Franklin seriously proposing that the regiments of the Pennsylvania line be armed with bows as a weapon superior to the then musket.

Field and Siege Artillery

The first use of missile-throwers that could not be carried in the hand is recorded at the great siege of Motya by Dionysius of Syracuse in 399 B. C. When King Archidamus of Sparta heard of it he made the remark that has been repeated in all ages by military pedants about new inventions, "Now human courage has become useless."

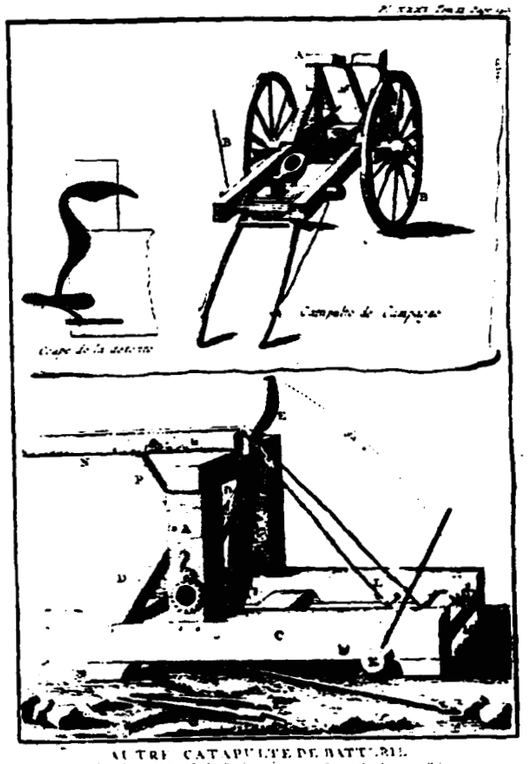
The catapult, the most popular piece of artillery of antiquity, was an overgrown crossbow. It consisted of a vertical frame with three openings. Through the central one went the missile; the two outer openings each contained a skein of some material which would stand a high degree of tension, with an arm thrust through the middle of the skein. The outer ends of the arms were connected by a bowstring which drove the projectile.

The whole vertical frame was fixed on a pivot for training, and the slide which drove the projectile could be elevated or lowered by a brace.

The power was furnished (usually) by twisted tendons—from the legs of horses or deer or the necks of oxen. Human hair was also used, and various inventors tried other materials. All materials tended to grow weaker with time, though the thickness of the tendons and the high torsion and tension minimized this effect. An arrangement like a miniature ship's capstan was placed at the end of each skein where it passed through the frame, to permit of periodic tightenings. The largest models had arms three or four feet long and skeins from six to eight inches in diameter.

Catapults came in two classes—stone-throwers and bolt-throwers, both working by direct fire. The bolt-throwers were rated by the length of their projectiles; stone-throwers by the weight of the stone they threw. The bolt-throwing machines seldom used anything longer than a three-span (28-inch) missile, which looked like an enlarged crossbow bolt and was usually fluted at the base, sometimes with a twisted flute to give a rifled effect. There were larger bolt-throwers, of course; Agesistratus had one which threw a lance six and one-half feet long, and there were other monsters in a water-battery at Syracuse. But the three-span catapult was the standard, both as a piece of field ordnance and as naval artillery.

It ordinarily had a range of from 700 to 800 yards.



AUTRE CATAPULTE DE BATTERIE.

Above: An onager of the type ordinarily attached to a legion as field artillery.
Below: A "siege-gun" onager.
Both drawings give a very good idea of the working of the machine, but they should be shown with slings instead of spoons.

Editor's Note. French caption calls these "catapults." This is an error.

with a good deal of accuracy. It also seems to have had high penetration power: one of them drove a bolt through three men (presumably in bronze scale armor) at the siege of Rhodes. Major Schramm of the French artillery made one of horse tendons which shot a 32-inch bolt and penetrated an iron plated oak shield at a distance of 400 yards.

The stone-throwing catapult was in more general use, particularly for siege operations. The projectiles were carefully shaped; both Romans and Greeks sometimes made them of hard-baked clay around a stone core. This missile burst on impact and could not be returned. Most stone ball-throwers used quite a small missile (eight or nine pounds) and with it obtained an effective

range of from 400 to 450 yards. Larger machines threw heavier projectiles, but without much increase in range.

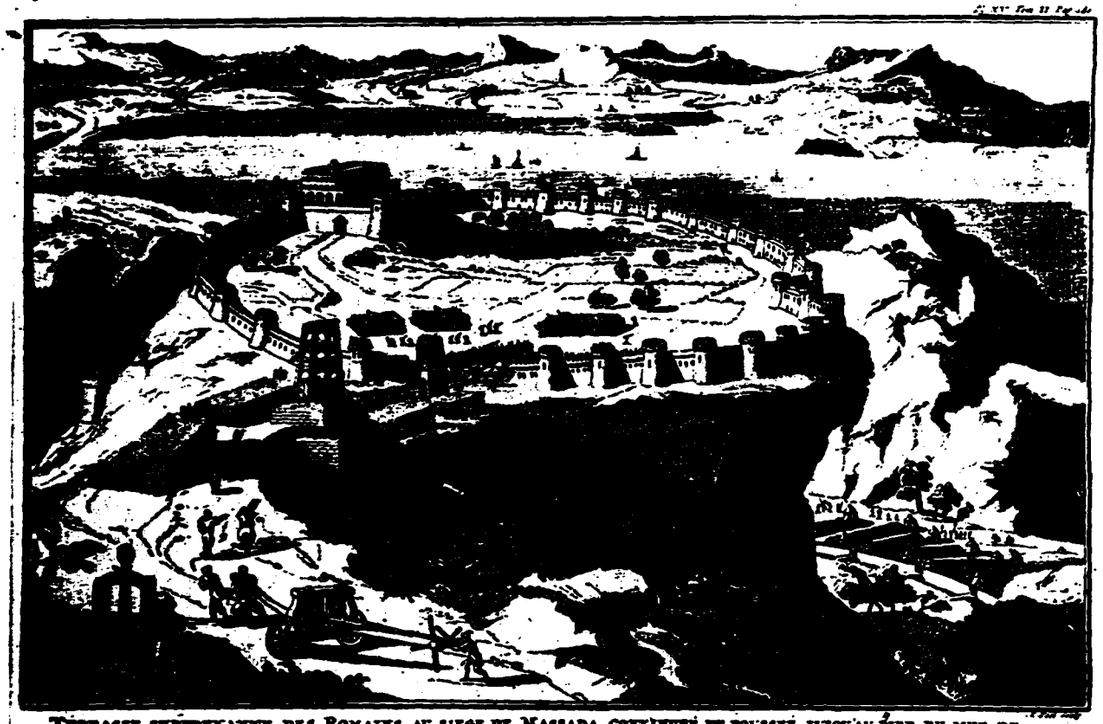
Josephus, describing the siege of Jotapata, remarks that the Romans constantly used catapults throwing 54-pound balls against that town. At a distance of 450 yards they made all movement unsafe in sections of the fortress commanded by the catapults, and from 600 yards got a good many hits. A man at the side of the historian was struck by a ball from this distance with such force as to tear his head off.

Larger ball-throwers were siege pieces for the most part. The largest size recorded were capable of throwing a 167-pound ball; Archimedes designed several of this size for the Syracusan navy.

From the time of King Lysimachus of Thrace (third century, B. C.) catapults were much used as field artillery. Lysimachus had an "Indian problem" on his northern frontier, and kept the tribes in check with a system of blockhouses on the roofs of which he mounted bolt-throwing catapults. They proved such a success that they were adopted throughout the world. In Caesar's time each gate of a Roman camp was habitually defended by a ball-thrower of 18 pounds weight of missile, and Tacitus tells of a battle between Vitellius and Vespasian in which the former nearly brought off the victory by concentrating his catapults opposite Vespasian's best troops and breaking up their charge with artillery fire—quite a modern expedient. Under the Roman empire, a 6000-man legion carried 55 catapults as regimental artillery, mostly bolt-throwers, as ball-throwers were inconvenient for field operations on account of the size and weight of the missiles. There were also six onagers per legion. All were mounted on wheels, and eleven men of each century (company) were told off as artillerists, with an officer whose title signified "regimental chief of artillery."

Divisional artillery, in the form of heavier machines, was carried when two or more legions joined. The heavy catapults and onagers which this represented were carried in knocked-down form with the divisional baggage. The field artillery was supposed to keep up with the infantry on all occasions.

In medieval times the catapult, as a piece of field artillery, mostly passed out of the picture. The excellence of medieval cavalry (which could ride right over such artillery as there was) had something to do with this decay; the increased fire-power of medieval infantry, due to the longbow and crossbow, which made artillery less useful, had more; but the really determining



TERRASSE SURPRENANTE DES ROMAINS. AU SIEGE DE MASSADA, CONTINUÉE ET POUSSÉE JUSQU'AU PIED DU MUR DE LA FORTERESSE. LA PETITE ELEVÉE SUR LA GRANDE ET SA TOUR DE CHARPENTE DRESSÉE DESSUS.

An onager and a catapult are shown at the left. The latter, mounted on wheels, is the ordinary piece of Roman field artillery. The onager is relatively too small as compared to the catapult. It should be really twice as large, being a "siege-gun," and should also have a sling instead of the spoon. From a very old French print.

cause was probably the lack of those wonderful Roman roads which enabled the wheeled traffic of a legion to keep up with the marching infantry.

We have mentioned the onager. This was an altogether different machine, operating by indirect fire. It had one very large skein, placed across the bed of the machine, parallel with the ground, and a single arm, which, when released, rose straight up to strike a bar parallel with the skein. In Roman times the arm was always fitted with a sling, which increased the range of the piece by about one-third. In later ages a spoon at the end of the arm took the place of the sling, the invention of the trebuchet having pretty much put the onager in the background.

Its advantage was high-angle fire and the fact that it could cast heavy and less shapely stones than the catapult. Its performance was not vastly different from that of a catapult of similar size, but its simpler construction made it popular for siege work. One illuminating note (from Philo) informs us that walls 15 feet thick were safe against onagers if they could be kept at a distance of 180 yards, and the same author recommends for the defense of every 30 yards of a city wall, one onager throwing ten-pound missiles and two bolt-throwing catapults.

The trebuchet was a French invention of about the twelfth century. It was simply a long pole working up and down on an axle. The shorter arm of the pole carried a heavy weight; the longer a sling from which the object to be thrown was discharged. Like the onager it worked by high-angle fire, but it had the advantage of throwing a missile whose weight was limited only by the capacity of the axle to stand it. The average range was not high, from 350 yards down.

Some enormous trebuchets are recorded. A single machine demolished at the Tower of St. Paul during the siege of Orleans furnished 26 cartloads of timber. Another flung dead horses into Liege during the siege of that city, and at the siege of Chateau Gaillard 400-pound stones were sent thudding against the walls of the fortress from a trebuchet with a 20,000-pound counterweight. Obviously no wall could long withstand such treatment.

Why then, were not more castles hammered down by them? Well, the main reason seems to have been because the castles were defended by that stout old soldier, General Ignorance. In the age of the trebuchet, siegecraft was at a very low ebb. Very few people knew anything about the proper placing of engines to make a practicable breach in walls; some of the few would not use their knowledge for fear of violating the absurd conventions of chivalry. It was "unchivalrous" to concentrate all your engines on one spot where the defense would not have a fair chance to shoot them down. Not until the advent of such generals as Papa Tilly and Gustavus Adolphus, who stopped playing war as a game and meant deadly mischief at every stroke, was this tradition done away with. And by that time the cannon had proved itself a far better piece of artillery than trebuchet, onager, or catapult.

Photo from Wide World Photos

FIRST HEAVY SNOWFALL OF SEASON AFFORDS CADETS OPPORTUNITY TO PLAY SNOW POLO

Wayne, Pa.—Even though today marked the first day of Spring the weather man showered New York, New Jersey and Pennsylvania with plenty of snow—the first real snowfall of the season. Down here at the Valley Forge Military Academy the cadets were given their first opportunity to trot out their mounts to engage in a real snow polo game. Brooms and a basketball replaced the mallet and polo ball.

Medical Department in the 1st Cavalry Divison Maneuvers

Lieutenant Colonel Edgar King, M. C. Division Surgeon, 1st Cavalry Division
Major Robert P. Williams. M. C. Commanding 1st Medical Squadron

THE Maneuvers of the 1st Cavalry Division, May 22 to June 1, 1931, afforded an excellent opportunity for some very interesting experiments in the Medical Department. The problem of the evacuation of sick and wounded men and animals from cavalry operating under conditions of modern warfare has been studied very little. In general it has been said to be similar to the evacuation problem in the infantry division. When, however, it was announced that the operations would take place in an area 5.100 square miles in extent, practically uninhabited and with only trails across the desert for roads, water frequently twenty miles away, troops operating as much as a hundred miles from their base and engaged for several days in mountains 9,000 to 11,000 feet above sea-level where wheeled transportation could not reach them; when we realized all of these conditions we began to visualize points of dissimilarity.

This then was an opportunity not to be lost. The personnel available was barely enough for a very much attenuated evacuation system, but one sufficient to allow a solution of organization, equipment and tactical questions as they arose. Much of the equipment had to be improvised. Our solutions were probably not the best, but they could be rated as "satisfactory" in that they worked, and the experience gained has been very valuable. "Excellent" solutions should evolve only after participation in more maneuvers.

Medical Department units in the cavalry division may be divided into two major echelons: first, small detachments attached to cavalry, artillery and engineer units (the Squadron, Battalion or Regimental Medical Sections) and second the divisional evacuation and hospitalization unit: the Medical Squadron.

Insufficient personnel meant that both echelons could not be adequate for complete functioning. Heretofore it had been the custom to break up the medical squadron and parcel out its men and ambulances to the regimental detachments. Regimental surgeons and veterinarians were then held responsible for the collection and treatment of casualties and their evacuation to fixed hospitals. This method assured prompt and efficient first aid, but such an evacuation scheme was wasteful of ambulances, deprived the Aid Stations of their mobility, since there was no unit behind them to take over their wounded, and it afforded no opportunity for treatment between the hasty first aid at the front and the fixed hospital back at the base. In this way much valuable individual experience could be gained, but there was no opportunity to work out medical tactics. In other words the Medical Department was using tactics on maneuvers which it could not use in war.

In these maneuvers it was decided to build up the medical squadron at the expense of the regimental detachments. It was realized that under this scheme adequate treatment could be assured the actual sick and injured only if all units of the medical squadron functioned efficiently. It was a more complicated method, but it more nearly resembled participation in actual combat.

Medical tactics could be tested. Casualties could receive additional treatment at the stations of the Medical Squadron on their way to the rear. The medical detachments with the combat troops would retain their mobility.

Regimental Medical Detachment

Each cavalry regiment was allotted two medical officers and five enlisted men of the Medical Department. This allowed one surgeon to accompany each squadron in case the squadrons were separated. Under Tables of Organization each detachment had an escort wagon to carry its aid station equipment. But we had been warned that the regiments would leave all wheeled transport behind on entering the mountains. They were to be in the mountains for several days, too long for the contents of the medical belts to suffice. During this period the cavalry was to be supplied by pack animals. The simplest solution therefore was to carry aid station equipment by the same means. Wooden boxes, reinforced with iron strapping, were constructed and provided with hangers, so that a Phillips pack saddle would take two boxes. A pair of boxes carried the quantity of dressings and medicines which we considered adequate to care for a regiment for a short period of time. Between the boxes and on top of the saddle, splints and a tent fly were lashed. The total weight was about 200 pounds. Each regimental surgeon was given at least one of these packs, which we called the Squadron Aid Pack, because in actual combat one such pack would be allotted each squadron. These first pack boxes were rather crude. Boxes half or two-thirds as large and built of lighter material would have been better. Clumsy as they were, they gave very little trouble. The horses carried them as well as most of the other packs in the division. Further experiments with them will produce an extremely valuable addition to Medical Department transportation. All medical officers of Regimental Medical Detachments were mounted, one of the men leading the pack horse.

Squadron Aid Pack. Two wooden boxes containing dressings and medicines. Splints and a tent fly are lashed between the boxes. This equipment is carried on the Phillips Pack Saddle, the pack horse being led by a mounted man. By using this method of transportation, unit surgeons always had equipment for a small aid station right with them.

With mounted troops, the escort wagon is of limited value for regimental medical detachments. Regiments are small, as compared to the infantry regiment, so that less material need be carried. But what is carried must accompany or be near the troops at all times. The cavalry uses light spring wagons and pack animals. Both showed their ability to keep up and should prove sufficient for the medical needs of cavalry at peace strength. At war strength regiments should have a reserve of medical supplies on an escort wagon with the regimental field trains.

Special Troops, Cavalry Division—This unit consists of its headquarters, the division headquarters troop, the signal troop, ordnance company maintenance, an armored car troop attached for administration and attached Medical Department. Peace-time total about 230 men and 99 animals. The elements serve at various points when in the field according to the nature of the operations. For units not near the forward or rear echelon, medical service was furnished by attaching aid men and by reliance on the surgeons of units to which the elements were attached or near which they were serving. This proved satisfactory in these maneuvers and it is believed that similar arrangements would serve in war. Consideration should be given to substituting a light truck (¾ to 1½ ton) for animal drawn transportation as the combat medical vehicle with this unit, as it is now entirely motorized excepting only the headquarters troop. Enlisted men, Medical Department (Veterinary Service) should be attached to the Headquarters Troop when necessary.

Combat Engineer Squadron—This was represented by a motorized troop. Medical service was satisfactorily rendered by an attached aid man, carrying a reduced Medical and Surgical Chest, man and chest being transported on a motor vehicle of the troop. This unit was generally with or near an organization having a medical officer. In war or maneuvers with the entire engineer squadron present, Medical Department personnel would be attached as per T/O. The veterinary service with the unit is now a rather small problem as two of the three troops are motorized, leaving but 136 animals.

Division Trains (Q. M. C.)—Medical and veterinary personnel was attached as indicated for a cavalry regiment. The veterinary work is important, the number of animals being large. Pack trains, when detached, secured medical and veterinary attendance from the unit to which attached.

Due to the long distance covered by these trains in this maneuver, they were usually too far from the medical squadron to get ambulance service by direct contact.

They were, therefore, directed to call on the Surgeon's Office at the rear echelon, which office secured necessary motor ambulance service. To cover such contingencies it was necessary at times to detach one motor ambulance to serve the trains and the rear echelon.

1st Medical Squadron

The 1st Medical Squadron consisted of a squadron headquarters, 1st Ambulance Troop and 1st Veterinary Troop, a total of two officers and fifty-seven enlisted men. As organized, it could provide only for ambulance and veterinary service. It had no personnel trained to maintain contact with the medical detachments of the cavalry and artillery or effect the collection of their casualties. Most important of all, it lacked any equipment or organization capable of rendering temporary care for the actual sick and injured. Its troops were too small to assume these duties. In the medical regiment of the infantry division these functions fall to the collecting and hospital companies.

The Division Commander offered to help in this experiment by the detail of a limited number of men, enough to form one small troop. If we used them for a collecting group, the gap between the combat troops and the forward limit for ambulances could be bridged. This gap proved to be anywhere from two to twelve miles deep. It was generally due to the tactical situation, but in the mountain fighting the terrain was sometimes impossible for wheeled vehicles. In actual combat the bulk of the casualties would occur in the cavalry and artillery; and on maneuvers those same units would have some men requiring evacuation because of actual illness or injury. Only a collecting troop could relieve the combat units of those casualties; and they had to be relieved, first to give the casualties adequate treatment and second to allow the combat forces to retain their mobility.

On the other hand if the division was going to operate a hundred miles from a fixed hospital, a hospital troop would be of great assisfance. But a collecting troop could furnish temporary care for the casualties in its collecting station. No equipment for a hospital station was available and neither were men, trained for duty in such a station.

Most of the men detailed to the squadron would be trained in the work of line troops only. We decided to use them to form a provisional collecting troop and extend the ambulance haul back to William Beaumont General Hospital in El Paso.

Three officers and twenty-three enlisted men were detailed to the medical squadron. The enlisted men came from the Post Medical Detachment, the Field Artillery, the Corps of Engineers, and the Cavalry.

The squadron was then organized as follows:

Squadron Headquarters:	1 Major, M. C. 1 Lieutenant, M. C. (part time only) 3 enlisted men.
Provisional Collecting Troop:	1 Officer 20 enlisted men
1st Ambulance Troop:	1 Officer 38 enlisted men
1st Veterinary Troop:	1 Officer 19 enlisted men

The Collecting Troop

The Provisional Collecting Troop was organized into a collecting station consisting of men who had served in the Medical Department, while the artillerymen, cavalrymen and engineers formed the contact and litter bearer section. The contact section was simply a small group of mounted men called contact agents. When combat was imminent or units of the cavalry or artillery were to be separated from the main body of the division, the troop commander sent contact agents to report to the unit surgeons. These agents acted in a liaison capacity between surgeons and the collecting troop. Usually two agents were sent to each cavalry regiment. The regiments had two squadrons, so this arrangement allowed the regimental surgeon to send one agent out with a detached squadron, or even smaller unit. When a unit suffered casualties, its surgeon dispatched his agent with a message to the medical squadron, stating how many and what kind of casualties he had, where they were and what moves and additional casualties could be expected from his unit in the immediate future. Casualties able to ride accompanied the agent on their own mounts. In that case his speed, of course, was dictated by the condition of the casualties. It was never less than four; often it was as high as seven miles per hour. Agents had to be resourceful and reliable, capable of finding their way alone over long distances and without unnecessary loss of time. Since they constituted the link between the combat troops and the medical squadron, their speed and efficiency determined the rate of evacuation. On reaching his troop, the agent delivered the message from the unit surgeon, and the collecting troop commander determined what means to send forward to evacuate the remaining wounded.

Because of the distances, hand litter carriage was not used during the maneuvers. The litter bearer section had three methods of evacuating the aid stations. Most of the wounded could ride their own mounts back to the collecting station; litter cases were brought back on pack horses or in a two-wheeled cart. The cart had been developed at the Medical Department Equipment Laboratory and sent here for field tests. It was of very light construction, carried two litter cases, one above the other, and was drawn by one mule. It was only a little wider than a litter and went everywhere except over the steepest grades when the footing was too insecure for the mule. Its springs were long and flexible, and cases rode more comfortably in it than in the animal-drawn ambulances. Throughout the maneuvers this cart proved a very valuable means of evacuating the more serious cases.

Weeks before the maneuvers the division had been warned that part of the fighting would be in the

Experimental Litter Cart, developed by the Medical Department Equipment Laboratory, Carlisle Barracks, Penna., and used by the Provisional Collecting Troop, 1st Medical Squadron. The cart is of light construction, very little wider than a litter, and went everywhere except over the steepest grades.

Sacramento Mountains, where wheeled vehicles could not possibly be used. A study was made of previous cavalry campaigns with the object of adopting the methods of evacuation which seemed practicable for our conditions.

The cavalry planned on using the Phillips pack saddle for their supply. We began experiments with this saddle to determine its practicability for evacuation. The saddle is essentially a steel frame resting on a large felt saddle-pad and is held in place by harness. Several means of fastening loaded litters to it were tried. Our object in each case was the construction of some method of securing the litters to the saddle with a proper distribution of the weight on the horse and so as to allow the patients to ride as comfortably as the gait of the horse would permit. Pack litters would only be used as a last resort for transporting wounded. But throughout our maneuvers situations were frequently encountered where no other means were practicable; situations where casualties occurred five to twelve miles from the collecting station. When the intervening terrain did not even admit the use of the litter cart, and carrying litters by hand was a physical impossibility unless double litter squads (eight carriers per litter) were provided; in these instances we considered that pack litters were called for.

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The Cacolet in use. The two litter cases had to be of approximately equal weight in order to balance. This approximation was easily obtained by carrying a canvas bag into which dirt was placed to bring up the lighter litter's weight.

Our first device, the cacolet, was a method of transporting sick and wounded that has been used for centuries in Egypt and the countries to the east of the Mediterranean. It was used extensively on the camels in Allenby's Palestine campaign. Our model was made in the Post Ordnance Shop from illustrations and descriptions in the "Official History of Australia in the War of 1914-1918." The cacolet consisted of light steel hangers attached on either side of the pack saddle. Each hanger received a standard litter, so two patients were carried, balanced, one on either side of the pack horse. This was our most successful method of pack evacuation.

General Allenby's principal objection to the cacolet was the discomfort to the patient caused by the swaying, uneven gait of the camel. Our pack horses largely overcame this objection. The patients had to be of approximately equal weight in order to balance. This approximation was easily obtained by providing a canvas bag into which enough dirt or sand was placed to bring up the lighter litter's weight.

A litter carrier (two-litter type) for the Aparejo was described in Daly's "Pack Transportation, Quartermaster's Department, 1910." Slight modification was needed to adapt it to the Phillips pack saddle. The carrier consisted of heavy leather slings attached by steel clamps to the litters. One horse carried two patients by this method, which was in effect simply the substitution of slings for the steel hangers of the cacolet. We preferred the cacolet, as the rigid hangers gave more room for the patient, and loading and unloading the horse were facilitated.

From the same Daly's manual we obtained the description of another litter pack, the litter carrier (one-litter type). This consisted of a steel frame made in the Post Ordnance Shop. The frame secured one standard litter to the saddle over the horse's spine. Our experimental model was higher than need be, but it is believed that this carrier, with further experiment, will develop into a valuable means of evacuation.

For our pack litters we had to use selected horses, paying particular attention to a quiet disposition and smooth walk. After the animals became accustomed to the litters this method of evacuation was safe, much more rapid than hand-carriage and more economical of men. On the march the pack horses wore only their saddles, the litters being in the wagons. The pack horses were led by mounted men. Travelling thus light they arrived at the site for the collecting station without becoming fatigued. Here empty litters were adjusted to the saddles and from then on the animals were always led by dismounted men. This slowed the gait to $2\frac{1}{2}$ miles an hour or less and also prevented accidents.

The objection was raised that these animals were loaded in excess of the 200 pounds prescribed for the cavalry pack horse. That is the maximum load with which animals can keep up with the cavalry. But the cavalry is speaking in terms of walk, trot and gallop with 30 or more miles a day. Our pack horses, with two loaded litters, often carried about 400 pounds, but such loads were carried only for relatively short distances and never at a speed even equaling a horse's walk. We used the same four pack horses throughout the maneuvers, never had a sore back and on their return to Fort Bliss all were in excellent shape.

We considered the travois, but discarded it as unnecessarily rough on the patients.

The litter bearer section brought the casualties to the Collecting Station, a small wall tent with a Field Medical Outfit No. 1, water, food, an officer and several enlisted men trained in the temporary care of the sick and wounded. The Field Medical Outfit was sufficient for all our needs. Another time, however, we would reduce its weight and carry it on a light wagon, so

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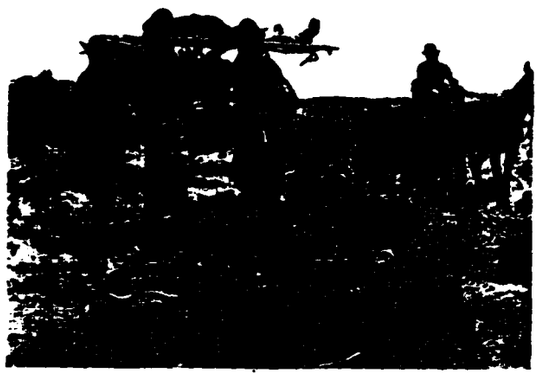
Daly's Litter Carrier (two-litter type) in use. Although quite similar to the cacolet, the latter gave more room for the patients.



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Daly's Litter Carrier (one-litter type). The patient must be secured to the litter. We used a system of litter slings and surcingles.

that the station could be established without waiting for the arrival of an escort wagon. This station was evacuated by the ambulance troop.

1st Ambulance Troop

This troop had six animal-drawn and six motor ambulances. Its operation followed closely similar units in medical regiments. On the march it moved in two sections, the animal-drawn section at the tail of the medical squadron. This section picked up any march casualties left by the division. The motor section followed by bounds, catching up with the animal-drawn section every fifteen minutes. At these contacts patients were customarily transferred to the motor ambulances. When required, one of the motors left the column and evacuated its cases back to the hospital.

In combat usually both an animal-drawn and a motor ambulance shuttle were established. The animal-drawn shuttle covered the short hauls and poor roads near the front, the motor shuttle covering the entire distance from the Ambulance Station back to the fixed hospital. Thus, the motor shuttle represented the Army Ambulance Service as well as the divisional. This was necessary since the medical squadron had no hospital troop with which to establish a mobile hospital in the field.

The Hospital

William Beaumont General Hospital served as the hospital station for all elements throughout the maneuvers. From a maneuver view point it was a Zone of the Interior installation.

Veterinary Service

Regimental Veterinary Department

A regimental veterinary surgeon and five enlisted men, all mounted, accompanied each cavalry and artillery unit. Equipment for a very small Veterinary Aid Station was carried on an animal-drawn ambulance, converted into a light spring wagon. This method of transportation worked very well; ordinarily the aid station equipment was where it was needed. Although in accord with modern cavalry practice our method was contrary to that laid down in Tables of Organization. Under those tables the peace strength cavalry regiment should carry its veterinary aid station in the same escort wagon as its regimental aid station (medical). Had we followed that method, regimental veterinarians would have had their equipment only occasionally during the maneuvers and probably never when most needed.

1st Veterinary Troop

The 1st Veterinary Troop performed the same functions for animal casualties as the collecting and ambulance troops performed for men. Veterinary contact agents established liaison with unit veterinarians. The lead line performed the functions of collection. It is essentially a moving picket line, the ends of which are attached to a special harness on anchor horses. The line is kept taut at all times by these horses, and to the line the animal casualties are secured by their halter shanks. Most animal casualties when relieved of the weight of rider and equipment could be handled by this method. For those too seriously injured or too ill, the troop had a motor veterinary ambulance. But its capacity was only one animal, so that only a very few casualties could be handled this way. For long hauls and the bulk of the seriously sick, portée trucks of the Division Quartermaster Train were used. These trucks were especially adapted for transporting animals, having tail gates that could be used as loading ramps. All animals of the division had been trained by being loaded into these trucks. The troop carried equipment for a small Veterinary Collecting Station on its escort wagon. After temporary care and treatment at this station, animal casualties requiring it were loaded into the portée trucks by the troop and evacuated to the Veterinary Station Hospital at Fort Bliss.

Division Surgeon's Office—For the movement, during the first 36 hours, the rear echelon remained at Fort Bliss. During this period the Division Surgeon left the office in charge of his assistant while he accompanied the Brown Forces. Rear echelon of Division headquarters then moved into the field and was established at Orogrande, New Mexico, the forward

Motor Ambulance of the 1st Veterinary Troop. This was an excellent means of transporting the more seriously disabled animals, but because of its limited capacity only a few casualties could be handled by this method.

Veterinary Troop of the 1st Medical Squadron unloading animal casualties from portée trucks of the Division Q. M. Train. The special tail-gate served as a loading ramp, and each truck had a capacity of four animals.

echelon being at a camp about 30 miles northeast and about 6 miles within the Sacramento Mountains. It proved best for the Division Surgeon to remain most of the time at the forward echelon, visiting the rear echelon by motor once daily if practicable and keeping in radio communication at all times. It is believed that the Surgeon of a Cavalry Division must be at the forward echelon to be of service. He also must, under modern conditions, do a great part of his travelling within the division area by motor. This does not mean that he should not have a mount available; certain phases of his work can only be done mounted.

His office is well enough left at the rear echelon. In operations similar to these maneuvers it serves a most useful purpose as a check on medical troops, casualties, etc. leaving the division area.

During the maneuvers the Division Surgeon acted solely as a staff officer, leaving the command of the medical squadron to another medical officer. This worked well and is, we believe, the best method.

Airplane Ambulance—In operations similar to these maneuvers the proper care of seriously wounded presents a difficulty which it is believed might in greater part be met by the use of airplane ambulances.

It is not very practicable to operate a mobile surgical hospital with a cavalry division, certainly not under most conditions. A suitable airplane, available on call, would often save life. Two patients were evacuated by plane from a point 50 miles from William Beaumont General Hospital to the hospital within less than one hour elapsed time. The advantage of such evacuation over ambulance haul for the seriously wounded is evident. Another point to be considered is that an airplane ambulance could be available at once, should our cavalry have to respond to an emergency call for immediate field service.

The Maneuvers

On May 22d, war was declared between Texas (Brown) and New Mexico (White). Both belligerents were concentrating large forces several days march from the border, while the troops of the 1st Cavalry Division, divided between Brown and White, covered the two concentrations.

The White covering force, a reinforced cavalry regiment, had a small medical detachment with one motor and one animal-drawn ambulance attached. These ambulances were declared neutral—and authorized to evacuate patients from the White force across no-man's land and through the Brown lines to William Beaumont General Hospital.

The Brown covering force consisted of the 1st Cavalry Division, less one brigade. This force had the skeletonized evacuation service which we had organized, and it is proposed to follow this Brown force through the maneuvers, showing the relation between the cavalry tactics and the medical tactics which we employed.

In each situation, the regimental surgeon and veterinarian with their small detachments should be visualized as parts of the regiment they served. As men and animals were injured or became ill, they attached diagnosis tags and gave such first aid treatment as was available, generally using only the contents of their belts and the squadron aid pack, turning the patient over to the medical squadron for future treatment and evacuation. Only when the regiment went into camp or bivouac or when it was to hold a position for several hours or more, did the surgeon establish his aid station.

Hostilities Commence

At dark on May 22d the reinforced 2d Cavalry Brigade the Brown cavalry force with an offensive mission marched in two columns to invade White territory. The medical squadron less motors and escort wagons which joined serials of similar vehicles followed the main body of the left column. Before the march started contact agents from the collecting troop were sent to report to each regimental surgeon. The roads used by the two columns were parallel and less than a half mile apart. Our method kept the medical squadron intact, just behind the bulk of the brigade, and relied upon the mounted contact agents bringing across any calls for ambulances from the right column. The plan worked successfully.

The march was of 15 miles. One column marched on the shoulders of a paved U. S. highway. This column gave us our march casualties, men and horses being frequently blinded by automobile lights and several horses slipping on the paving or falling into roadside ditches.

Bivouac was reached a half hour after midnight. Here a serious deficiency in the medical squadron was demonstrated. The squadron carried all its supplies and equipment on three escort wagons, one for each troop. These wagons were attached to the Division Trains for the march and were due at bivouac just as the squadron was due to leave. Which meant that we had no equipment to establish a Collecting Station and a Veterinary Collecting Station in the bivouac. In actual combat this would have been very serious. The brigade was in bivouac less than four hours; it had driven back the White border detachments and seized a White town. The troops, therefore, had sustained casualties, and it was the mission of the medical squad-

ron, immediately on arriving in bivouac, to relieve the regimental detachments of these casualties, to give the wounded men and animals further treatment and to evacuate them to the hospitals at Fort Bliss. Also, all dressings, splints and blankets used by regimental detachments in treating the casualties should be replaced by the medical squadron. Further, this was just the first march of the campaign. When the brigade again marched the medical squadron would be directed to follow without distance; if animals were to be watered and men and animals fed and rested, before the next day's march commenced, it had to be done at once. Of all these duties the only ones that the medical squadron could accomplish were relieving regimental detachments of their casualties, evacuating those casualties to Fort Bliss, and watering the animals. The discrepancy between what could be done and what should have been done was due to the complete lack of spring wagons in the medical squadron. Such vehicles would have accompanied the squadron, and the equipment for collecting stations, the medical supplies and the rations and forage would have been available from the moment bivouac was reached. As it was, all these items were hours behind and not available when needed. One spring wagon is authorized for the squadron in Tables of Organization, but it had never been issued. Of course the situation was met by emergency measures, and all the missions were accomplished except that the men got no rest.

At daylignt the brigade marched, and the medical squadron accompanied it. To correct the deficiency a squadron order declared that one animal-drawn ambulance was henceforth a spring wagon. There should have been one such vehicle per troop, but that would have meant the conversion of half the animal-drawn ambulances. The squadron commander was present at all division conferences and was immediately informed by the Division Surgeon of changes in the tactical situation and of probable future developments. From all of this information the load of the spring wagon was changed in each camp to meet the needs of the next march, and the squadron was always accompained by enough equipment to accomplish most of its missions.

The second day's march was a long one, at least in point of time. About 4:00 A. M. the brigade marched in one column with strong advance and flank guards. The medical squadron (less escort wagons) followed the main body, its motor ambulances moving by bounds so that they caught up with the squadron every 15 minutes. The day was a series of small cavalry engagements between the advance and flank guards and White delaying forces. Perfect contact was maintained with all elements. The medical squadron, following the combat troops in this advance deep into enemy territory, would have furnished perfect evacuation, as all casualties would have occurred within a few hundred yards of the road. It is probable that stations of the squadron would not have been established during the march. Since the movement was only preliminary to the main attack, which might occur at any time, all troops were kept mobile, and all casualties which would be unable to participate in the attack were evacuated . Typical handling of casualties that day was as follows: first aid was applied by the patient or a companion or the unit surgeon. If the injury was serious, the surgeon despatched his contact agent with a message, and the collecting troop turned over the appropriate transportation to the agent, who guided it to the casualty and then rejoined his surgeon. The litter cart was invaluable for this work. On either side of the road was American desert, sand, mesquite and cactus, with small, sudden arroyos. Any part of it could have been negotiated by animal-drawn ambulances, very little by motors, but the cart was small and inconspicuous and had a much better chance of getting through hostile fire. The patients preferred it to the animal-drawn ambulances when going across country. The litter cart delivered the cases to the ambulance troop where they were transferred to animal-drawn ambulances, inspected and re-dressed. When an ambulance-load was accumulated the ambulance dropped to the rear of the column; and at the next contact with the motor column the load was transferred to a motor ambulance which was dispatched to the hospital.

In the veterinary service similar methods were employed. Animal casualties were dressed and tagged by regimental veterinarians and turned over to a contact agent from the veterinary troop. He led them to his troop where they were inspected, re-dressed and put on the lead line. Animals which could not keep up were cut out of the lead line and left by the roadside in care of a mounted man of the troop, who hailed the motor veterinary ambulance or a portée truck and thus they were dispatched to the hospital, the mounted man rejoining his troop.

In the afternoon the enemy made a stand along a ridge at Orogrande; when the medical squadron received the brigade attack order, troop commanders were assembled and the squadron commander dictated his orders for the attack. Since the brigade staff had transmitted the intelligence that the attack would be short and decisive, sites for stations were selected by map reconnaissance and were considerably in advance of the area known to the squadron at the time the order was issued.

Half an hour later, while advancing to the positions ordered, word was received that the enemy had evacuated his position and that all troops were to proceed to Orogrande and bivouac there under peace conditions until midnight Sunday.

The day had been hot, troops were without water except that in their canteens. They were thirteen hours in the saddle. The road distance for the day was 34 miles, but that figure bears little relation to the distance travelled, when reconnaissance and back trips of contact agents and evacuation vehicles are considered. Throughout, perfect contact had been maintained and it is believed that the medical squadron would have furnished perfect evacuation in a similar combat situation. During the day seven men and two horses, all actual casualties, were handled by the squadron.

On arrival at camp an ambulance immediately visited each regimental aid station to carry any casualties to the collecting stations for men and animals. There cases were treated and evacuated or returned to their organizations during the night. In the morning a similar visit was made just before the march commenced, to assure that the combat troops were not encumbered with any non-effectives. Similarly at the end of a march all contact agents returned to the squadron, where man and horse were fed and rested. This relieved the combat troops of the burden of caring for them, gave the officers of the medical squadron an opportunity to question them in detail about the day's events and permitted the replacement of an exhausted man or horse. Contact agents rejoined their regimental surgeons just before the march was resumed. All the actions mentioned in this paragraph were performed as a routine at each halt for the night.

The offensive was resumed at midnight the following day. The medical squadron was now detached from the brigade and reverting to divisional control was given orders to follow the brigade, which was to march at daylight. For the march, one animal-drawn ambulance was attached to each cavalry regiment, in addition to the contact agents sent out by the collecting and veterinary troops.

The medical squadron followed the brigade at three hours distance, the 24 miles across the desert to Ditch Camp, at the foot of the Sacramento Mountains. The march was without particular incident except for one halt of four hours, due to the tactical situation. In the late afternoon the brigade finally succeeded in driving the Whites into the mountains, and troops were concentrated for the night at the only place where water was available.

All motors in the division were detached and left in Orogrande. When Ditch Camp was reached arrangements were made for evacuation by motor. The camp of the medical squadron was near the Brigade C. P., and the squadron commander was allowed the use of the brigade radio. If it had not been for this courtsey it is difficult to see how evacuation could have been accomplished. The tactical situation allowed only single motor vehicles to go forward from Orogrande, and even this movement was to be kept at a minimum. The situation was perfectly logical and one which might be expected frequently. It has led to much thought, discussion and experiment on the subject of communication for the squadron. We can't always expect to transmit messages over an instrument which is busy with tactical orders. At Ditch Camp our only other means of communicating with Orogrande was by mounted messenger, and the distance was 24 miles or five hours.

The only practicable motor route was not that over which the troops had marched. To familiarize all his drivers quickly with this route the ambulance troop commander followed an ingenious method. A second driver displaced the orderly whenever an ambulance left Orogrande for Ditch Camp. On his return to Orogrande this second driver has been twice over the road and was now qualified to drive his own ambulance over it and at the same time act as guide to a third driver.

That night and the next day our cavalry drove the enemy deeper into the mountains. One regiment operated up Culp's Canyon, a squadron up Grapevine Canyon and another squadron climbed 2000 feet directly up the face of the mountain (extreme grade). The attack was thus in three columns over a broad front, the columns being separated by from two to five miles, with high mountains between. They were not linked by any communicating trails. As there was no way to foretell which of the columns would suffer the bulk of the casualties, it seemed poor tactics to attach any elements of the medical squadron. Reconnaissance showed that animal-drawn ambulances could be sent up the canyons, but litter cases on the mountains could be brought out only on pack litters or by hand carriage. Ditch Camp was centrally placed for all columns and had the only water. The medical squadron was kept there, ready to send whatever was needed by the shortest route to any column. Collecting, Ambulance and Veterinary Collecting Stations were established.

That afternoon two litter cases in serious condition were reported 15 miles up Culp's Canyon. This required the negotiation of 30 miles of very rough canyon where there were no roads. An animal-drawn ambulance made the round trip in six hours and twenty minutes.

That night it was discovered that one cavalry regiment, through a misunderstanding, had returned its contact agents to the collecting troop before entering the mountains. Immediately on receiving this word two mounted agents were despatched. They left at 9:00 P. M. to contact that regiment and accomplished their mission before morning.

But it must not be thought that the medical squadron did not have contact until those agents joined their regiment. All the time the troops were in the mountains main reliance was placed on contact by radio, authorized by the Division Commander. Most of the calls for ambulances came in that way, thus saving half the time and allowing unit surgeons to retain their contact agents for emergency.

The troops were in the mountains three days, penetrating to a depth of 25 miles. During this time twelve cases were evacuated to hospital, and twice as many more received treatment and were held temporarily at the Collecting Station. Excellent opportunities were afforded to try out all methods of evacuation.

During this same period the veterinary troop evacuated nine animals. All were led back to the Veterinary Collecting Station at Ditch Camp, where they received treatment and rest. Those requiring evacuation was sent out in the veterinary motor ambulance. It was immediately seen that this vehicle with a capacity of one animal was inadequate to clear the Veterinary Collecting Station if it had to go the 72 miles back to Fort Bliss. Arrangements were made to use the ambulance between Ditch Camp and Orogrande

and portée trucks of the Division Train for the rest of the distance.

While the mountain fighting lasted the medical squadron faced a very difficult situation. However, it demonstrated that a peace strength squadron, with all four troops active, can properly treat and evacuate the casualties from a peace strength cavalry division. The addition of a hospital troop would have allowed the establishment of a hospital station at Orogrande and thus shortened the round-trip ambulance route by over 100 miles.

On the third day the tactical situation changed. The entire division, including the regiment which had constituted the enemy's covering force, was concentrated at Ditch Camp. It then withdrew under cover of darkness to Orogrande.

To handle this withdrawal, as many elements of the medical squadron were attached to the cavalry and artillery as they were likely to need. The squadron, less these detachments, marched after the field trains and ahead of the main body. This arrangement allowed unit surgeons to carry with them all casualties resulting from the rear guard action. If their attached animal-drawn ambulances became filled, a mounted contact agent could double the column and request that another ambulance be left beside the road to join the regiment when it arrived at that point.

On arrival at Orogrande the division occupied a defense position opposing an advancing hostile infantry force, which had been concentrating while we were in the mountains. The division occupied three successive positions.

For this phase, simulated casualties with various types of wounds were designated. All elements of a complete evacuation and treatment system were represented. Regimental surgeons reported by contact agents their locations and subsequent moves of their aid stations. Slightly wounded rode their own mounts or walked to a Collecting Station behind the threatened flank or a Collecting Point behind the other flank. Litter cases were brought back in the cart or by pack litter. Collecting stations were evacuated by an animal-drawn and a motor ambulance shuttle to an imaginary hospital.

Veterinary casualties were also designated. They were led back to contact agents and treated in the Veterinary Collecting Station, whence they were evacuated by lead line, veterinary motor ambulance and portée trucks.

This being a defense situation with the cavalry operating mainly dismounted, distances were shortened and an opportunity afforded to inspect the entire medical service. The observers from other arms and services showed considerable interest in the work of the Medical Department. In fact several became temporary casualties in order to experience rides in the litter cart and on pack litters.

This phase terminated the maneuvers and the division marched back to Fort Bliss under peace conditions.

Conclusion

We have discussed medical service with mounted troops with many officers, both medical and of the mounted services, particularly cavalry. The general opinion expressed is that the cavalry casualty can not expect the same promptness as the infantry casualty due to the nature of cavalry service. We can subscribe to this view but very partially—we believe that the difficulties exist but that, under modern conditions, they are by no means insurmountable, provided that we can make the necessary *special preparations* to meet them. We wish to particularly call attention to the value of *pack horses* for carrying medical supplies. With pack horses, sufficient supplies can always be with *the troops*. These horses can go anywhere the troops can go, and cavalry commanders will permit them to do so. No wheeled vehicle can do this or is permitted to do it. We must move our men and supplies by the same means the cavalry uses— i. e. riding horses, pack horses and spring wagons. By using a spring wagon drawn by *four horses* to carry the aid station and dispensary equipment this materiel will always be kept up.

Spring wagons require a reduced load, but we have selected a load of about 800 pounds in weight which seems ample for a peace strength cavalry regiment when supplemented by two pack loads.

For war, simply add a wagon per squadron.

With the Phillips pack saddle no difficulty is experienced in training medical soldiers to transport loads on pack horses.

Collection and Evacuation—This, like regimental service, presents difficulties. We believe, however, that a medical squadron can be so organized, equipped and trained that the job can be well done. Such a squadron should have among other things:

1. No transportation slower than a spring wagon drawn by 4 horses (except in its field trains).
2. A light type of motor ambulance.
3. In the collecting troop, the means for transporting patients over every kind of ground over which cavalry can operate.
4. Radio or radio telephone communication so arranged that unit surgeons can promptly give full details of all casualties left behind to the squadron.
5. Mounted contact agents from the collecting troop in sufficient numbers. These would bring out many casualties on the patients' own mounts.
6. Airplane ambulances for seriously wounded or sick, and other emergencies.
7. Carefully prepared training regulations, equipment tables, etc. based on cavalry practice. We can move as fast and far as cavalry does, give medical service during combat, spot the casualties and evacuate them if we provide personnel and equipment suited for fast work, have enough of both and time to train them.

An attempt to work out the details suggested above is being made in the First Cavalry Division.

Side Lights on Exhibition Drills at Fort Myer, Va.

The First Reconnaissance Regiment

By Major Albert H. Stackpole, 104th Cavalry, Pennsylvania National Guard

BEFORE going into an explanation and discussion of what I have called, for want of a better name, the "First Reconnaissance Regiment" let me disavow any idea of attempting to present something bizarre merely for the sake of its revolutionary irregularity. What I have to offer I offer with no apologies, for it is my belief that the developments in the warfare of today make my suggested organization not only a possibility but, in character at least, an essential to the advancing army of the future.

In brief, this is the organization of the First Reconnaissance Regiment, United States Army:

One squadron of cavalry, plus a machine gun troop.
One squadron of armored cars.
One observation squadron, Air Corps.

If at first glance this appears to be a hodge-podge of men and equipment, bear with me until I have developed my thought. It is granted by students of the military profession that the sweeping advance of an army must be screened, covered, protected by whatever troops are best equipped for that purpose. In the older days it was the cavalry, but the days of the massed charge, the thunder of hundreds of hoofs as squadrons galloped in shock action, is, I fear, something for the movies alone.

What have we in its place? Some say the attack or observation plane for long distance reconnaissance; others claim the armored car as the sine qua non of a reconnoitering force. I contend that both, with a complement of cavalry line troops, presents a possible answer.

Granted that airplanes can travel far and fast, see much, without excessive fatigue. True, but what of the heavy banks of fog that hover in every country; the driving sheets of rain or blankets of wet snow befogging the most daring of pilots and observers in their effort to peer into enemy territory?

Granted that armored cars can speed rapidly along highways, and without committing themselves to the development of an action, inflict considerable damage and return to the commander of troops with information. True, but what of the road barriers, the impassable routes to be found in some counties, the inability of the armored car to leave the road and proceed 'cross country or through dense woods?

Granted that cavalry of the line can travel over the most difficult terrain to be found anywhere in any kind of weather, day or night, subsisting on the country and pushing on until horseflesh will stand no more. True, but what of the extremely limited area, in terms of miles, to be covered by these mounted men; what of the comparative weakness of their fire-power?

In the three foregoing paragraphs I have endeavored to sum up, quite generally, the merits and demerits of the three squadrons composing my mythical regiment. But in summing them up, I call to your attention the fact that what one squadron lacks, another supplies; where the weather stops one squadron another steps forward to fill the gap. And there, I believe, is the strength of the reconnaissance regiment.

Let us assume that this regiment is pushed forward as the advance guard, the reconnoitering force, of a larger body. In his hands the commanding officer holds the reins of three powerful steeds: his air corps squadron for distant and rapid reconnaissance, his armored car squadron for quick sweeping of the roads ahead of him, and his cavalry squadron for a searching of the country where lack of roads or soupy weather minimize the activity of the other two.

Liaison impossible with three such groups under one commander? Not at all! With the development of short-wave radio and its continued improvement there is no reason why all elements should fail to be in communication with their commander and with each other at all times.

For this purpose, in the case of the cavalry troops, a highly mobile crosscountry vehicle of the Christie caterpillar tractor type, equipped with the best short-wave radio equipment, could move with the organization to which it was attached. A similar command vehicle would stay with the armored car squadron commander, whose radio equipped machines would keep in touch with their leader's peripotetic P. C. The radio of the observation squadron, of course, is already highly developed in commercial aviation, as well as in the Army Air Corps.

Difficulties of supply? Surely, but not insurmountable. The field train, attached, or an integral part of the regiment, would be composed largely of pneumatic-tired trucks of large cargo capacity, to be used for the transportation of gasoline, of oil, of spare parts, of clothing, arms, and equipment, of forage or of *men and horses*, as the situation demanded. Again the tractor mount of the type used either on the roads or in cross-country travel, could be put into service as a supplementary carrier.

The above, I believe, might be a working regimental organization.

This, of course, with the usual complement of medical department officers and men, distributed as necessary with each squadron, a supply officer trained with motor transport troops, ordnance repair men, etc.

NOTES FROM THE CHIEF OF CAVALRY

Goodrich Trophy Training Test, 1931

TROOP F, 7th Cavalry, Captain Donald A. Young, commanding, has been declared the winner of the 1931 Goodrich Trophy Training Test. The next competitors were:

2nd: Troop E, 8th Cavalry, Captain Harvey N. Christman

3rd: Troop F, 6th Cavalry, Captain Thomas W. Herren

4th: Troop B, 12th Cavalry, Captain Clifford A. Eastwood

The other troops competing were:

Troop B, 1st Cavalry, Captain Byron E. Shirley
Troop B, 2nd Cavalry, Captain Garnett H. Wilson
Troop F, 3rd Cavalry, Captain Hugh J. Fitz Gerald
Troop A, 3rd Cavalry, Captain Randolph Russell
Troop A, 4th Cavalry, Captain Hans E. Kloepfer
Troop F, 5th Cavalry, Captain Olin C. Newell
Troop F, 11th Cavalry, Captain Charles G. Hutchinson
Troop E, 12th Cavalry, Captain Henry M. Shoemaker
Troop B, 13th Cavalry, Captain Harry H. Baird
Troop F, 14th Cavalry, Captain Glenn S. Finley
Troop A, 14th Cavalry, Captain Thomas G. Hanson

The Goodrich Trophy is a statuette of a cavalry trooper in action; the sculptor was Mr. A. Phimister Proctor. The donor is Lieutenant Colonel L. E. Goodrich, Field Artillery Reserve.

The Goodrich Trophy Training Test is held annually at all cavalry stations where a squadron or more of Cavalry is stationed. Each regiment or detached squadron enters one troop of cavalry in the contest. The first competition for the trophy was held in 1926.

The test is designed to require the troops competing to:

(a) Demonstrate their marching ability by completing a fifty (50) mile march in two stages within twenty-four (24) hours. Part of this march to be accomplished during the hours of darkness.

(b) Demonstrate their field training by making camp, establishing an outpost, and by breaking camp during the night with but little warning.

(c) Demonstrate their combat training by the employment of the troop in a combined action, in which one element acts dismounted by simulated fire action, one element (one platoon) employs the pistol, and a third element (one platoon) attacks with the saber alone. Silhouette targets and saberheads to be used as the objectives of those attacks.

Each cavalry commander in connection with this test appointed a board of three cavalry officers of suitable experience, preferably graduates of the Cavalry School, one of whom might be himself.

The boards prepared the prescribed problems in accordance with detailed instructions from the Chief of Cavalry.

The board, accompanied by a veterinarian, made an examination within twenty-four hours preceding the commencement of the March Phase of all public horses of the troop and of all private mounts pertaining to officers of the troop for which they drew forage. Penalty was assessed for each horse not standing the test. A similar examination was made on the day following the conclusion of the test of all animals which had participated in the test.

1931 Cavalry Rifle Platoon Competition

THIS competition was won by a composite platoon from Troop B, 8th Cavalry, 2d Lieutenant James O. Curtis, commanding.

Platoon scores.

1.	8th Cavalry—1st Squadron	19015
2.	8th Cavalry—2d Squadron	18707
3.	26th Cavalry (PS)—1st Squadron	18171
4.	26th Cavalry—2d Squadron	18164
5.	12th Cavalry—1st Squadron	18112
6.	5th Cavalry—1st Squadron	17828
7.	5th Cavalry—2d Squadron	17803
8.	1st Cavalry—1st Squadron	17764
9.	3d Cavalry—1st Squadron	17440
10.	14th Cavalry—1st Squadron	17414
11.	12th Cavalry—2d Squadron	17383
12.	7th Cavalry—1st Squadron	17229
13.	11th Cavalry—2d Squadron	17087
14.	4th Cavalry—2d Squadron	17073
15.	1st Cavalry—2d Squadron	16825
16.	11th Cavalry—1st Squadron	16352

Note 1—No entries submitted by the 3d and 9th Cavalry Regiments.

Note 2—The 2d, 13th Cavalry Regiments, and the 2d Squadron, 14th Cavalry, Fort Des Moines, Iowa, having participated in the Cavalry Leadership Test for Small Units, were ineligible to compete in the 1931 Cavalry Rifle Platoon Competition.

The Cavalry Rifle Platoon Competition is designed for those cavalry regiments and detached squadrons which are not afforded an opportunity to compete in the 1931 Leadership Test for Small Cavalry Units. Each rifle troop of such units is eligible to place in the competition a composite platoon selected by the troop commander. The selection is based solely upon individual aggregate scores made in record practice in rifle, pistol and saber during the calendar year. A composite platoon consists of one lieutenant, two sergeants, three corporals and twenty-two privates first-class and privates.

The prize is a cash sum of $270.00 to be equally divided among the enlisted members of the platoon, and the platoon commander receives a trophy suitably engraved.

The Foreign Military Press

Reviewed by Major Alexander L. P. Johnson, Infantry

BOLIVIA—*Revista Militar*—November-December, 1931.

"The Military qualities of General Juan Vicente Gomez, Commander in Chief of Venezuela," by General Eleazar Lopez Contreras.

General Juan Vicente Gomez, President of the United States of Venezuela, is one of the outstanding figures of Latin America today. Successful as a soldier and leader of men on the field of battle in numerous campaigns, he is equally successful in preserving peace within the borders of the republic over which he has presided for more than a score of years. General Contreras presents an interesting character sketch of his commander in chief, who evidently possesses to a marked degree the rare gift of commanding not only implicit obedience, but also the loyalty and the devoted affection of his subordinates.

COLOMBIA—*Revista Militar del Ejército*—November-December, 1931.

Reorganization of the Colombian Army.

On November 1, 1931, a presidential decree went into effect for the reorganization of the Colombian Army. The military establishment under this decree consists of 477 officers, and 6,170 enlisted men, organized in five brigades and "Guard of Honor" battalion (Presidential Guards). The brigades, which replace the former divisional commands, consist of brigade headquarters and three infantry battalions of three rifle companies and one machine gun company of four heavy machine guns each. In addition each brigade contains a variable component of other arms. Thus, the 1st brigade has 1 group of cavalry, 1 group of artillery and 1 battalion of railway engineers. The 2d Brigade has, in addition to its infantry, 1 battalion of railway engineers, but neither artillery nor cavalry. The 3d Brigade includes 1 group of cavalry, 1 battery of field artillery and 1 company of railway engineers; the 4th Brigade contains 1 battalion of engineers, and the 5th Brigade, 1 troop of cavalry.

The cavalry group consists of headquarters and 2 troops. Similarly the field artillery group is composed of headquarters and 2 four-gun batteries. The Engineer and Railway Engineer battalion consists of headquarters and 2 companies, while the "Guard of Honor" battalion has a headquarters and 3 rifle companies.

The military establishment includes two river flotillas of two gunboats each.

The reorganization also affects the Ministry of War which, under the new plan, consists of five departments and four separate sections. The General Staff, designated as Department No. 2, consists of five sections: I. Operations and Communications; II. Territorial Service and Mobilization; III. Intelligence; IV. Transportation and S. O. S.; V. Military History and Personnel.

The military school system comprises the School of Cadets, the School of Military Aviation and the War College (Escuela Superior de Guerra).

"The Definite Boundaries of Our Country," and "The Surface of Colombia," by Colonel Pedro Julio Dousdebes.

Two very carefully prepared, authoritative articles by the same writer. The first is a precise tracing of the geographical boundaries of the Republic of Colombia, whose total area covers 1,194,270 square kilometers. This study includes a succinct statement of the treaty agreements which definitely fixed the various portions of the frontier of the republic.

The second article is a description of the surface character, river and mountain systems of Colombia based upon the author's personal knowledge of the country, as well as upon the works of leading geographers.

AUSTRIA—*Oesterreichische Wehrzeitung*—May 1, 1931.

"The Student Army of Soviet Russia."

Under the heading of "15 million student reservists for communism," the Soviet Commissar for Public Instruction sent to all schools a circular which contemplates the militarization of the entire soviet system of public instruction. Copies of this document came into possession of several members of the League of Nations shortly after Moscow has accepted Briand's invitation to a conference called for the discussion of his United States of Europe project, and soon after the Soviet Government had also announced its intention to participate in the deliberations of the Disarmament Conference. This circular issued by the Commissar places the entire school system into the military service, and virtually transforms the entire population into a nation in arms. An ukase issued shortly afterwards by the Commissariat for Defense regulates the methods of training for the different parts of the country. In the northern districts these instructions are of a purely defensive character, while in the south even boys are to be trained for offensive warfare. Although the Soviet authorities speak officially only of national defense, it is known that they have complete plans for offensive action against Roumania and Poland, for the conquest of the Danube delta, and the reconquest of Vilna, Brest-Litovsk and Warsaw. It is thought that Czecho-Slovakia will be totally helpless the moment the Red Armies occupy Poland and Roumania. The Soviet Government expects Germany to remain neutral, hence the Reich will form an effective barrier against western

aggression. The circular of the Commissariat of War counts upon popular support wherever the Red Armies might operate. Propaganda with that end in view has already been initiated.

Militaerwissentschaftliche Mitteilungen—January-February, 1932.

The current number of this Austrian periodical is devoted entirely to the question of disarmament. In a series of very interesting and scholarly articles the various aspects of this important problem of the day are discussed and analyzed.

"The Calvary of Disarmament," by Colonel Maurice Wietorin.

It was the objective of every nation in every age to reduce its enemies to impotence. In ancient times defeated nations were either put to the sword or sold into slavery. As civilization progressed wars terminated with treaties of peace which imposed more or less stringent conditions upon the vanquished. The peace treaties which terminated the World War, although initiated upon the broad, humanitarian basis of Wilson's Fourteen Points, do not, in the author's opinion, differ materially from those of an earlier, more barbarous age. Even so, their enormity lies not so much in the conditions they impose, but rather in the hypocrisy that disarmed the vanquished nations under the pretext that it would initiate a general limitation of armaments among all nations.

The author then traces the history of disarmament during the post-war years, and he scrutinizes the activities of the preparatory commission and the League of Nations in this important field. These do not augur well, in the author's opinion, for a successful consummation of the program before the disarmament conference now in session.

"Potentiel de Guerre," by Colonel Emil Paschek.

This article analyzes Interrogatory V of the League of Nations questionnaire, dated December 12, 1925, which was intended to determine the potential war power of each nation. In the author's opinion, this factor is undeterminable. It is, therefore, an added reason which precludes the possibility of a universally applicable basis for world disarmament. The author believes that the war potential of any nation encompasses the entire state. He holds that mental preparedness and economic weapons may suffice for the conduct of a cruel war of annihilation, especially where there is in reserve a powerful military machine. He cites as an interesting example in point France's gold war of 1931 which featured financial campaigns not only against the defeated Central Powers but also against the British World Empire and the gigantic power of the United States.

Belgium—*Bulletin Belge des Sciences Militaires*—April, 1931.

Russia—In 1927, a "League for the Development of the Aerial and Chemical Arms" (Ossoaviachim) was founded in Russia under the chairmanship of Rykov, president of the Council of Peoples' Commissars. This organization has, in time of peace, complete charge of all work connected with the antiaircraft and antigas defense of the civilian population. The activities of this organization extend to every section of the country which is, for this purpose, divided into "rayons," each containing a number of organized "cells." These provide courses of instruction for the development of leaders for the antiaircraft and antigas defense activities. Several rayons are united under the supervision of provincial directorates, and the latter are directly under the control of the Central Directorate which in turn is in constant touch with the party organization.

The great antiaircraft defensive test and maneuver held at Kiev, in September, 1928, indicated the extent to which this important phase of preparedness had been developed in Russia. In addition to this active defense, there is in Russia also a remarkably well organized passive defense developed by the police, the fire departments, the Red Cross and Ossoaviachim. Since 1928 exercises of a general character have also been held in other Russian cities.

Czecho-Slovakia—*Vojenské Rozhledy*—May, 1931.

"Education of a Democratic Aristocracy in the United States."

The "West Point Guide Book" supplies the material for which the author saw fit to select such a fantastic title. He acquaints his readers with the organization and administration of the United States Military Academy. He discusses in detail the prescribed curriculum, the system of training, and discipline. The author apparently believes that the objective of cadet training at West Point is best characterized by the title he selected for his discussion.

Germany—*De Re Bellica*—No. 11, 1931.

The unfavorable economic situation of the world is having its adverse effect upon this excellent periodical published in the Spanish language by Gerhard Stallings, Berlin. The publishers announce, that unless subscription lists double, publication of this monthly magazine will have to be suspended. "De Re Bellica" is unique among military periodicals. Its contents are of the highest order and provide the reader with excellent material for self-instruction. Suspension of its publication will be a distinct loss to the military profession notably in Spanish speaking countries.

Militar-Wochenblatt—December 4, 1931.

"The Struggle for Manchuria."

Manchuria, with an area of about 924,000 square kilometers and a population of approximately 30 millions, has for a long time been the objective of Japanese foreign policy, which has consistently sought to establish Japan as the paramount power of the Far East. This policy may be defined somewhat along the principles of an Eastern Asiatic Monroe Doctrine. Japanese attempts to colonize in that vast territory have failed. After 25 years of occupation the Japanese population of Manchuria has not yet reached the million

mark. Climate and living conditions are unfavorable to the Japanese. Economically, however, Japan has been eminently successful in her Manchurian enter-

prise. The wealth in natural resources, the products of Manchuria's fertile soil have become an indispensable necessity of life for the Island Empire.

The position of Japan as a world power depends in a large measure upon the raw materials which she derives from Manchuria. It is, therefore, reasonable to conclude that Japan will never voluntarily withdraw from that Chinese province. Japan selected the most auspicious moment for the execution of her designs. Neither the League of Nations, nor any one of the interested powers are in a position to prevent Japan in that.

As to the actual military operations, it is interesting to note that the Japanese forces employed are relatively small but well disciplined. Morale is high. Provided with the most up-to-date equipment, and led with a remarkable singleness of purpose, this army is opposed by improvised, poorly equipped, incoherent masses. Military operations generally followed the railroad lines. The absence of suitable highways practically imposed such limitation upon the action. Occupation of important railway centers and establishment of railway guards were the principal features of this campaign. The Japanese employed their bombing squadrons extensively and effectively. Armored trains and light tanks also played an important part.

Great Britain—*Journal of the Royal United Service Institution*, August, 1931.

"The Higher Study of War in the Army," by Major General Sir Charles W. Gwynn, K.C.B., C.M.G., D.S.O.

The author stresses the importance of proper training of staff officers. Their course of study should cover the widest field from the earliest stage of their career. On the other hand, theoretical training without subsequent practical experience is of little value. Hence, the number of officers receiving staff training must bear a definite relation to the number of peace-time staff appointments in which experience can be gained. While under such system some first-rate officers would miss the chance of higher training, the author believes that to train more than can be assured of staff employment might well produce unsatisfactory consequences, and increase rather than decrease the number of the disappointed. In the author's opinion, senior officers do not form the best material for theoretical instruction. They will miss the assistance of subordinates in matters of detail, yet the solution of problems often turns upon the minutiae of detail. Again, the senior officer might become so involved in details which require expert subordinates that they will lose their sense of proportion and waste time. On the other hand, discussions and lectures without the study of concrete problems tend to a neglect of essential details and the formation of superficial conclusions. Since only a limited number of officers can receive the special training afforded by the Staff College, they must be treated as a leaven to work on the army. It imposes the duty upon commanders and staffs to spread the common doctrine throughout the army, not merely an optional doctrine, but one that affects every aspect of its employment.

The Journal of the Royal Artillery—October, 1931.

"The Mechanized Unit in the Field," by Lieut. Col. C. A. H. Montanaro, O.B.E., R.A.O.C.

During the past three years mechanization of the army has increased considerably. The corps artillery has been completely mechanized, brigades of cavalry partially so, and experimental infantry brigades are provided with mechanized first-line transport. Armored cars of the Royal Tank Corps and the cavalry have likewise made immense strides. For the maintenance of these vehicles a series of experimental mobile (or field) workshops have been tried out in practical exercises. The author undertakes to set out without technicalities some of the problems and the layout of the organization of the maintenance service for the first-line motor transport vehicles on active service. The author believes with respect to future developments that mechanization of an expeditionary force as to first-line and "A" echelon vehicles is limited 1, by the terrain over which the approach march is to be made, and 2, by the daily automatic supply services being able to keep pace with its movements, and its proper protection. From these assumptions the author concludes that only a definite percentage of any expeditionary force is likely to be entirely mechanized. Such mechanized force will be prepared as a mobile reserve in the hands of the C. in C. This percentage, in the author's opinion, will largely be determined by the maximum size of a self-contained mechanized force which can for a very limited time exist unsupported by a line of communications for the purpose of a special operation.

For purposes of his discussion the author makes certain assumptions as to the stage of mechanization reached by the army at the opening of a campaign. Accordingly the force presents the following picture:

1 Cav. div. (2 brigades with each regiment composed of 2 saber squadrons, but with mechanized M. G. squadrons, first line transport and scout cars. Each brig. with one mechanized art. btry. and 1 R. E. field sqn.)

5 (infantry) divisions (in 2 corps), each having one inf. brig. capable of being embussed and incorporated with the mechanized "support," i.e., mortar companies, mechanized and M. G. Cos. and first-line transport.

Corps artillery, engineers, armored cars of the R. T. C. or cavalry for the use of either cav. or inf. divisions; all entirely mechanized.

Auxiliary and H. Q. services with transport all mechanized, and a reserve mobile force consisting of an armored car regiment; 2 cav. brigs. as above; mixed tank brig. consisting of H. Q. and signal section, 3 tank bns. comprising light, medium and close support tanks; 2 army field brigs. R. A.; a mechanized field co., R. E.; and protective and supply formations. The entire force capable of self-sustained action involving separation from the L. of C. for a mission up to a week's duration.

The author further assumes, that this expeditionary force will march 3-6 days and rest 1 day until it establishes contact with the enemy. Shortly after making contact the situation temporarily stabilizes. During this stabilization, which may last 3 weeks, mobile troops screen the force till the railhead can be moved up.

The author then pictures the resulting maintenance situation based upon authorized organization as laid down in F. S. R.

Unit mechanics with hand-tools and spares carried by the organization take care of all first-line supply and repair needs. They attempt none but running repairs; the extent of these depend largely upon the extent of supervision of experienced officers and N. C. O's. It emphasizes the necessity of training competent unit artificers to provide the reliefs for the wastage of war.

Second-line repairs consist of jobs requiring not more than 24 hours. They are carried out by divisional and corps workshops. These include two light aid detachments each, one of which is available for use of the mechanized infantry brigades. Divisional and corps workshops are set up in two echelons to provide continuous repair facilities. These echelons may be advanced by the "caterpillar" or "leap frog" system. The first seems to have the advantage of simplicity, of organization, the second appears better suited to assist rapidly advancing or retreating troops.

The third link in the repair chain is a stationary advanced ordnance workshop which takes care of repairs and overhauls too great to be handled by the mobile shops in the army areas.

The author summarizes the details which, in his opinion, should be put into administrative orders; guiding principles for locating workshops, and considerations of communications. The article concludes with three appendices: A. definitions; B. organization, time and space factors; and C. Diagram showing maintenance and repair installations in the field.

HUNGARY—*Magyar Katonai Szemle*,—August, 1931.

"Organization of the A. A. Defense of the Capital," by Capt. Joseph Bálint.

The constantly growing radius of action of airplanes dictates the necessity of peace-time preparation and organization of an effective antiaircraft defense of the capital and other equally vital strategic centers of the country. The author makes an interesting comparison of the relative values for this purpose of the A. A. artillery and aviation.

The advantages of the A. A. artillery are:

1. *Instant readiness for action.* In contrast airplanes require 13-15 min. in daylight, and 26-28 min. at night, in addition to the time interval between alarm and take-off, to climb to a suitable attack altitude.

2. *Constant readiness for action.* Darkness and fog seriously interfere with pursuit aviation but do not affect the effectiveness of the A. A. artillery.

3. *Sustained power of action.* The number of daily flights of pursuit aviation is limited. This limit cannot be exceeded without rapid deterioration of personnel and materiel. It takes several thousands of rounds to wear out an A. A. gun. Besides, modern artillery equipment permits ready replacement of the worn-out liner.

4. *Constant observation.* Well organized A. A. artillery is prepared to transmit accurate data for effective fire against approaching hostile aircraft from established observation and listening posts 30-40 km. in advance of the gun positions. The air force depends upon the same source for its information.

5. *General view of the air situation.* Ground observation provides better means for estimating the air situation, hence A. A. artillery can render valuable assistance to pursuit aviation by indicating the location of hostile planes.

Aviation possesses the following advantages:

1. *Ability to obtain a decision.* A. A. artillery alone can seldom, if ever, compel an enemy to abandon his mission.

2. *Great mobility.* A. A. artillery is tied to the ground. Airplanes can pursue and strike hostile aviation beyond the range of the A. A. guns. Hence, while A. A. artillery is capable only of passive defense, aviation is capable of active defense.

The author advocates a barrage or belt of fire 20 km. wide and 6000 m. high to compel hostile aviation to run the gauntlet of the concentrated fire of 3-4 guns for every 12 km. of front. He emplaces his guns in batteries of threes forming an equilateral triangle, distance between guns about 4 km. The distance of the barrage from the city limits naturally depends upon the available materiel. Within this belt of fire the defensive mission passes to the air force. Ample maneuvering space must, therefore, be provided within the belt of fire. The center of gravity of the defensive plan depends upon the direction of the expected attack. Listening posts along an observation belt about 30 km. from the center of the defended zone, the author believes, will allow ample time for the alarm and preparation for action.

Smoke-screens are effective defensive agents. Airplanes as well as industrial smokestacks can be used for their release.

SOVIET RUSSIA.—*Voyna y Revolutcia*,—No. 7,— 1931.

"On Sovietization." by Pietrov.

An interesting discussion of the intriguing problem of sovietization of territories "liberated" by the Red Armies in a war of the future, and the proper methods of establishing the dictatorship of the proletariat. It is the bolshevik version of the law of military occupation of hostile territory. The author differentiates with subtle perspicacity between highly and moderately capitalistic states, dependencies, colonial, semicolonial and backward countries. In the case of capitalistic states the author proposes complete sequestration of all large property holdings, organization of all productive activities along communistic lines, distribution of a limited amount of farm land among the peasantry with collectivization of agriculture. In colonies, the author advocates war on feudalism, liberation of subject nationalities. In all cases, he urges close cooperation between the Red Army and the masses of workers and peasants of the "liberated" territory.

SPAIN.—*La Guerra y Su Preparación*,—September-October, 1931.

"The German Cavalry in the Roumanian Campaign, 1916." by Lieut. Col. Beigbeder, Military Attaché of Spain in Berlin.

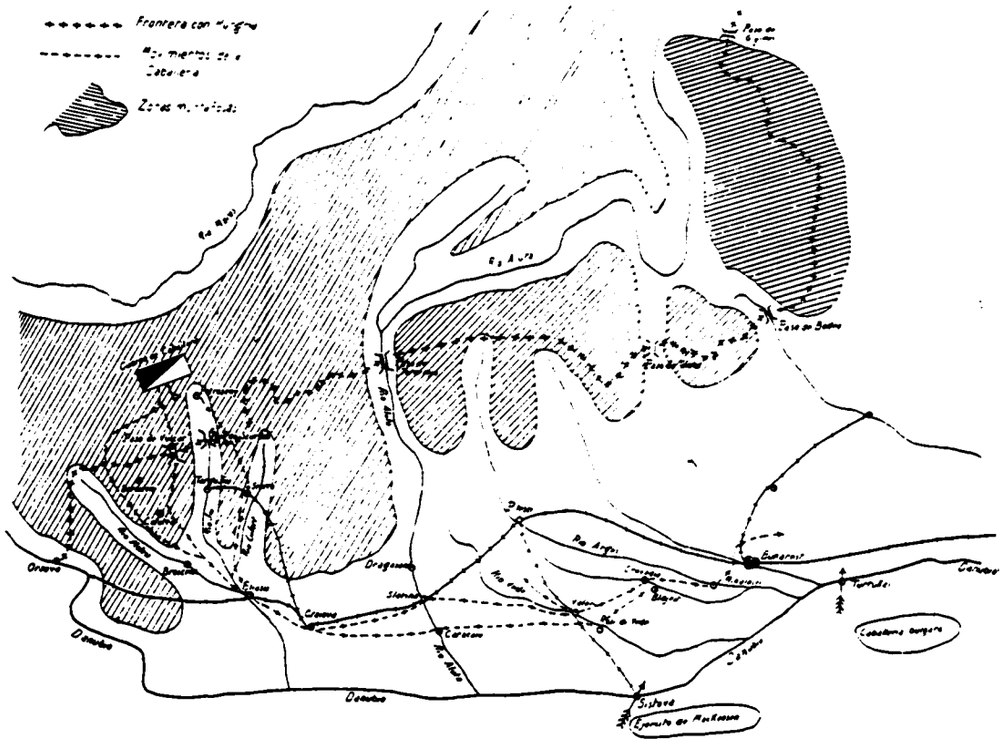
Recent writings of General Brandt, former Inspector General of Cavalry of the German Army, have renewed general interest in the problems pertaining to cavalry and its modernization. General Brandt incidentally believes that the cavalry has lost much of its former importance as an agent of reconnaissance, and that the essential mission of cavalry will henceforth consist of close cooperation with infantry. For this purpose cavalry will have to be employed in large masses.

The world war furnishes a most interesting, one might say classic example of the employment of cavalry which, to a certain extent, seems to confirm the views of General Brandt. The event occurred during the Roumanian campaign, in 1916.

The German efforts to invade the Roumanian lowlands by forcing the Carpathian passes of Gyímes, Bodza, Tömös and Vöröstorony (Torre Roja) failed. General Falkenhayn, in agreement with the Austro-Hungarian High Command, decided to launch his attack on his right flank in the vicinity of Vulcan Pass with the intention of executing a turning movement towards the southeast in the direction of Bucharest. The first attempt, executed in October, 1916, failed before the 6th and 7th Cavalry Divisions had an opportunity to act. Subsequently these divisions were organized as a cavalry corps under General von Schmettow.

The German offensive was launched on November 11th. During the first four days of the attack the Germans advanced slowly but steadily, occupying the heights south of Szurduk Pass on the 14th. The bulk of the cavalry corps remained in reserve north of the Carpathian crest with one regiment, the 4th Uhlans, detached in position near the pass named with reconnaissance and demolition missions.

On November 14th, the German High Command received information of a general retreat of the Rou-



manians beyond Targu-Jiu towards the south and southeast. The 4th Uhlans, observing the Roumanian retreat, anticipated a general pursuit, proceeded to Seorta in order to cut the railroad to Craiova. General Kuhne's corps, reinforced by one division which had just detrained at Petrozsény, was directed to advance on Dragosani. The cavalry corps was ordered to support this movement, covering Kuhne's right flank, and to envelop elements of the Roumanian army which may offer resistance to Kuhne's advance. The orders designated Filiasu as the cavalry objective. Subsequent events proved that the German orders for the pursuit were premature. They were actually based upon erroneous reports.

The cavalry corps crossed the Transylvanian Alps through Szurduk Pass and upon reaching Targu-Jiu encountered the Roumanians in a strong position along the heights between the rivers Jiu and Gilorta. The 6th Cavalry Division engaged in a stiff battle southeast of Targu-Jiu, but the Roumanians offered stubborn resistance. On the following day, while the battle still continued along the divide, the German cavalry, believing that it had enveloped the hostile left flank, advanced resolutely until it ran headlong into the Roumanian main line of resistance, north of Cetatea. Late in the afternoon, the entire cavalry corps found itself engaged in one of the hardest fought battles of the campaign. A severe snowstorm and the extremely difficult character of the terrain added to the hardships of the battle. On the left of the cavalry corps, the Bavarian 11th Division and the 4th Uhlans endeavored to contain a numerically superior hostile force.

The 6th Cavalry Division, upon being replaced by infantry, retired to Targu-Jiu.

On the following day, November 17th, the Austro-German forces renewed the battle with unabated vigor. The cavalry extended its enveloping movement farther to the west, while Kuhne's corps directed its attack against the Roumanian right. The 7th Cavalry Division attacked the Roumanian positions along the heights north of Cetatea but failed to gain ground. The 6th Cavalry Division, on the right of the 7th, advanced along the valley of the Motru, and closed with the enemy west of Cetatea. After a brief dismounted action it dislodged the Roumanians and promptly launched the pursuit. At the same time, the 41st Division made appreciable gains on the Roumanian right flank. Under this double strain the Roumanians decided to evacuate Cetatea. Farther to the east, the Bavarian 2d Division, reinforced by the 4th Uhlans, dislodged the enemy from his strong position along the Gilort ravine. The 6th Cavalry Division reached Broscani at sunset. Bad roads and Roumanian demolitions considerably retarded the advance of the cavalry.

On November 18th, the cavalry began its advance on Filiasu and Craiova. Reconnaissance detachments, well in advance, reached the valley of the Aluta south of Slatina while pioneers destroyed the Craiova-Slatina-Pitesci railroad line. These developments resulted in the complete isolation of Roumanian forces near Orsova. They attacked the German-Austrian forces in the rear on the 19th and 20th in an attempt to cut their way through. It was necessary to detach a portion of the 7th Cavalry Division to cover the rear of the pursuing army.

A reconnaissance troop of the 2d Dragoons entered Craiova on November 21st, the advance guard arrived there on the 22d, and the main body of the corps on the following day. At the same time the cavalry secured the bridges at Caracul and Slatina. After crossing the Vede river, the cavalry corps continued the pursuit toward the northeast. On November 30th, it encountered a Roumanian force with artillery near Blejesti. Further advance was impossible until infantry reinforcements came up. On December 1st, we find Schmettow's cavalry corps beyond Crevedia. Here the situation changed completely. Mackensen's army had crossed the Danube at Sistova and was advancing northward seeking to effect a junction with the German Ninth Army. The Roumanians reinforced by Russians opposed this movement. There still was a gap of 40 km. between Mackensen's left and the right of the German Ninth Army. The Roumanians planned to attack and dispose of Mackensen separately. By some chance a copy of the Roumanian attack order fell into German hands and Field Marshal Mackensen, who had assumed command over all Austro-German forces operating in Roumania, promptly decided upon a simultaneous attack with all his forces on December 2nd. He assigned to the Cavalry Corps the mission of covering the interval which separated his two armies.

On December 2nd, the 7th Cavalry Division established two bridgeheads across the Arges, west of Bucharest. On the following day, the 6th Cavalry Division and the Bavarian 11th Division fought a victorious battle at Mihalesci. On December 4th, the Cavalry Corps received orders to move to the north, passing around Bucharest and to cut the railroad leading to the northeast. At the same time the cavalry was to effect a junction with the Bulgarian cavalry advancing from Turtukai with the mission to cut communications east of the Roumanian capital.

On December 6th, the 7th Cavalry Division, supported by infantry, took the Roumanian defenses northwest of Bucharest, and shortly afterwards the Austro-German forces entered the capital.

The author makes the following deductions:

1. The operations were initiated with the definite idea of employing cavalry.

2. The premature action of Schmettow's corps as a result of erroneous information indicates the difficulty of determining the precise moment for the exploitation of a victory. Frequently failure is due to the erroneous or premature decision of the commander in chief rather than to the cavalry employed.

3. During the pursuit, from November 18th to December 5th, the cavalry corps covered daily an average of 23 miles. Considering the size of the command this was indeed a remarkable performance. It must also be remembered that all rivers intersected the direction of march, and that on two days of the pursuit a part of the cavalry had to engage in rear guard actions against a Roumanian detachment cut off by these operations in the vicinity of Orsova.

SPORTS

THE 1st Cavalry Division at Fort Bliss held its first horse matinee of the season in Howze Stadium at Fort Bliss on Wednesday, March 23d. These matinees are held under the auspices of the El Paso-Fort Bliss-Polo-Horseshow-Association, the principal officers of which are:

Brig. Gen. W. C. Short		President and Director.
Major T. L. Clark,	F. A.	Executive.
Major P. L. Thomas	Cav.,	Treasurer.
Lieutenant C. V. Bromley,	Cav.,	Secretary
Lieutenant P. B. Sancomb,	7th Cav.,	Grounds and Decorations.
Major Willis D. Crittenberger,	8th Cav.,	Entertainment.
Captain M. H. Ellis,	Cav.,	Ringmaster.
Captain H. N. Christman,	8th Cav.,	Paddock Master.

A Horse Matinee Trophy will be awarded at each matinee to the unit winning the greatest number of points during the matinee. This trophy will be suitably engraved and held by the winning unit until the next matinee. This trophy will be finally awarded for the season of 1932, at the 1932 1st Cavalry Division Horseshow to the unit winning the greatest number of matinees during the season.

Winners of the Matinee on March 23d were:

CLASS I. JUMPERS—ENLISTED MEN

Name of Rider		*Place*	*Name of Horse*
Private Horn	82d F. A.	1st	Valley
Sergeant Prueitt	8th Cav.	2nd	Rabbit
Private Tauser	7th Cav.	3rd	Goat
Corporal Carrigan	8th Cav.	4th	Bully

CLASS II. JUMPERS—OFFICERS

Name of Rider		*Place*	*Name of Horse*
Lieutenant Sancomb	7th Cav.	1st	Midnight
Lieutenant Doan	8th Cav.	2nd	Silver
Lieutenant Wing	7th Cav.	3rd	Crescent
Captain Rose	8th Cav.	4th	Husky

CLASS III. JUMPERS—LADIES

Name of Rider		*Place*	*Name of Horse*
Miss Robenson	7th Cav.	1st	Apology
Mrs. Creed	8th Cav.	2nd	Berk Boy
Mrs. Vance	7th Cav.	3rd	Chestnut
Mrs. Maloney	8th Cav.	4th	Masquerader

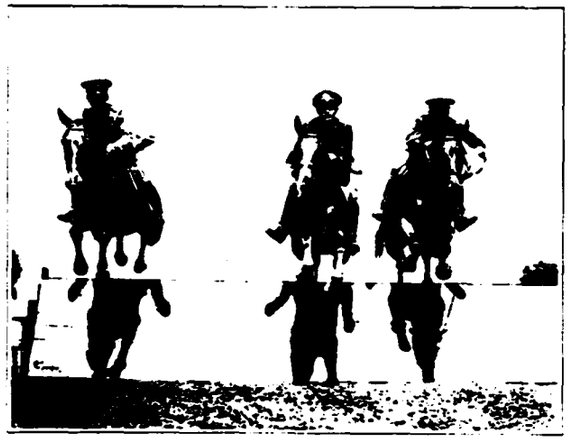
CLASS IV. NOVICE JUMPERS

Name of Rider		*Place*	*Name of Horse*
Lieutenant Croswell	8th Cav.	1st	Dan Patch
Sergeant Shrout	7th Cav.	2nd	Snake
Private Hinkle	Sp. Trps.	3rd	Yaqui Jim.
Corporal Brown	8th Cav.	4th	Whiskers

In all jumper classes performance only counted. The 7th Cavalry won the Matinee Trophy with a total of 19 points. The 8th Cavalry was runner-up with a total of 17 points.

Sergeant Ambrose Shrout, 7th Cavalry, gave a fine exhibition immediately following class IV, on his newly trained horse "Happy Gay."

The children of the El Paso-Fort Bliss-Polo-Association riding class gave an exhibition at the close of the matinee.



The Olympic Games Equestrian Team of the United States Army in a workout at Ft. Rosecrans, Calif. The team is expected to be America's foremost contenders in the Prix des Nations event; the individual Dressage event and the "Three Day Event," the latter covering training tests, endurance tests with cross country and steeplechases and jumping test over obstacles.

Left to right in this triple jump are; Capt. Wm. T. Bradford, on "Suzanne." Lieut. Carl W. A. Raguse on "Sir Neal" and Lieut. Peter Hains on "Don R."

Polo Tournaments

May 28 to June 6—Boise, Idaho.
May 31 to June 14—Maryland Polo Club.
June 12 to July 31—Meadow Brook Club.
June—Intercollegiates.
July 2 to July 10—Fairfield Polo Club, Conn.
July 2 to July 10—Broadmoor, Colo.
July 3 to July 24—Rockaway Hunting Club.
July 10 to Aug. 28—Point Judith, R. I.
July 17 to July 24—Monmouth County.
July 17 to July 31—Rumson Country Club.
Aug. 1 to 15—Big Horn Polo Club, Wyo.
Aug. 7 to 25—Myopia Hunt Club, Mass.
Aug. 13 to 21—Broadmoor, Colo.
Aug. 15 to Sept. 15—Oak Brook Polo Club.
Aug. 21 to 27—Miami Valley, Ohio.
Aug. 22 to 27—Norwood, N. J.
Aug. 28 to Sept. 3—Fairfield, Conn.
Aug. 28 to Sept. 11—Onwentsia Club, Ill.
August—Smithtown, N. Y.
Sept. 5 to 17—Bryn Mawr, Pa.
Sept. 12—Twin Cities Polo Club, Minn.
Sept. 15 to Oct. 1—Wichita, Kan.
September—Open Championship, Meadow Brook Club, N. Y.
September—Monty Waterbury Cup Tournament, Meadow Brook Club, N. Y.
Oct. 1 to 15—Fort Oglethorpe, Ga.

PROFESSIONAL NOTES *and* DISCUSSION

The Sino-Japanese Conflict

By First Lieutenant O. L. Nelson, Infantry

THE basis of trouble in Manchuria is the considerable Japanese investment there. To properly safeguard the South Manchurian Railway, a prize of the Russo-Japanese War, Japan acquired a railway zone and an area at the sea terminal of the road at Dairen. Japan also then secured important mining and land rights and a concession to build a railroad from Mukden to the Korean border. Through the Japanese-owned railways flowed the trade of Manchuria.

Japan regards Manchuria as essential to her economic security. She depends upon that area for food, raw materials and an outlet for surplus population. To safeguard her billion dollar investment there, Japan secured from China by treaty the right to maintain 15.000 troops along the railway zone.

With the removal of restrictions early in the century some twenty-five million Chinese have settled in Manchuria, a movement that has been compared to the great westward trek in the United States. These Chinese settlers have had little liking for Japanese special privilege and for the colonization schemes of Japan for her Korean and Japanese subjects. Chang Hsueh-liang, after he moved to Peiping, antagonized the Japanese by breaking treaties, by surrounding Japanese railways with restraints and by ignoring Japanese rights in general. Local Chinese goverments discriminated against Japanese, and uncontrolled Chinese soldiery obstructed trade.

With Manchuria by nationality and by political affiliation a part of China and by trade and by economic development a part of Japan, trouble was inevitable. In carrying out a local ordinance Chinese farmers sought to dispossess Koreans who had settled at Wanpaoshan near Changchun. Chinese farmers and police clashed with the Koreans, who were aided by Japanese special guards. On July 27th it was discovered that one Shintaro Nakamura, a captain in the Japanese army, had been executed by Manchurian troops. These instances and innumerable others set the stage for the action that followed.

On September 18th Japanese railway guards discovered Chinese troops from the Petayung barracks in the act of destroying a portion of the South Manchurian railway near Mukden. That act precipitated the Japanese military campaign.

On this date Chinese troops were scattered in large numbers throughout Manchuria. Some forty thousand distributed in large garrisons at Mukden, Taonan, and Chinchow owed allegiance to Chang Hsueh-liang. Chang Tso-hiang, Chairman of Kirin province, controlled some sixty thousand scattered in Kirin, Changchun, Harbin, and along the Chinese Eastern Railway from Harbin eastward to the Siberian border. Wang Fu-lin's troops in the province of Heilungkiang numbered some twenty thousand and were located in garrisons scattered along the Chinese Eastern Railway from Tsitsihar northwest to the Russian border.

The Japanese forces consisted of some five thousand railway guards and some seven thousand troops of the 2nd Division scattered in small detachments along the South Manchurian Railway. In addition, some forty thousand reservists, available on call, reside in Manchuria. Press reports repeated the rumor that a number of these Japanese reservists were called to active duty.

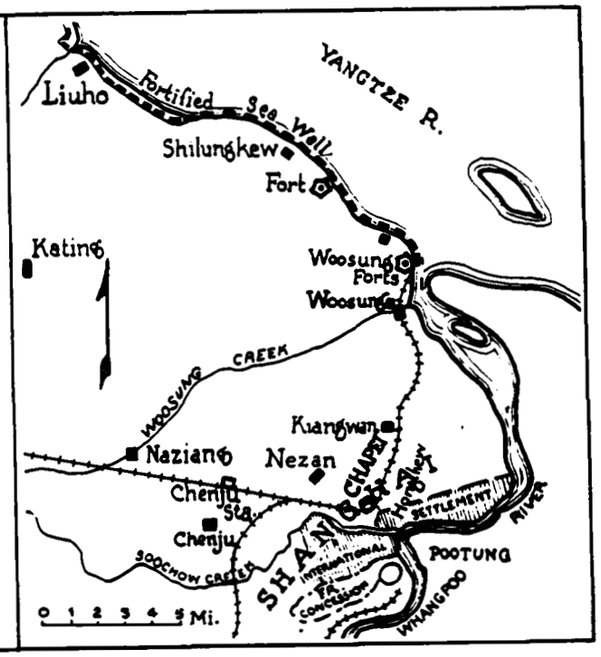
Japanese troops immediately occupied Kirin, Changchun, Mukden, Newchwang, and Fushun and proclaimed martial law in the territory adjacent to the Railway Zone. The Commanding General moved his headquarters from Port Arthur to Mukden. Japanese troops in Korea received a warning to be prepared to move into Manchuria.

The only real fighting took place in the action on the railway near Mukden that initiated the occupation. Here some three hundred Chinese were killed. Japanese occupation met with little resistance as the Chinese forces melted away before the Japanese advance. Whether this was due to the Chinese soldier's indisposition to fight or due to telegraphic orders from Chang Hsueh-liang instructing them not to fight is difficult to say.

By September 24th Japanese troops had completed their occupation. At that time the Japanese government indicated a willingness to negotiate with the Chinese for a settlement of the difficulties. The Nanking government informed Japan that there could be no negotiations until Japanese troops were withdrawn. China appealed to the signatories of the Pact of Paris and invoked Article XI of the Covenant of the League of Nations. By this action Chinese diplomacy elevated the Manchurian trouble from the plane of a local conflict that could be settled by local negotiations between the conflicting parties to the realm of international politics wherein the Great Powers would play the leading rôles.

There was sporadic fighting in November along the Taonan-Anganchi-Tsitsihar Railway. On the 19th forces of General Mah's were defeated north of the Nonni river and driven north of the Chinese Eastern Railway.

Manchuria



The Shanghai Area

Despite Japanese occupation of all strategic points in Manchuria, the military situation was not entirely satisfactory to General Honjo, the Japanese commander. Chinese forces in and around Chinchow exceeded in number the Japanese forces scattered throughout Machuria. Bandits and Chinese soldiery terrorized a large area southwest of Mukden and in Harbin disturbances between rival Chinese factions created great disorder. During December Japanese troops engaged in "mopping up" expeditions using armored cars very successfully. Chinchow and Harbin were occupied. By January 5th no Chinese forces remained north of the Great Wall. The occupation of Harbin and Tsitsihar brought Japanese forces into the zone of influence of Soviet Russia, joint owner with China of the Chinese Eastern Railway, and evoked a mild protest from Soviet Russia.

Japanese military success in Manchuria carried with it disastrous economic consequences for the victor. The effects of the boycott produced such a strong feeling of resentment that its translation into action was inevitable. The mauling of five Japanese monks in Chapei on January 19th by a Chinese mob and the printing by a Shanghai Chinese newspaper of a scurrilous attack on the Japanese Imperial House precipitated the action.

On the night of January 28-29 Admiral Shiozawa advanced upon the Hongkew-Chapei boundary with some three thousand men after announcing his intentions and expressing the hope that the Chinese would retire. Knowing that experienced Cantonese troops at odds with the Chinese government's policy of nonresistance were entrenched in Chapei, the Japanese commander chose a poor place to make a demonstration of force. Sniping operations and guerrilla warfare were admirably adapted to a defense of this area and were resorted to very effectively. Surprised that the Chinese had not withdrawn and chagrined at their inability to advance, the Japanese reduced Chapei to ruins.

On February 3rd Japanese gunboats began shelling the Woosung Forts. Skirmishes occurred all along a general line extending from the forts to Shanghai. After several days of shelling the Woosung Forts the Japanese landed some twenty-five hundred soldiers and marines just south of the mouth of the Woosung Creek and attempted to take the forts. Despite heavy artillery support from naval guns the Japanese were unable to advance. On February 13th the Japanese advanced under a smoke screen and succeeded in getting a thousand men across the creek on a pontoon bridge. Chinese machine-gun fire made the position untenable, and the Japanese retreated.

Abandoning the idea of defeating the Chinese with a small force the Japanese began to prepare for extensive operations. Re-enforcements poured in from Japan until by February 20th the Japanese forces totaled around twenty-five thousand.

General Ueda who had succeeded to the command of the Japanese forces undertook an ambitious program. Along the Hongkew-Chapei boundary the Japanese feinted to attract as many Chinese troops to that locality as possible. Simultaneously, naval gunfire preoccupied the defenders of the Woosung Forts. Between these two points were concentrated the Japanese re-enforcements with the mission of attacking the Chinese center at Kiangwan and of breaking through the Chinese defenses. After dividing the

Chinese lines a small part of the forces were to envelop the Woosung Forts while the main body outflanked the Chinese and squeezed them southward against the settlement.

Though the plan was excellent the Japanese again failed to correctly estimate the Chinese strength. After forty-eight hours of fighting the Chinese still held Kiangwan. Then the Chinese launched a counter-attack at Hongkew. That plus the sniping operations in areas in which gains had been made proved to be so effective that the Japanese abandoned the attack and awaited re-enforcements.

The valiant defense of the Chinese surprised everyone. The 19th Route Army, composed of trained Cantonese troops, bore the brunt of the attack. Well trained in trench warfare by the Russian General Galen and by the German Colonel Bauer, these South-China troops understood trench construction and the correct location of barbed wire entanglements and machine guns. Remaining under cover during the artillery preparation they manned the defensive positions in time to meet Japanese attacks with effective machine gun fire.

By March 1st the Japanese forces had increased to about fifty thousand and the offensive was resumed. As a preliminary to a general attack, Kiangwan had been attacked and captured on February 28th. On March 1st the Japanese attacked the entire Chinese line from Chapei to Woosung Forts. At the same time Japanese troops were landed at Liuho, twenty miles northwest of Shanghai on the Yangtse river. With their left flank thus menaced and with fresh Japanese troops pushing the frontal attack the Chinese retreated hurriedly, though in fairly good order. As soon as the Chinese had withdrawn west of the line Liuho-Kating-Naziang, the Japanese attack halted. The Chinese were now outside of the twenty kilometer zone specified in the original Japanese ultimatum.

Apparently, military operations terminated with the Chinese retreat from Shanghai. Settlement of the difficulties and the question of withdrawing troops present problems yet to be solved.

Meanwhile, the Chinese internal situation grows more complicated. Chiang Kai-shek's failure to send re-enforcements to the Cantonese 19th Route Army promises to make future co-operation between the two groups even more difficult than in the past. Not even a common hatred for Japan and the need for common defence seem to produce a united China.

The Formation of "Model" Regiments of Cavalry for the Mexican Army[1]

A project suggested to the Secretary of War and Marine by Lt. Col. Natalio Garduno Nava

I HAVE the honor of submitting to the Secretary of War, to aid him in his search for means of improving our institutions, the following suggestion, namely, the formation among the regiments which will be maintained as our permanent cavalry arm, of one or more "model" corps. These corps can be formed from the best elements of the regiments which are to be disbanded in accordance with the government's program of economies, and should be formed of enthusiastic horsemen—not merely men who may happen to possess some slight knowledge of riding and equitation, but men who are thoroughly and accurately familiar with horses and all branches of horsemanship and horsemastership.

If we take into consideration that one of the most important qualities of the modern cavalryman, or dragoon, is his horsemanship, and if we agree that the dragoon should be a young, healthy, vigorous man, such as are nearly all of our country people (those whom we call *De á Caballo*), we are forced to the conclusion that a corps formed as suggested will inevitably be of superlative efficiency in all its services, and especially in the field in campaign.

One of the notable components of the old Russian Army was found in the Cossacks. Agile, intrepid, excellent riders, they possessed sufficient practical knowledge of horsemastership to bring out and maintain the best qualities of their mounts in campaign, particularly in the services of exploration and reconnaissance.

The Uhlans of the German Army were composed of individuals specially selected for size and character, a combination which inspired the greatest of respect in their enemies. The basis of their training was a careful and conscientious education in all branches of horsemanship.

One of the glories of our own military history is to be found in the exploits of our valiant *Chinacos*, who, led by Colonel Nicolas Romero, gained fame with lariat, machete and excellent horsemanship. And there linger among us to this day memories of the old-time corps of *Rurales*, who pleased the eye not only with their showy uniforms but also with their riding and their complete mastery over their mounts. The exploits which most attracted the attention of General Francisco Villa were, beyond doubt, their rapid movements in campaign, and these were made possible by the quality of the troopers, the men *De á Caballo*.

We cannot doubt for an instant that one of the most potent factors in the overthrow of the old regime, was the presence in the revolutionary ranks of thousands of farmer-riders.

Nor should we fail to consider the geography of our country. It covers a tremendous area, it is mountainous and broken, it lacks hard-surfaced roads: hence, the most satisfactory and efficient means of locomotion is still to be found on the back of a four-footed animal. And, as I have already pointed out, it is apparent that the cavalry, and no other arm, determined and assured

[1] Translated by First Lieutenant C. C. Clendenen, 12th Cavalry, from "Revista del Ejercito y de la Marina" (Mexico), March, 1931.

the triumph of the revolution. Thus, the cavalry must be given adequate attention, even to the point of favoritism.

It would be possible to advance many other arguments showing the advantages which would accrue to our country, the proud possessor of such a cavalry, but many such arguments would encroach upon the sphere proper to higher authority, so I will pass to a brief discussion of the organization of such a force.

The formation of these "model" regiments need add no expense whatever to the burden now borne by the nation if they are included among the regiments which are to be maintained permanently to form the cavalry arm. Composed of personnel satisfying the requirements and standards which I will mention in more detail, they would serve as a model for all other regiments in their efforts to attain a like standard of excellence.

The commanding officers and higher officers of these "model" units should be selected from among those who unite the qualities of being good organizers, able horsemen, expert judges of all matters pertaining to horsemanship, and lovers of their arm. The junior field officers and troop officers should be selected by the Department, each for his ability to guide and instruct his subordinates in horsemanship and horsemastership. The personnel of the troops should be selected by a commission of experts, after an examination such as I have outlined below.

Practical examination:

1. Selection of a horse.
2. Overcoming properly the defenses and vices of the horse.
3. Knowing the kind of a bit suitable for the horse assigned.
4. Bridling and unbridling.
5. Saddling and unsaddling.
6. Mounting and putting the horse in motion.
7. Mounting bareback, mounting the saddle without stirrups, and moving at the walk, trot and gallop.

Theoretical examination:

1. Explaining the various steps of the practical examination, and explaining the rules and methods which any of the applicants may have followed.
2. A knowledge of the elementary medicaments for treating a horse in case of emergency.
3. The qualities of being fond of horses and considerate toward them.

One of these "model" regiments, if attached to the Cavalry School from its opening, would be a great benefit to the students, for their progress will be greatly facilitated if the example set before them is that of recognized experts. The combination of practice with theory will assure that the students of such a school will be incomparable cavalrymen.

From the personnel of these "model" regiments could be selected, also, the trainers for the remounts produced by the breeding establishments which the War Department has founded with such success and from which trained horses are to be produced for service in our ranks.

Reconnaissance Groups in the French Maneuvers

Colonel J. Pichon, "Revue de Cavalerie," January-February, 1932 (Digest)

NOTE. *This digest of an article appearing in the "Revue de Cavalerie," Jan.-Feb., 1932, is published as giving food for thought to officers who must command in the future our reconnaissance groups, either horse or mechanized.*

CHANCE gave me the opportunity to observe, during the maneuvers, the operations of a variety of modern reconnaissance groups.

Two general characteristics were particularly striking: first, the diabolical *entrain* of these units; the uncertainty and almost the fear of those who saw these rapid, powerful adversaries appear suddenly at a hundred different points of the battlefield and did not know how to guard against them nor get rid of them. This was true not only of the infantryman, cavalryman or artilleryman fearing the armored automobile appearing at 20 km. an hour, but an armored car meeting another unexpectedly usually turned tail. So would the other one.

Elements of unequal rapidity were associated; horses, cyclists, armored cars and sidecars armed with machine rifles and making easily 50 km. an hour.

The use of these engines of unequal rapidity is diverse. The horse cavalry filters through everywhere. The cyclists, once dismounted, hold with the characteristic solidity of infantry. The armored cars go fast on the road, slowly in the fields when they can risk themselves there, are powerful and well enough protected, but see badly. The sidecars go extremely fast without any protection and see of the enemy only that which is very apparent. In short, the most rapid and powerful tools of fire are the most blind.—there is no remedy for it.

Attempts were made to solve the difficulty by dissociating the different elements: horse elements on a flank across the fields: the cyclist squadron, used in the defensive on the position to be covered, incorporated in the battalion which occupied it. Two of the armored cars, with a platoon of cavalry, on the principal road to be covered.

There was no unity of command. The main body of the horse squadron made war on its own account. The armored cars on the main road acted as alarm bell, nothing more—it is not a force. As for the cyclist company, it was just one more small company for the major commanding the defensive position.

Another case: about ten o'clock a reconnaissance group, having forced a passage in an enemy outpost position, breaks up. The two horse squadrons are sent in one direction: all the motorized elements set off on another axis of operations, making an angle of

more than 45 degrees with the other. Towards noon, the horse elements are in a regular wasp's nest, and the motorized elements are too far off to give any help.

Same day: an armored car and some machine rifles hold a solid strong point. *But there is not a horseman there.* The officer who commanded this strong point could see very well to his front, badly on one of his flanks. He kept sending a motorcycle out on this uneasy flank to make sure he was not being turned, for he needed time to put his materiel back on wheels and to withdraw. He finally fell back much too soon. He lacked a few troopers, and nothing could take their place.

The different elements are complementary, but they may be temporarily separated. Thus, in a race for a strong point, it is normal to send the most rapid in spite of the risks of their being alone, and it is evident that it is useless to give machine-rifles motors capable of going 50 km. an hour if they have to drag along behind mounted men. On the other hand, when combat is likely, concentration is necessary.

A Few Maneuver Examples

The motorized arms are of great efficacy when they know the situation and are used without exposing themselves; that is to say, against an enemy whom they see at a distance where their fire is effective and they are not in danger. Example: they arrive at a crest or at the edge of a wood and surprise the enemy on the march in the open.

On the other hand, the simplest traps are of almost certain efficacy and experience has shown that an armored car or tank may be taken, if isolated, by resolute men.

Traps are laid in advance. All these engines, used to seize strong points quickly, come by the road, and have for objectives bridges and villages—where they are going almost inevitably to have street fights.

Foot troops surprised by an armored car run no danger if there is cover handy—orchards, hedges, houses;—and, if there is not, run a danger much greater by retiring in the open where the armored car, more rapid, will shoot them at will, than by accepting combat; an armored car in many cases destroys three enemy ones if it knows its business; and armored cars which enter a defile confidently because the enemy is abandoning it are lost—if that abandonment is a trap: and it probably is.

Case No. 1: A street bordered by houses. Opposing armored cars perceive each other and shoot at each other. One flees towards B while A pursues. (Sketch No. 1)

But suppose this fleeing armored car turns towards B′ and disappears. In no case can A pursue. B′ merely waits under perfect cover at the corner of the house and fires point blank at A. A is totally disarmed if it has no troopers nor sidecars near. To pursue blindly is suicide.

Case No. 2: An important village: schematically a straight street crossing three water courses, hence three bridges, and turning towards the east at the northern exit of the village. (Sketch No. 2)

Three armored cars and some sidecars enter the village from the north; they are already at bridge 3 when they find themselves face to face with three enemy armored cars entering from the south, and also followed by sidecars.

Confused cannonade, rapid withdrawal of the northern party.

Why? Mistaken maneuver. It was a case for shooting the bolt behind bridge 3 in the manner described in the preceding example. No armored car of the southern party could have passed.

However, the elements which withdrew disposed themselves as shown in Sketch No. 2; the machine-rifles of the sidecars AA′ opposite the northern exit, the armored cars at B on the road, the first ready to fire on bridge No. 1.

When the southern armored cars arrive at bridge No. 1 they receive fire of machine rifles which disturbs them only a little but, once on the bridge, four 37 mm. shots come from less than 200 meters. The check is perfect.—no southern armored car can fire towards B without exposing itself, consequently without being destroyed.

This may last indefinitely. B is nearly invisible. The southern armored cars have no one to go and see if B is still in place; they know it only when they try to come out.

Finally the sidecars find near C an emplacement commanding B. An armored car sent there surprises with 37 fire and obliges the opponents to retire.

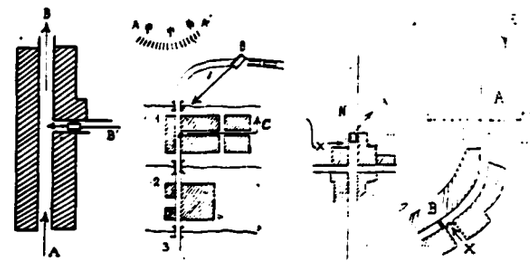
The ambuscade at B is good but not eternal. It would have been perfect if it had covered on the south by a wall or a house.

Case No. 3: A village protected by an armored car covering retreat against the advance of infantry. (Sketch No. 3)

This armored car repeats the same maneuver: it appears at the edge of the village, fires, withdraws and starts over again.

Naturally, the infantrymen have left the road and are scattered among the sugar beets. Some have gained the orchards at the north of the village.

The armored car comes out at N to fire towards A at the moment when infantrymen who have enfiladed



Sketch No. 1. Sketch No. 2. Sketch No. 3. Sketch No. 4.

at X are behind it and pelt it with clods of earth simulating grenades.

Case No. 4: A village held by machine rifles (side cars) and an armored car. The latter admirably camouflaged, covered with branches, commanding the entrance of the village.

Two armored cars appear, one behind the other. The defending armored car bombards them, then withdraws because of one against two.

Why? This is not justifiable: the defending car was entirely invisible, not located, and could let them come and shoot them up at 30 meters, a sure thing.

* * * * * * * * *

I did not see the silent trap used at maneuvers. It is, however, already classic in Russia.

Motorized engines come, as long as nothing has excited their mistrust, by the road. It is elementary to show them nothing and to let them come in. (Sketch No. 4)

In a village, against an enemy E, the barricade should never be at A visible from a distance. It should be at B, if possible behind an elbow of the road, visible only when one bumps into it and commanded by a lateral ambuscade X. And, if there is a combination with dismounted men (machine rifles or carbines), they will be invisible and mute, at the outskirts L, L′, L″, will never fire until one or more cars have entered the net and will close the exit.

There is a risk of losing in a trap armored cars sent to make contact with a distant enemy, but it is a risk that has to be run.

When about to establish contact with an enemy who expects you, armored cars should be protected by patrols against traps and have the terrain of their advance assured by fire elements.

The occupants of armored cars should know that they cannot attempt anything with impunity, and the foot people should know that they are not without defense.

NOTES FROM THE CAVALRY BOARD

Antiaircraft Mount for Light Machine Gun for Use on Vehicles

THE mount shown in the accompanying photographs, for want of a better name, is designated as the "Cavalry Board Mount No. 1, Antiaircraft". Its use is contemplated on escort wagons, trucks, or other vehicles, where the cavalry light machine gun may be called into use.

The mount consists of a light cradle and a support. The cradle is bolted to the gun, and the fork and pintle are permanently attached to it. The right fork has a friction clamp.

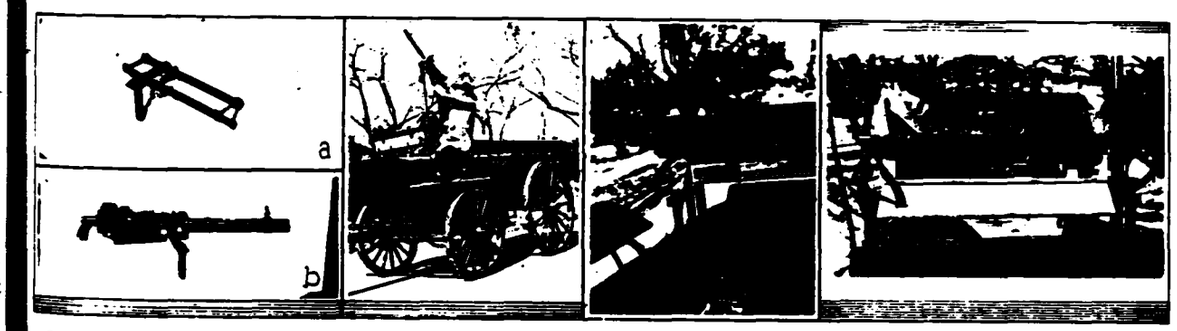
The support for use on an escort wagon is a piece of one and one-quarter inch pipe. The pintle socket is fitted tightly into the upper end of the pipe and is also equipped with a friction clamp for locking the traverse.

The left side of the cradle has attachments for holding the ammunition box. Two ammunition boxes, each holding one hundred rounds, are carried in brackets on the left side of the wagon seat.

A box is provided under the driver's seat to carry the gun when immediate action is not contemplated. This expedient also affords protection from the weather. There are no bolts or pins to be removed in order to put the gun into action. Simply take the gun from its box container and slip the pintle into the pintle socket in the upper end of the pipe support. When action is imminent, the gun can be carried mounted in the firing position, being held in place by the friction clamps. An ammunition box may also be carried attached to the cradle; however, this is not recommended as the time required to attach the ammunition box is negligible.

The following procedure must be followed in order to prepare for action: 1. *Gun in box under seat.* Remove gun from box, insert the pintle into its socket in the upper end of the pipe support, adjust the friction clamps, attach an ammunition box, and load. 2. *Gun carried mounted on the support.* Attach an ammunition box, adjust the friction clamps, and load.

The accuracy possible with this mount depends entirely upon the rigidity of the support and its attachment to the vehicle. As indicated in the accompanying photographs the support has rather a long unsupported distance above the seat. However, this give sufficient stability for satisfactory firing against both ground and aerial targets.



Left to right:—a. Cradle, fork, and pintle for Browning Machine Gun Caliber .30, Model 1919 A1, when used on vehicles for Antiaircraft or other protection. b. Same gun in the cradle, which, with the fork and pintle is permanently attached to it. Showing Browning Machine Gun, caliber .30, Model 1919 A1 mounted on Escort wagon in use against enemy aircraft. Showing support for BMG, Cal. .30, M1919 A1 when used for train protection purposes. Note rear brace to side of escort wagon body. Gun in place in improvised box under seat when its use is not imminent.

BOOK REVIEWS

TASCHENBUCH DER TANKS, by Fritz Heigl. J. F. Lehmann's Verlag, Munich, Germany. Price 15 R. M.

This is the third edition of this handy compendium and has been brought to date as much as anything of this character can be accomplished, especially when it is remembered that War Offices are not prone to publish too much regarding improvements in armored vehicles and tanks.

The first part is devoted to armored cars, beginning in 1900, and states succinctly what has been accomplished since then, including their uses, characteristics, transformation of standard vehicles, armor, tires, multiwheel drive, dual control, climbing possibilities, large wheel vehicles, such as the "Pavesi" and multiwheel chassis.

This is followed by tanks of the wheel-caterpillar type and caterpillar only. The article on caterpillar chain is very instructive, as is also the wheel suspension. The good and bad points of such chains as the Kegresse, Nyberg, Kornbeck, Chase, steel-band, Renault, Vickers, Carden-Loyd and others are fully stated.

The chapter on visibility, with periscopes, is very good and contains some interesting information.

This is followed by methods for transmitting commands within the tank, gun mounts, and finally the problem of new designs.

Quite some space is also given to armored railroad trains, their history, construction, etc.

The tanks employed by various countries are very well described so far as information is available, but newer types are principally based on surmises.

Then follows tank tactics with examples of operations during the World War, the latter with armored cars used by the Austrian troops in the Balkans.

The book closes with a table covering the armored cars and tanks at present in the service of the various countries, including date of adoption, weight, dimensions, power, speed, armament, armor, gasoline capacity, radius of action and hill-climbing capabilities.

The book should be in the hands of every one interested in motorization and mechanization.

■ ■ ■ ■

LEONARD WOOD, by Herman Hagedorn, two volumes; pp. 436, 524. Harper & Brothers, New York, 1931. Price $10.00.

A notable biography of an outstanding American, a fascinating story of an interesting epoch in our national existence. Based upon a wealth of original source material, filled with a mass of hitherto unpublished official records and private letters, these two volumes constitute an important American historical document. The author acquitted himself creditably of a herculean task. The stirring record of an eventful and romantic life encompassed within these volumes is a fitting tribute to the memory of Leonard Wood.

■ ■ ■ ■

THE RED MAN IN THE NEW WORLD DRAMA, by Jennings C. Wise. 592 pages exclusive of appendices 54 illustrations. The W. F. Roberts Co., Washington, D. C. $5.00.

An interesting and absorbing book.

The prints which form the illustrations of the book are, in themselves, of the greatest interest although the explanatory descriptions of the events pictured are not identified.

On the title page, the author calls his work. "A Political-Legal Study with a Pageantry of American Indian History." The expression sums up the book very well, no matter how unusual the joining of these two aspects may seem.

In the foreword, Colonel Wise outlines his purpose of showing that the development of this nation was greatly influenced by contact with the Indian tribes and of waking the American conscience and love of fair play so that something may be done to save the remnant of the once mighty Red Men.

The author read a great deal in his preparation of this work, and his reference footnotes are of great value. In later editions, they might well be listed in a bibliography at the end of the book.

An exhaustive and fascinating story of the origin and pre-Columbian history of the Red Race is given in Appendix I (which should be read first) and Chapters I and II.

A comprehensive account follows of the centuries of invasion and aggression by the white settlers, and of deception and betrayal by the government. A number of our presidents, notably Washington and Grant, are credited with attempts to halt the process of spoliation and extermination, but their influence could naturally be only temporary.

The efforts of outstanding Indian leaders to protect their people by organization, through treaties, and by a despairing resort to open resistance, are treated with sympathetic understanding.

Americans may read this book with profit. The subject matter is truly a part of our history; and a part of which we are amazingly ignorant.

It is to be hoped that the author may be successful in stimulating an interest in the American Indian and a desire to assist him to better conditions of life.

Organization Activities

First Cavalry

Ft. D. A. Russell, Texas

This regiment met the many and varied situations incident to the Holiday Season with the traditional Black Hawk efficiency, but without calling on the members of the command for a nickel. A very satisfactory Christmas was held at this station and every child under the age of sixteen was given a present.

The spirit of Christmas Charity extended farther, and every child in the regiment who was in need of clothing and shoes was properly cared for. Having taken care of its own, $134.64 was turned over to the Marfa Community Chest for relief of the needy.

There has been installed in Post Headquarters a library of the latest publications, including fiction, biographies and books of a military nature. This has met with an appreciative response and is being maintained without assessments on individuals.

"Louie"

"Louie, a brown gelding, height 16 hands $1\frac{3}{4}$ inches, weight 1050 pounds, Preston brand 013X, was foaled at Brawley, California.

Purchased by the Government in 1911 at the age of 6. His purchase price and breeding are unknown.

Louie, upon joining the regiment, was assigned to Troop L, which, with Troop K, was, at that time, stationed at Calexico, California.

He was transferred to Troop I, 1st Cavalry in the latter part of 1919 and to Troop E, 1st Cavalry when the regiment was reorganized in 1920. On September 16, 1920, he was transferred to Hq. Detachment, 2nd Squadron and from there to Headquarters Troop, 1st Cavalry on February 2, 1925. On January 19, 1928 he was transferred to Troop A, 1st Cavalry, of which organization he has been a member until the present time.

During his long period of service Louie has been a consistent and faithful performer in many regimental and a number of Division horse shows, winning many prizes, ribbons and cups. He has always been in demand as an officer's mount.

In his more than twenty years of service he has been stationed with the 1st Cavalry at the following Posts and Camps: Calexico, California; Presidio of San Francisco, California; Camp Harry J. Jones, Douglas, Arizona; Fort D. A. Russell, Wyoming, (now Fort Francis E. Warren) and Fort D. A. Russell, Texas, (formerly Camp Marfa, Texas), his present station. Stations are shown in their chronological order.

In December 1922, Louie left Camp Harry J. Jones, Douglas, Arizona with the Regiment on an overland march to Marfa, Texas, a distance of over 500 miles. Louie at this time was 18 years old, yet finished this march, made in mid-winter, in excellent condition. In 1929 at the age of 25, Louie *made* the 1st Cavalry Division Maneuvers, marching a total distance of over 700 miles, and participating in the Division horseshow after the maneuvers.

Today he is vigorous and active and is in training for horseshow events for week February 20 to 27th."

3d Cavalry (Less 1st Squadron)

Fort Myer, Virginia.

With six events of the coming Fort Myer Society Circus to be participated in by young ladies and children from Washington and vicinity, rehearsal groups have reached such proportions as to tax the capacity of the riding hall during practice hours. By reason of the meetings of the youthful riders and the presence of their interested friends and relatives, Fort Myer has become the center of many social gatherings throughout the week.

Young ladies practicing for the musical ride meet on Mondays, Wednesdays and Fridays from 2:00 until 3:00 o'clock.

Practice in the tandem driving event takes place from 2:00 P. M. to 3:00 P. M. Tuesdays and Thursdays and from 3:00 P. M. to 4:00 P. M. on Wednesdays.

Those riding in the jumping event meet from 3:00 to 4:00 o'clock on Monday, Tuesday and Friday.

4th Cavalry

Fort Meade, South Dakota.

Training Films, depicting action of the Cavalry Squad, mounted and dismounted—in close and extended order, and the method of directing and controlling Artillery Fire, were shown in the Post Theatre on Saturday, February 13th.

Troop B, 4th Cavalry still retains their lead in the Post Bowling League. They have won 4 out of 5 games played.

Troop A, 4th Cavalry is now in first place in the Post Basketball League. They have won 5 of the 6 games played.

The weather for the past week has been much colder with several flurries of snow, country roads are reported in poor condition—traffic flows regularly.

5th Cavalry

Fort Clark, Texas

Fort Clark, Texas, sent a very strong and successful team to San Antonio, Texas to compete in the annual horse show at Fort Sam Houston, Texas on February 23 and 24, 1932.

The "Fort Clark Team" consisted of: Capt. Boudinot, 1st Cavalry Brigade; Capt. Boon, "Team Capt.", Lieut. Thorp, Lieut. Ruffner, Lieut. Carns, Mrs. J. B. Wire, Jr., 1st Sergt. Holz, Sergt. Mundy. Corp. Owens, Corp. Bennett, Corp. Mucciante, and Privates Moluder and Moran, all of the Fifth Cavalry.

The "Fort Clark Team" competed in eighteen (18) classes, winning places as follows: eight first places, four second places, and five third places. A total of seventeen (17) places won out of eighteen classes entered.

Among the outstanding classes won were: "Open Jumping," "Officers' Jumping," "Enlisted Mens' Jumping," "Hunter Class," "Triple Bar," "Officers' Charger," (Gov't Owned) and "Enlisted Mens' Mounts."

14th Cavalry (Less 1st Squadron)

Fort Des Moines, Iowa

The 14th Cavalry held its Organization Day on March 5th, celebrating its 31st Anniversary.

In the morning a gymkhana was held in the Post Riding Hall. Winners in the different events were as follows:

Musical Chairs—Private D. C. Smith, Tr. E,
Sack Race—Private R. V. Barker, Tr. E,
Egg and Spoon Race—Sgt. F. H. Blohm, Tr. E,
Mounted Wrestling—Private G. E. Goddard, Tr. E.
Troop Choice Event—Troop E.

There were four periods of polo played between the Reds and the Blues.

In the evening the Officers and their wives were all present at a regimental dinner held at the Officers Club.

Enlisted men and their guests had dinner in the various organization messes followed by a hop in the post gymnasium.

Steel work on the new War Department Theatre is now practically completed, the brick layers are busily engaged in building up the walls of the building. The whole garrison is looking forward to the time when this building will be completed.

Every Wednesday evening is set aside at the Officers Club for small bore matches, these matches are well attended by the officers and ladies of the garrison and a great deal of interest is being shown.

103d Cavalry, P. N. G.

Philadelphia, Pa.

The results of the calibre .22 rifle match, held in the Armory 50-foot range, during January, 1932, for the Major George A. Schwartz Trophy were as follows:

Troop "B"	2432
Troop "C"	2367
Troop "A"	1880

The individual small bore champion for 1932 is Corporal E. A. Elwell, Troop "B." Corporal S. W. Rawlins, Troop "C," finished in second place.

A .22 cal. rifle match fired on March 17, 1932, resulted as follows:

Second Troop, P. C. C.	2396
103rd Engineers	2202
Upper Darby High School	1755

(did not compete in standing position)

Corporal Sarappo, Co. "F," 103rd Engrs., was high man for all stages, with Mr. Wilbur, Upper Darby, high for the prone and sitting.

Conditions for both of the team matches were the same as for the Chief of the Militia Bureau's Match.

111th Cavalry, N. M. N. G.

Santa Fe, N. M.

Brigadier General Osborne C. Wood, the Adjutant General of the State, has recently written a brief history of the New Mexico National Guard, a digest of which follows:

National Guard history in New Mexico dates back to the Taos rebellion of 1847, when a company was organized to assist United States troops in quelling a revolt in Taos County against the American occupation.

From 1851, when a territorial militia was established by the First Legislative Assembly, to 1861, various organizations of the Territorial Militia were almost constantly in the field engaged in campaigns against hostile Indians.

At the outbreak of the Civil War, several regiments of the Territorial Militia garrisoned army posts from which regular troops had been withdrawn to repel the threatened invasion of the Confederate army from Texas. Two regiments under Colonel Christopher (Kit) Carson participated with the regulars in these operations, which resulted in the expulsion of the Confederate forces.

In 1862, Colonel Carson's regiment, the First New Mexico Cavalry, waged an active campaign against the Navajos. In 1864, Colonel Carson, with several troops of his regiment and the intrepid California Column, subdued the Kiowa and Comanche Indians. The famous battle of Adobe Walls broke the backbone of their resistance.

From 1868 to 1873, the troops of the Territory were often in the field against raiding Indians. There was a respite from 1873 to 1879, with a recrudescence of Apache raids in the latter year.

In 1882, the Territorial Militia was authorized to furnish aid to sheriffs and constables and did this so effectively that the Governor was able to declare the Territory free from lawless elements by April, 1883.

The same latitude was allowed militia commanders with regard to Indian raids in 1885. The Apaches had gone on the warpath again in 1884, and different militia organizations were in the field against them until April, 1886. At the close of that year, there were on the rolls 3 regiments of cavalry and one regiment of infantry.

Active service being less, the militia was gradually reduced until, in 1894, it consisted of one squadron of cavalry and one regiment of infantry. In 1897

the Territorial Legislature passed a law providing for the National Guard of New Mexico and since that time it has been on a firm basis.

In the Spanish-American War the First New Mexico Cavalry, which at that time consisted of but one squadron, became the Second Squadron of the First United States Volunteer Cavalry, better known as the "Rough Riders," and saw service in Cuba. Among other engagements, they participated in the Battle of San Juan Hill.

When the President called State troops into service on the Mexican Border, New Mexico furnished a Regiment of Infantry and a Battery of Field Artillery. Mexican Border service prepared the New Mexico National Guard for valuable service during the World War in which the First New Mexico Infantry and its Battery of Field Artillery saw active service.

The New Mexico National Guard now consists of a Regiment of Cavalry, the 111th, commanded by Colonel Norman L. King, a Regiment of Engineers, the 120th less the 1st Battalion, commanded by Colonel Ulibarne, and Battery "A," 158th Field Artillery, commanded by Captain Herbert C. Gray, together with the State Staff Corps and Detachment. The present strength of the New Mexico National Guard is seventy-nine (79) officers, two (2) Warrant Officers, nine hundred and fifty-nine (959) enlisted men and is kept at a high state of efficiency.

Since the World War units of the New Mexico National Guard have been called into the service of the State for strike and riot duty on several different occasions.

The New Mexico National Guard has its annual field-training period of two weeks at Camp Maximiliano Luna near Las Vegas, New Mexico. Camp Luna is named in honor of Captain Maximiliano Luna, a Captain of the First New Mexico Cavalry, who served with the "Rough Riders" during the Spanish-American War and afterwards volunteered for service in the Philippine Insurrection and while on active duty in the Philippine Islands he lost his life in the service of his country.

305th Cavalry

Philadelphia, Pa.

Lieutenant Colonel Sloan Doak, G-3, Hq. 62nd Cavalry Division, paid us a visit on February 3rd. Colonel Doak has been a member of two Olympic teams and Captain of one. The turnout for the meeting was good and members of the Regiment were highly interested in the talk Colonel Doak gave.

The sections which will participate in the Annual Ride commemorating our Regimental Day are busily engaged getting the rough edge of the drill smoothed off, and it promises to be a well-drilled exhibition.

On the night of Wednesday, 24th, we took a rather severe drubbing in a pistol shoot at the hands of a group of experts who are guards at the Girard Trust in Philadelphia. However, they are about the best in town and we don't feel too badly about it. Also, it was our first match of the year, and we hope to do better next time.

306th Cavalry

Baltimore, Maryland

The two-sided map maneuver which was started at the December Conference has been continued through three conferences and will probably be completed at the next conference. This type of instruction arouses more interest among the students than any other form of inactive training. While irregular attendance by commanders of units will greatly increase the difficulties of handling this kind of instruction, it is believed that results can be obtained which more than justify the great amount of work involved in carrying on training of this nature.

It is planned to resume instruction in equitation for the Baltimore Reserve personnel early in April, and the officers are looking forward with pleasant anticipation to getting back in the saddle again.

The 2nd Squadron and Machine Gun Troop, 306th Cavalry

Washington, D. C.

On Tuesday evening, February 2nd, the Kennedy Warren Hotel was a scene of gay festivity when the squadron entertained with a dinner dance. Patrons for the event were Colonel and Mrs. John Philip Hill and Major and Mrs. Harley C. Dagley.

Captain Gustaf Frederick Von Rosen, Military Attaché of the Swedish Legation, was among the guests of honor.

Eighty-three couples attended the dinner, while many others came in later for the dancing.

At recent conferences the squadron has been honored by visits from Colonel George T. Bowman, Chief of Staff 62nd Cavalry Division, Colonel M. S. Jarvis, Infantry, Senior Instructor Organized Reserves, Washington, D. C., Lieutenant Colonel Sloan Doak, Cavalry, Major W. M. Grimes, Cavalry, Office of the Chief of Cavalry.

Inactive training is progressing in a highly satisfactory manner. Ground covered by the 2nd Squadron and Machine Gun Troop between October 1st last and March 1st may be described as follows:

Ten regular conferences have been held, and the subjects covered have been, respectively: Organization; Horses and Horsemanship; Doctrines, Principles and Methods; Estimate of the Situation; Combat Orders; Nomenclature, Care and Use of the Rifle, Pistol and Saber; Machine Rifles; Machine Guns; Scouting; Patrolling and Security.

The average attendance for the ten conferences is 70 persons per conference.

Eight equitation classes have been held at Ft. Myer, Va., on Sunday mornings with an average attendance of 63 persons, per class.

The number of students enrolled in the Extension Courses, March 1, 1932, is 93.

The number of lessons marked:

October	77
November	93
December	120

January	320
February	300
Total	910

The number of subcourses completed March 1, 1932, is 157.

307th Cavalry

Richmond, Virginia

Interest in the Extension School Courses continue to increase. New enrollments are being received daily.

1st Lieutenant Sam H. Franklin, 307th Cavalry, has been designated to pursue the course of instruction at The Cavalry School during the period March 9th to June 15, 1932.

The Cavalry conferences held in Richmond are drawing a large attendance of officers assigned to other arms.

The following officers of the Regiment have recently been promoted to the grade of First Lieutenant:

Second Lieutenant Sam H. Franklin, Jr.
Second Lieutenant Ludwell L. Montague.
Second Lieutenant Southgate W. Taylor.
Second Lieutenant Louis B. Powell.

Third Squadron and Machine Gun Troop, 307th Cavalry

Norfolk, Va.

Colonel George T. Bowman, Cavalry, Chief of Staff of the 62nd Cavalry Division and Liaison Officer for Organized Reserves at Headquarters Third Corps Area visited Norfolk on February 18th and 19th and made an inspection of Reserve Activities in the Norfolk Area.

A meeting for all Reserve Officers in the area was held at the Princess Anne Country Club, Virginia Beach, Va., on the evening of February 18th. The meeting was preceded by a dinner and sixty-four officers were in attendance. Colonel Bowman was the principal speaker. Following the dinner, the Unit Instructor, Major David H. Blakelock, Cavalry, gave an interesting talk on Supply within the Division. The motion picture "Service of Supply of a Division" was also shown and was well received.

Inactive duty training in the Squadron is progressing very satisfactorily, especially with respect to the Extension Courses. Fifty-six per cent of the officers and men of the Squadron are now enrolled and to March 1st an average of six lessons per student has been completed.

The motion pictures, "The Cavalry Rifle Platoon, its Weapons, Organization and Formation" and "The Cavalry Rifle Platoon, in Mounted Action" were shown during the January and February conferences and helped make those conferences especially instructive and interesting.

308th Cavalry

Pittsburgh, Pa.

Regimental Organization Day was celebrated in fitting style. Lieutenant Colonel and Mrs. George E. Cherrington were at home to the regiment from six-thirty p. m. to seven-thirty p. m. at their home, 5851 Marlborough Avenue, Pittsburgh, Pennsylvania.

At seven-thirty all officers and ladies adjourned to the Pittsburgh Hunt Club House, where an excellent Buffet Supper was served. After supper there was dancing.

The officers and ladies under guidance of Colonel Cherrington, who is M. F. H., Pittsburgh Hunt, inspected the Hunt Stables and viewed among others Colonel Cherrington's registered four-year-old hunter.

A more delightful setting or more appropriate one for a cavalry party would have been impossible to find.

862nd Field Artillery, (Horse)

Baltimore, Md.

The inactive training objective this winter has been to prepare officers for Summer Camp and it is believed that they will arrive in camp this summer better prepared than at any previous time. It is the ambition of Lt. Colonel R. S. B. Hartz, the Regimental Commander, to have every officer of battery grade qualified as expert gunner, the attainment of which will no doubt be unique for a reserve regiment. In January one of the regular conferences was replaced by a meeting of all Reserve officers at the War Memorial Building in Baltimore to hear a lecture by the Corps Area Commander, Major General Paul B. Malone, and in February the program for one of the Conferences was a lecture by Lt. Colonel George E. Harrison, Infantry, on Allenby's Palestine Campaign, a subject most fitting for a Field Artillery regiment which is a component of a Cavalry Division.

With the advent of spring the thoughts of the officers return toward riding and those enrolled in the equitation class are impatient to resume the former nightly rides at Fort Hoyle, held on Sunday mornings. There is somewhat the same feeling among the pistol enthusiasts who are awaiting with some impatience the completion of the Post Office and Federal Court Building in Baltimore which has in its basement an excellent pistol range of dimensions ample for record practice.

For information about Italian saddles made by Adolfo Pariani, Milan, address the Cavalry Association.

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The United States Cavalry Association

Organized November 9, 1885

DESIGN

1. The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and the solidarity of the Cavalry of the Army of the United States.—*Article III of the Constitution.*

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MEMBERSHIP

Membership shall be of three classes, which, together with the conditions of eligibility therefor, are as follows:

(1) Active, for which all general officers of the Army of the United States and all commissioned officers of the Cavalry of the Army of the United States shall be eligible.

(2) Associate, for which all present and former commissioned, warrant, and non-commissioned officers of honorable record of the military or naval services of the United States not included in class I shall be eligible.

(3) Honorary.

Application for membership, showing present or former military status, should be addressed to the Secretary, U. S. Cavalry Association, 1624 H Street, N. W., Washington, D. C., and be accompanied by remittance of dues for one year.

DUES AND SUBSCRIPTION TO THE CAVALRY JOURNAL

There is no initiation fee. Annual dues, payable in advance, $3.00, which includes subscription to the CAVALRY JOURNAL, 60% thereof being so designated.

Any person or organization not eligible for membership may subscribe for the JOURNAL at the regular subscription rates of $3.00 per year. Canadian and foreign postage, 50 cents additional.

Members and subscribers are requested to give prompt notice in advance of change of address. Changes in address are made only on notification.

The Organization of the 1932 Olympic Games and the Conduct of the Equestrian Sports

By Major W. M. Grimes, Cavalry

General

In view of the fact that the Games of the Xth Olympiad will be celebrated in Los Angeles, Calif., from July 30th to August 14th, 1932, it may be of interest to briefly outline the Olympic Organization, with special reference to the Equestrian sports and the part played by our *U. S. Cavalry Association*.

Before proceeding with the organization of the games, let us briefly outline the historical background.

Historical

The ancient Olympic Games, the origin of which is buried in obscurity, were celebrated at Olympia in Elis, a small plain west of Pisa.

The first historical fact connected with the Olympic Games is their revival by Iphitus, King of Elis. It is probable that during the Dorian invasion the celebration of the festival was discontinued, and it is said that Iphitus was commanded by the Delphic oracle to revive the Games as a remedy for the internal difficulties then besetting Greece.

Different dates are assigned by ancient writers, some placing the revival at 884 B. C., others at 828. The Olympiads were not employed as a chronological era until 776 B. C. The Olympic Games continued to be celebrated with much splendor under the Roman Emperors, and the festival was finally abolished in A. D.

MAJOR GENERAL GUY V. HENRY, CHIEF OF CAVALRY, U. S. A., ON "GRAY FALCON"

President, Fédération Equestre Internationale; President U. S. Cavalry Association; Member, American Olympic Committee; Chairman, 1932 Olympic Games Equestrian Committee; Chairman, 1932 Olympic Games Modern Pentathlon Committee; War Department Representative for Army Participation in 1932 Olympics.

394, in the sixteenth year of the reign of Emperor Theodosius.

The revival of the modern Olympic Games dates back to 1892, when at a meeting of the Union des Sports Athlétiques in France, Baron de Coubertin publicly proposed their revival. For a while, little interest was evidenced. However, in 1894, it was decided to revive the Olympic Games and the institution of the International Olympic Committee took place. To the ancient city of Athens fell the great honor of staging the modern revival, the first of the modern Games being held there in April, 1896; since then they have been celebrated every four years, with the exception of 1916.

Organization for 1932 Olympic Games

Organization for the Xth Olympiad consists of: International Olympic Committee; American Olympic Association; American Olympic Committee; various games committees of the several sports on the Olympic program: Organizing Committee, Games of the Xth Olympiad, Los Angeles, California; International Federation of the various sports on the Olympic program; and National Federation of Sports on the Olympic program.

The functions of these various sub-divisions are briefly indicated below.

International Olympic Committee

This committee is permanent, elects itself and has from one to three members from each country elected for an indefinite time. The number of countries represented on the committee is unlimited.

The committee, in general, is charged with ensuring the regular celebration of the Olympiads and for their proper organization and conduct. It fixes the time and place for the celebration of each Olympiad. It entrusts the organization to the *National Olympic Committee* of the country in which the chosen town is situated. The country selected usually delegates the duties to a *special organizing committee* chosen by itself. In the case of the Xth Olympiad the International Olympic Committee entrusted the organization of the games to the American Olympic Committee, which, in turn, delegated its duties to a special organizing committee of Los Angeles.

American Olympic Association

The Association is maintained as a permanent organization through which expression can be given and action taken relative to the interests of the United States in Olympic Games.

The American Olympic Association directly, or through its members or committees, has jurisdiction over all matters pertaining to the participation of the United States in the Olympic Games and over the organization of the Olympic Games or any Olympiad celebrated in this country.

In general, membership is confined to organizations of this country taking some active part in the administration of one or more of the games or competitions upon the Olympic program and to such other organizations as further or tend to promote the participation in or preparation for an amateur sports or games competition.

American Olympic Committee

This committee is brought into being by the Executive Committee of the American Olympic Association. It consists of the Executive Committee of the American Olympic Association, plus Chairmen of Games Committees and Chairmen of such other Committees as have been created by the Executive Committee.

In general the committee is responsible for American participation in the games and is charged with soliciting, collecting or receiving and handling funds.

Three Army officers are members of this committee:

Major General Guy V. Henry.
Major E. P. Denson, War Department General Staff.
Major W. C. Rose, War Department General Staff.

Olympic Games Committees

There is a Games Committee for each sport on the Olympic program. Each committee has the power to advise the American Olympic Committee on all matters relative to place, time and method of holding try-outs or other competitions for members of team of the competition or event upon the Olympic program for which it was appointed; of nominating for final appointment by the American Olympic Committee, the managers, coaches, trainers or other personnel of such team and of nominating to the American Olympic Committee the members of the team.

Equestrian Sports Committee

The Games Committee for the Equestrian Sports known as the 1932 Olympic Games Equestrian Committee; its membership follows:

Major General Guy V. Henry, Chief of Cavalry, Chairman
Mr. Gustavus T. Kirby
Colonel Pierre Lorillard, Jr.
Mr. Alfred B. Maclay.
Lt. Colonel C. L. Scott, Secretary

Organizing Committee, Games of the Xth Olympiad, Los Angeles, California

The organization of the games is entrusted to the Organizing Committee, Games of the Xth Olympiad, Los Angeles, Calif., U. S. A.—this Committee is responsible for and controls the games and makes all the necessary arrangements.

The Los Angeles Organizing Committee looks to several international sport federations for technical advice and assistance in staging Olympic sports; insofar as the equestrian sports are concerned the Committee deals with the Fédération Equestre Internationale.

The International Equestrian Federation

Consists of a group of approximately 24 national equestrian associations that have joined together for the purpose of regulating the conduct of international equestrian events, horse shows, etc., in the seven countries concerned. In the international horse world the federation occupies a somewhat similar position to that occupied in this country by the Association of American Horse Shows, Inc. In addition to prescribing rules and regulations for the conduct of international horse shows, it has general supervision over the Equestrian events of Olympic Games. This federation prepares the regulations for Olympic Equestrian events and appoints various juries and other officials.

Our Chief of Cavalry, Major General Guy V. Henry, is President of the International Equestrian Federation.

The U. S. Cavalry Association

The U. S. Cavalry Association is the national representative of the Fédération Equestre Internationale.

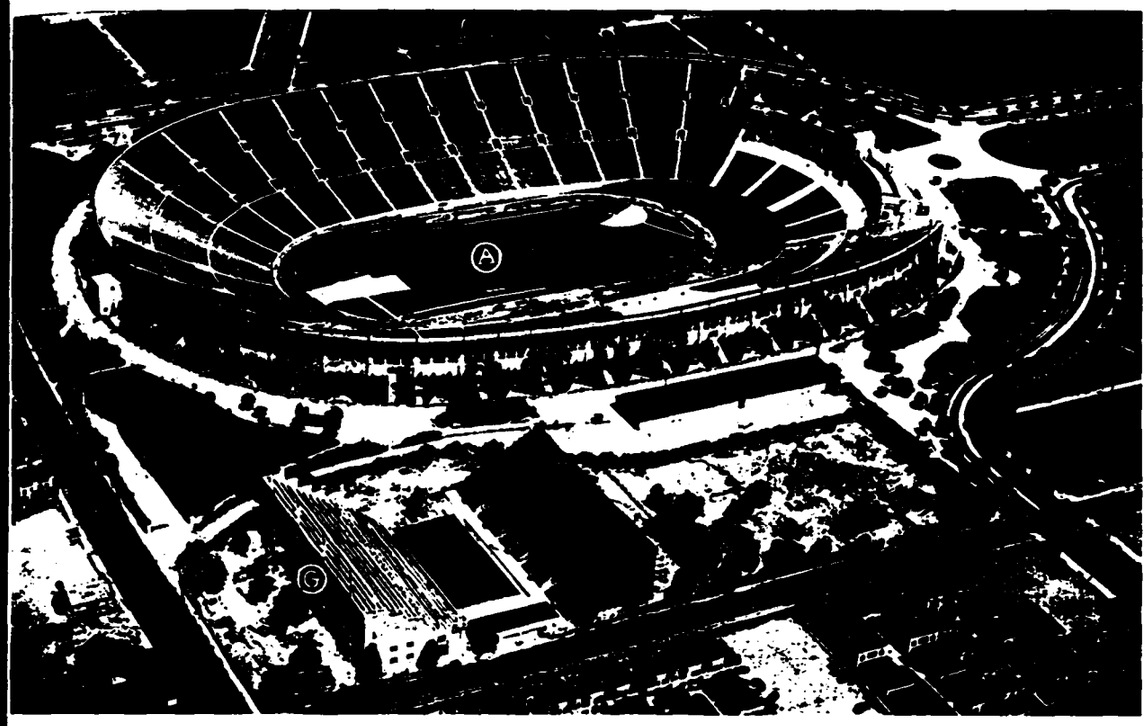
The U. S. Cavalry Association is responsible for the organization and conduct of the Equestrian events and gives such technical or other assistance it can render to the Organizing Committee in the preparation of the courses for the equestrian events.

In other words the actual staging of the Equestrian Sports is handled by the U. S. Cavalry Association; this includes such items as preparation of terrain, jumps, issuing instructions, etc., judges and all related matters.

Lieutenant Colonel John A. Barry, Cavalry, under the direction of the Chief of Cavalry represents the U. S. Cavalry Association in Los Angeles.

2d Lieutenant M. F. DeBarneville, QMC. Reserve, on duty at the American Embassy, Paris, represents the association in Europe.

1st Lieutenant R. M. Eichelsdoerfer, A.D.C., Cav. is acting as liaison officer with the foreign army teams upon their arrival at the port of New York.



OLYMPIC STADIUM
In which Will be Held the Jumping Phase of the Three-Day Event and the Prix Des Nations.

The Xth Olympiad

The program will open in Olympic Stadium Coliseum on Saturday afternoon, July 30, with the historic opening ceremony, a part of which will be the impressive parade of nations, in which 2,000 sons and daughters of 35 nations, led by their respective national flags, will participate in the march past the tribune of honor. One athlete will then step from the drawn up ranks to take the Olympic oath for all the teams of the participating nations. As the oath is administered the Olympic flag will be raised; the Olympic torch will blaze forth atop the massive peristyle of the stadium and in presence of representatives of foreign countries, world-wide Olympic organizations, and officials of state, the games of the Xth Olympiad will be declared officially opened. Many other beautiful features of pageantry will mark the opening ceremony.

Something of the magnitude of the program is suggested by the fact that, during the 16 days the games are in progress, more than 135 distinct programs of competitions from 15 branches of sports will be held mornings, afternoons and evenings at 9 or more stadiums, auditoriums or water courses. Competitions will be held in the following world-wide sports: track and field athletics, boxing, cycling, equestrian sports, fencing, field hockey, gymnastics, modern pentathlon, shooting, rowing, swimming, diving and water polo, weightlifting, wrestling, yachting, national demonstration, international demonstration, and fine arts.

The Equestrian Sports

The equestrian sports have the greatest appeal of all events on the Olympic programme, insofar as the Army is concerned; they are one of the two sports (*) in which all of the competitors come from the Army. To the horseman, civilian or military, Olympic equestrian sports are the most spectacular, colorful and greatest equestrian competition of their kind in the world.

There are three separate and distinct events, each representing an entirely different phase of equitation. First, there is a jumping event; second, schooling event and, lastly, an event that combines an endurance test with jumping and schooling. These exhibitions require on the part of rider and horse, a degree of training, courage and skill that goes far beyond the demands of the horse show ring; only the equestrian equivalents of Tilden, Jones, and Ruth have sufficient knowledge, experience and capacity to participate.

The equestrian sports are scheduled for the period of August 10-14 inclusive.

Entries

Entries are individual and team. Team entries consist of three riders and three horses.

Each rider has the privilege of entering two horses in each event. The entering of the second (reserve) horse is optional. The horse to be ridden is designated 48 hours before the event begins.

All entries must meet the Olympic requirements as to eligibility, amateur standing, etc.

Officials—Judges—Regulations

The average horse enthusiast who views the equestrian sports will find much of interest in the judging: the events will be judged by international jurors. The nations participating in the games select the best qualified judges from the foremost horsemen of their respective countries. Their names are then submitted to the Fédération Equestre Internationale, and from these lists the necessary officials are selected.

Judging is in conformity with the general rules of the Fédération Equestre Internationale. Details of judging and scoring will be discussed separately under each event.

There are three separate and distinct sets of jurors and judges as follows:

1. The *Jury of Appeal* consists of from three to five jurors from five different countries selected by the Fédération Equestre Internationale. This jury settles controversial matters referred to it when a complaint in writing is made by one of the competitors against a decision of a ground judge. The Jury of Appeal at Los Angeles is composed of the following:

Major General Guy V. Henry, representing the United States.

Count Clarence Von Rosen, representing Sweden.

Commandant G. Hector, representing France.

2. The *Ground Jury* consists of three to five jurors selected by the Fédération Equestre Internationale, to judge each event, or one jury may judge all three events. This ground jury is solely responsible for judging the event or events. Countries will be represented on the ground juries in Los Angeles as follows:

Dressage	United States. France Sweden
Three Day	United States. Holland Sweden
Prix des Nations	United States. Poland Sweden

Lieutenant Colonel Sloan Doak, Cavalry, will be the ground juror to represent the United States in all three events.

3. *Judges at the Jumps* score faults, etc. There are approximately 45-50 minor officials that will be necessary for the proper staging of the equestrian events.

Likely Competitors

From information received to date, it is believed that the following countries will enter teams approximately as follows:

Nation	*Event*
United States	*Dressage*—Three Day—*Prix des Nations.*
Bulgaria	*Dressage.*
France*	*Dressage.*
Holland**	*Dressage*—Three Day—*Prix des Nations.*
Japan	*Dressage*—Three Day—*Prix des Nations.*
Poland†	*Prix des Nations.*
Sweden††	*Dressage*—Three Day—*Prix des Nations.*
Mexico	*Dressage*—Three Day—*Prix des Nations.*

The above list will in all probability be increased several countries, while not definitely accepting, on the other hand have not positively declined.

Most of the foreign teams coming from Europe will land in New York on or about July 1st, shipping to Los Angeles as soon after arrival as practicable. One or many countries will probably ship direct to Los Angeles via the Panama Canal.

The first of the foreign equestrian teams to arrive was the team representing the Japanese Army; the advanced party arrived in California on May 11th.

Concours Individuel de Dressage*

The first of the three equestrian events is the *Dressage*, a training or schooling event for high schooled horses. The *Dressage* will be held on August 10th in the Riviera Area of Los Angeles.

The event is designed to show the skill and ability of the rider in controlling his mount and the latter's obedience to the will of the rider. The rider shows his horse at all gaits, at two track, change of lead at

* The Modern Pentathlon is the other.

* 4th in *Dressage*, 1928 Games.
** 1st in *Three Day* and 3rd in *Dressage*, 1928.
† 2nd in *Prix des Nations*, 1928.
†† 2nd in *Dressage*, 5th in *Three Day* and 3rd in *Prix des Nations*, 1928.

gallop, on the circle, on a straight line at each stride and the movements of the *passage*, *pirouette* and the *piaffer*.

This is the first time the horse loving public of America has had an opportunity of witnessing the gaits and acts of the *haute ecole* demonstrated by the leading experts in America and Europe.

As to the *Dressage* as contained in the Olympic Equestrian Regulations:

"* * * The purpose of *Dressage* is to make the horse 'agreeable': that is to say, keen but obedient. These characteristics are manifested by:

"the freedom of the gaits;

"the rhythm, the lightness and ease of the movements;

"the rigorously straight position maintained during all the work.

"The horse should give the impression of managing himself—of being on his own.

"Confident and attentive, he generously gives himself to his rider. His walk is regular, free and extended, his trot is natural, free and rhythmic, his gallop is united, light and well balanced."

Judging and scoring the *Dressage* is technical and complicated. There are relatively few horsemen competent to judge and evaluate the many intricate movements.

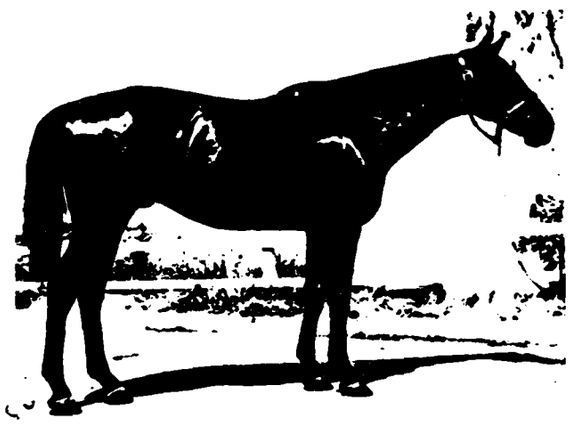
The competitor is judged in conformity with the rules of the Fédération Equestre Internationale; in order to give the reader an idea of this event, there are listed a few of the more important provisions:

Movements are executed from memory and in the prescribed sequence. When a rider errs he is stopped and is told to resume with the correct movement. Time is not taken out in this course. For the first and second errors riders are penalized two and five points respectively. The third error is elimination.

Each rider is allowed 16 minutes in which to execute the prescribed movements. Time begins to count when the rider salutes the jury and moves forward and ends when the rider, after completing the movements, halts and salutes the jury. Failure to complete the test on time is penalized ½ point for each full second overtime. Each judge deducts the time penalties from the score of the rider concerned.

In movements prescribed to be executed at a certain point, the execution begins when the head and

Riviera Country Club in the Vicinity of Which the Dressage and the Endurance and Schooling Phases of the Three-Day Event Will be held.



One of the top Dressage Horses, T.B., B.G. "Olympic." (Radius Rosa-Odette VI) 16-2½, 1226 lbs., 8 yrs. Owned by Capt. H. C. Tuttle, Q. M. C., now with team.

shoulders of the rider arrive on line with the point.

All movements are scored by each judge on a basis of from 0 to 10, regardless of the coefficient allotted to the movement.

After each rider's performance, the marks of the judges are examined; whenever a difference of four or more points exists among the judges' marks for the same movement, the judges are asked to explain their markings.

The classification of each rider is determined by each judge as follows:

The coefficient allotted each movement, or group of movements is multiplied by the mark for that movement or group of movements; each product shall then be divided by ten; the sum of these quotients determines the rider's standing.

Final classification is as follows:

At the conclusion of the *Dressage* each rider is classified in accordance with the score card of each judge; then each rider's several classifications are added and divided by ten. The winner is the rider with the least total; second place goes to the rider with the next smaller total, and so on. In case two or more totals are equal, resulting in a tie, the winner is the rider whose average work is the highest; second place goes to the rider whose average work is next highest, and so on.

In case of "ties" in the Individual *Dressage* Event, the Jury, has the riders execute certain specified movements.

In case of "ties" in team competitions, the team whose work is most homogeneous is placed first; that is, the team whose individual scores are the least separated.

Normally the arena is 60 meters by 20, approximately 196 by 65 feet.

There is no limitation as to weight.

The equipment for the *Dressage* is: flat saddle, snaffle, simple curb with curb chain, and lip strap if needed.

Martingales and artificial reining devices of what-

ever kind are prohibited. Horses are not allowed to wear boots or bandages.

Concours Complet d'Equitation
The Three-Day Event

The Three-Day Event comprises three distinct tests held on three successive days.

August 11—A training test, Riviera Country Club.

August 12—An endurance test, Riviera Country Club.

August 13—A jumping test, Olympic Stadium.

The maximum number of points in each test is:

Training test		400.
Endurance test	Route phase (roads or paths)	100.
	Cross-country phase	700.
	Steeplechase phase	500.
Jumping test		300

From the foregoing it is seen that the Endurance Test counts a little more than three times the Training Test and four times the Jumping Test.

Prior to the Training and Jumping Test all horses are examined by an international commission composed of three members; the commission has the power to exclude from the event or from the last test horses which are unquestionably exhausted and horses which have become seriously lame, regardless of cause. All other horses continue and complete the event at the option of their riders. They are classified as to final standing, provided such horses have not been otherwise eliminated during the course of the event.

First Day: Training Test

The purpose is to prove the suppleness of the horse and his obedience to the aids of the rider (a horse responsive to the legs, light on the hands).

Each rider is allowed eleven minutes to perform successively a series of some forty prescribed movements. The marking and scoring follow the general procedure followed in the *Dressage*.

The score cards of the judges are arranged in such a manner as to total the 400 points allotted to the training test.

A rider failing to make a score of at least 150 points is disqualified from the remaining tests of the event, and such a rider is not classified in the final standing.

Second Day: Endurance Test

This test is to show the endurance of a good charger or hunter, when well trained and conditioned. Likewise, it is a test of the rider's knowledge of pace and of his control of the horse.

The endurance test is laid partly on roads or paths and includes a steeplechase course and a cross-country obstacle course. 2 hours, 5 minutes and 6 seconds are allowed for this 36 kilometer* (22½ mile) ride.

In principle, the different phases of this test are conducted in the following order:

a. On roads or paths, about seven kilometers, at the rate of 240 meters per minute or, in other words, if completed in 29 minutes, 10 seconds, there is no penalty.

b. Steeplechase of about 4,000 meters, at the rate of 600 meters per minute. No penalty if completed in 6 minutes, 40 seconds.

*Kilometer equals 1000 meters, about ⅝ mile.

c. On roads or paths, about 15 kilometers, at the rate of 240 meters per minute. Or, if completed in 1 hour, 2 minutes, 30 seconds, there is no penalty.

d. Cross-country, over 30 to 35 obstacles, about 8,000 meters at the rate of 450 meters per minute. No penalty if completed in 17 minutes, 46 seconds.

e. On the flat, 2,000 meters, to be covered at the gallop, at the rate of 333 meters per minute. No penalty if completed in 6 minutes.

Two minutes are allowed at the finish of the road phase 7 kilometers) to permit riders to proceed to the starting point of the steeplechase.

One minute is similarly allowed at the finish of the steeplechase to permit riders to proceed to the starting point of the 15 kilometer route phase.

These minutes begin to count the instant the horse passes the respective finishing points.

The cross-country phase is normally shown to the competitors on foot the day preceding the endurance test.

In the cross-country phase 30-35 obstacles must be jumped. The obstacles are natural ones, such as hedges, ditches, farm gates, brooks, streams, roadways, etc. Obstacles of height shall have a maximum height of 1 meter 15, those of width, a maximum width of 4 meters.

Each phase of the endurance test is scored upon the *time* consumed and upon the *faults* committed at the obstacles. *Overtime* is penalized at the rate of 2½ points for each 5 seconds overtime in the route phase (roads, paths, on the flat) in the steeplechase there is a 12½ point penalty and in the cross-country phase there is a 17½ point penalty. *Undertime* on the steeplechase is rewarded respectively 2 points for each 5 seconds up to 30 seconds; and 2 points for each 4 seconds up to 14 minutes and 6 seconds in the cross-country phase.

The unit of measure for determining the penalties and the bonuses is 5 seconds, except in the cross-country where bonuses are warded on ten full seconds. Fractional parts of 5 seconds are disregarded.

The following scale of faults is used in scoring at the obstacles

	Steeplechase	Cross-country
A. First refusal or run out.	25 points	35 points
B. Second refusal, or run-out, at the same obstacle	50 points	70 points
C. Fall of horse at an obstacle	50 points	70 points
D. Fall of only the rider at an obstacle	100 points	140 points
E. Third refusal, or run out, at the same obstacle	Elimination	Elimination

Defenses on the part of the horse, circling, trotting, errors in the course, if corrected, are not entered on the score. Such faults are automatically penalized in the time element.

Failure to take an obstacle, or to pass on the prescribed side of a guide flag, entails elimination.

Third Day: Jumping Test

The last phase of the Three-Day Event is the Olympic Stadium Jumping Contest, on August 13.

The course is approximately 700-800 meters long, taken at the gallop, at a speed of 375 meters per minute. There is an overtime penalty of ¼ of a point per second; there is no credit for faster time.

There are 12 obstacles, with a minimum height of 1 meter 10 and a maximum of 1 meter 15. The width of bar and ditch will not exceed 2 meters; the water jump will not exceed 3 meters 50. In general, the obstacles are patterned after natural fences encountered in cross-country riding. Specifications for obstacles include an in-and-out, a 3 meter 50 ditch and four obstacles exactly 1 meter 15 high. The remaining obstacles are left to the discretion of the organizers.

In this event faults are scored as follows:

	Penalty
A. First disobedience*	15 points
B. Knockdown with front or hind feet	20 points
C. In water of brook with front or hind feet	20 points
D. Second disobedience	30 points
E. Fall of horse and of rider	30 points
F. Fall of rider only	60 points
G. Third disobedience on the course, failure to jump an obstacle in its proper order, failure to keep course, unless rectified	Elimination

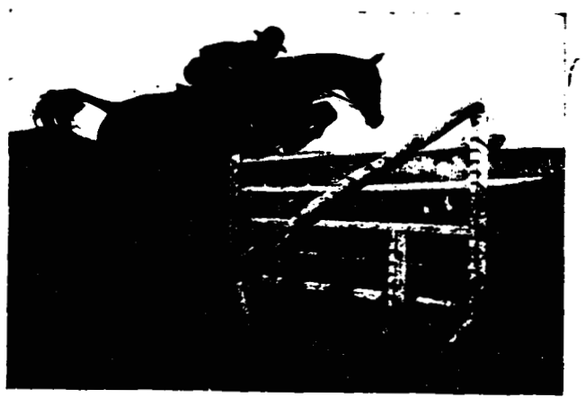
Herewith are pertinent extracts from applicable rules of the Fédération Equestre Internationale for Olympic Jumping Contests. American Horse Show followers will note many differences between the international rules and those used by our own horse shows.

Touches, tips or displacements which do not affect the height of obstacles are not counted.

When an obstacle is composed of several elements in

*Disobedience.—A refusal, a run-out, a circle on the course, regardless of where and why made except to correct a run-out, a refusal, which so displaces an obstacle that it has to be replaced.

Fine type of Three-Day Horse. T.B., B.G. "Pleasant Smiles" (Transvaal-Bread Winner) 16-1, 1150 lbs., 8 yrs.



Joe Aleshire (½ TB, ½ Saddle-bred—16-1, 1200 lbs., 12 yrs.) a top Prix Des Nations horse. Capt. W. B. Bradford, Cav., up. Fence, 5 ft. 6 in.

the same vertical plane, a knockdown of the top element is the only one penalized.

The term *disobedience* includes:

Refusal, accompanied or not by disturbing the obstacle so that it must be reset.

Runout.

Defense.

Circling in any part of the course for any reason except to retake the course.

Refusal, stopping at an obstacle to be jumped, whether or not a knock down occurs.

Stopping at an obstacle, without a knockdown and followed immediately by a standing jump, is not penalized.

If a horse, having knocked down an obstacle in stopping or sliding, takes that obstacle without backing or retaking the track, he is penalized by a disobedience plus four points for the knockdown.

If he backs or retakes the track, a refusal is scored, and he must await the resetting of the obstacle before resuming the course, under penalty of disqualification.

If an obstacle has not been reset by the time the rider is again ready to resume the course, he must halt, and, during this time, the special chronometer is started. The signal to resume the course is then given by a bell. The time between starting the chronometer and the signal bell is deducted from the contestant's time for the course. The same procedure is followed when an obstacle must be reset to be jumped a second time. If the rider continues the course without stopping he is eliminated.

Runout.

An evasion of the obstacle to be jumped.

Jumping the obstacle outside of the flags or other limiting markers.

A knockdown, by either horse or rider, of a flag, a wing or other appurtenance of the obstacle.

The rider must return to the obstacle and, if it has been knocked down, must wait until it has been reset, under penalty of elimination. The time taken to reset the obstacle is recorded and deducted as in the case of a refusal accompanied by a knockdown.

Defense.

Any action. (stopping, backing, rearing, etc.) by which a horse seeks to avoid forward movement.

A horse has fallen when the shoulder and haunch on the same side have touched the ground, or the obstacle and the ground.

The fall of a horse or rider at an obstacle is added to the fault committed.

After a fall or any other accident a horse brought to the rider is not eliminated if the course is retaken at the exact point of the accident, and the aid received by the rider is not penalized.

Time is recorded to fifths of a second.

A horse continuing a defense for one minute at the start or during a round is eliminated.

Concours de Sauts d'Obstacles
Prix des Nations

The *Prix des Nations* is a jumping competition and will be held in the Olympic Stadium on the morning of the last day of the games, August 14.

The course for this event has approximately a length of 1050 meters, dependent somewhat on size of the stadium: the speed required is 400 meters per minute with 165 pounds up. There is an overtime penalty of $\frac{1}{4}$ of a point per second; there is no credit for a faster rate.

There will be at least 12 obstacles, requiring each contestant to take from 16-20 jumps; obstacles will have a minimum height of 1 meter 30 (4′ 3″) and a maximum height of 1 meter 50 (5′ 3″); two at least must be the maximum height, 1 meter 60. Water jumps will have a spread of 4 meters (13′ 1½″), over water, which, with the hedge in front thereof, gives a maximum width of 5 meters (16′ 4½″). *Obstacles de volée* (of breadth) will be 1 meter 50 to 2 meters wide. All jumps are patterned after natural fences encountered in cross-country riding.

The classification in the *individual* competition is determined by totalling the points of each rider; in the *team* competition classification it is determined by totalling the points of the three riders of each team.

A tie in either the *individual* or *team* competition is decided by a jump off over six obstacles of 1 meter 20 (4′ 7½″) to 1 meter 70 high, *obstacles de volée* being separated by 1 meter 60 to 2 meters 20. In the "jump off" time is not a factor unless a further tie shall result, in which case those tied are classified according to their time.

The details of scoring penalties, etc., are similar to those prescribed for the jumping phase of the Three-Day Event.

1932 United States Army Olympic Equestrian Team

THE 1932 United States Army Olympic Equestrian Team, now in training at Fort Rosecrans, California, consists of the following:

Manager
Lieutenant Colonel Charles L. Scott, Cav.
Team Veterinarian
Captain James E. Noonan, V. C.
Dressage
Major Harry D. Chamberlin, Cav.
Captain Hiram E. Tuttle, Q. M. C.
Captain Isaac L. Kitts, F. A.
Sergeant Alvin Moore, Engineers.
Three Day Team
Captain Edwin Y. Argo, F. A.
1st Lieutenant Earl F. Thomson, Cav.
1st Lieutenant Le Roy J. Stewart, F. A.
Captain John T. Cole, Cav.
Captain Fred W. Koester, Cav.
Major Arthur P. Thayer, Cav.
Prix des Nations
Captain William B. Bradford, Cav.
1st Lieutenant Carl W. A. Raguse, Cav.
1st Lieutenant John W. Wofford, Cav.
2nd Lieutenant Raymond W. Curtis, Cav.
1st Lieutenant Peter C. Hains, III, Cav.

Our Horses

THE noted newspaper correspondent, Frederic William Wile, Major MI-Res and also head of the Frederic William Wile News Service, made the following comments regarding Cavalry in his "Washington Observations" in the *Washington Evening Star*, May 30, 1932:

"Over in the War Department is a memorial tablet erected under Gen. Pershing's direction in honor of the horses which fell in France. Despite increasing use of mechanized cavalry, the horse has by no means galloped out of the military picture. A fervid believer in the four-footed hero's indispensability is Maj. Gen. Guy V. Henry, Chief of Cavalry, U. S. A., and one of the Army's most expert saddlemen. Although it does not compare numerically with most foreign establishments, Uncle Sam has today what is undoubtedly the most efficient Cavalry of any army in the world. It has attained that eminence amid recurring congressional vicissitudes. • • • Military authorities remain convinced that in future wars 'combination cavalry' (mechanized and horse) will serve vital purposes—each with its mission and its limitations and operating separately to obtain its maximum efficiency."

Today's Conclusions

After Seven Years With the Army Horse Show Team

By Captain W. B. Bradford, Cavalry

ARMY horsemen owe a deep debt of gratitude to civilian horse shows for the assistance they have given in the development of our equestrian teams. They have furnished both the incentive and the material aid which have enabled us to rise from a condition of inferiority to one of very definite superiority among our countrymen and in our own country.

However, in recent years, all international competition, except in America and the British Empire, has undergone a great change. The International Equestrian Federation has grown in power and now regulates such competitions absolutely. It controls even the Olympic Games. Due to its influence, the great majority of international shows have adopted conditions, courses and obstacles of a type utterly different from those found in any American show. Consequently, we find that our horses, wonderfully successful under New York and Boston conditions, are often of little value in other international contests.

In this connection the experience of the Italian Team in New York in 1929 is very interesting. Previously in Europe, this team had been almost unbeatable. Arriving in New York, they found their horses entirely unaccustomed to the very special and artificial conditions of the National Horse Show and failed to win even a single international class.

Briefly, our shows differ from International Federation shows as follows: our ring is a small affair about 30 or 40 yards wide by 80 to 100 long. This is generally so, whether indoors or out of doors. The typical jumping course consists of two jumps on each side of the ring. The contestant enters and passes around twice on the right hand. Occasionally there is a figure of eight course copied from London. But London itself is far behind the times. A horse takes this same course many times during a show, and, if he then goes to a different community, he finds exactly the same thing and the same jumps. He rapidly develops habits that are undesirable and bad.

The European arena is a tremendous affair, 200 to 300 meters wide and 300 to 500 meters long. It contains many natural features and always several different bank, ditch and water jumps. It is usually out of doors and turfed over. *There are no typical jumping courses. The obstacles, courses and conditions all vary for every class.* Obstacles are usually numbered consecutively, and the rider follows his course as he would across country. He never sees the course, or knows it, until the time for competing arrives. The number of obstacles in a class vary from 10 to 25 or 30 and the distance from $\frac{1}{4}$ mile to $1\frac{3}{4}$ miles. There is generally a time element requiring a gallop of 16 to 18 miles per hour. The courses are planned so as to encourage the development of courageous galloping horses and bold, fearless riders. There is a thrill for both contestant and spectator during every moment, and interest is always intense.

How different from our own shows, where horses and riders become routined! One soon tires of seeing them go round and round, over the same old jumps, in class after class, whether the show is in New York or California. Perhaps this can be called sport, but it is certainly not a very interesting one.

With such a vast basic difference existing between our methods and others, one can easily see that we must seek a more satisfactory medium for developing

1. Posen. A Portion of the New Arena at Posen. Not more than one-third on the Arena is shown. Note the Pond, a Difficult Obstacle When Combined with Other Jumps. 2. Warsaw. A Small Section of the Picturesque Stadium. The Trees add to the Beauty as well as to the Difficulty of the Course. The Bank, Ditch, and Water Jumps do not shown in this Picture.

international equestrian material. Furthermore, I believe that it will be increasingly difficult for the very shows themselves to exist, unless there is a radical change in their character. The many of our best amateur civilian show riders who have deserted the ring for the more alluring point to point and steeplechase give proof of this.

As for Army riding, if we are to make further improvement, we must forget our riding halls and the poor old Olympia (not Olympic) figure of eight course, which has been jumped and hounded to death. We must seek something more thrilling and varied than the old familiar brush, gate, post and rail courses, "twice around the outside." We must have many times the space that is generally available in an indoor ring, or the usual outdoor affair, so that we may develop our galloping horses and also ourselves. Then will come the thrills and excitement that will change this riding into a real sport.

Europe is leading the way, under the auspices of the International Equestrian Federation. Olympia in London, and the great Dublin show as well, have now become members of this International Federation, whose rules are most strict and whose tendency is ever towards the sporting type of event I have just been eulogizing. Now New York, Boston and Toronto are entering the fold of the Federation. Beginning this fall, complete new regulations and conditions will govern their international classes.

But, unfortunately, these shows are indoors and necessarily limited as to the changes they will be able to make.

Because of these prevailing out-of-date conditions, those responsible for the selection of horses and riders for the Olympic Games—where unknown courses and unfamiliar conditions will be encountered—are now faced with a serious problem. Certainly, they can determine the horses and riders who are consistently best over our own training courses, or our own training ground. But will these same combinations also be the best in the Games? We have no way of telling. One might say, what of the horses that did so well in New York last year? But, as I have tried to explain before, we cannot go by results at New York, because conditions there are totally dissimilar from what we must expect elsewhere. Our best indoor horses are not the best outside.

Your Frenchman or Italian is not faced with this problem. For the past few years, he has been trying out his Olympic prospects for the three equestrian contests at all the greatest shows of Europe, shows where conditions approximate those prescribed for the Games. He *knows* what his jumper will do when faced with a course such as he is bound to meet in Los Angeles. The three-day man and the high schooler also *know*, from many actual tests, just what to expect from their mounts.

Our American Team can only *guess*. For example, one of our best horses in practice at San Diego is *Ansonia*. Last year in our Association Horse Shows, he was the poorest. *Suzanne*, an outstanding horse at New York, Boston, and Toronto, cannot even be considered for the Olympics. One must surely see that the situation for us is always very difficult. Can there be any solution? I have studied the matter a great deal these past few years, and believe that there is an answer.

We know that our present shows are inadequate. We know that there is little hope of getting them to initiate a change.* Why then depend on them any longer for guidance? Why not form our own association and lead where formerly we have been led? From the ground up, we must build and carefully encourage the riding and the horses that we need, thus contributing not only to keen enjoyment of the sport, but even more to our success as international horsemen.

More specifically, I propose the creation of two military associations: one in the middle west, to include Fort Bliss, Fort Sill, Fort Leavenworth and Fort Riley; a second in the east to include West Point, Fort Hamilton, Fort Myer, Fort Oglethorpe, and Fort Benning. Each association should stage three or four consecutive shows a year, preferably in the spring. Using the Middle Western Circuit as an example, a show would be held at Fort Leavenworth from April 29th to May 2nd inclusive; at Fort Riley from May 6th to 10th; Fort Sill May 14th to 17th; Fort Bliss May 24th to 29th.

There should always be an admission charge and entry fees. Prizes should be simple and inexpensive—perhaps a copper plaque. Expenses must be curtailed. Net receipts from the four shows should be placed in a general fund and guarantee the freight or express shipment charge of horses and automobile travelling expenses of officers and grooms. After these expenses are paid, any sum remaining should revert to each of the four shows in proportion to the amount subscribed.

There should be teams of 4 to 5 officers and 7 jumpers, 3 three-day horses and 1 *dressage* horse from each post in the association. Restricting teams to 11 horses would permit combined express shipments if desired. Traveling expenses for these teams would be guaranteed by the general fund insofar as possible. Teams would assemble at each of the four shows in turn, where they would compete with each other, and also with all the local military and civilian horses that could be encouraged to enter.

The arena selected for each show should be not less than 200 meters wide by 300 meters long out of doors, with some natural terrain obstacles. Each arena should differ from the other three as far as possible and should be patterned after those of Europe, such as that of Rome, Aachen, Warsaw, Nice, or Lucerne. (The shows of England and Ireland are not the type contemplated by the International Federation.) The grounds should contain several types of water, ditch and bank obstacles, as well as built-up jumps, and combinations of all. *The course and obstacles should vary for each class so that rider and horse would never know exactly what might confront them.* Courses should be from 500 meters up to 1200 or more and obstacles number from 10 to 24. Time should always be an element. The metric system of measurement should be used, to conform to international custom. Tips should not be counted. Contestants should never be allowed to practice in the arena.

Each program should contain both *Local Classes*, and *Open Classes*. The *Local Classes* should be framed to meet local needs and might be for children, for green horses, polo ponies, local horses, civilians, or whatever seems needed. Military teams, transported at Association expense, should be excluded from *Local Classes*. The *Open Classes* should be for official military teams, and also for any other competitor, military or civilian, who might pay the entry fee.

The *Local Jumping Classes* should be patterned exactly after the International plan, though the obstacles would naturally be quite small.

The *Open Jumping Classes* should be for various heights, spread, rate, and distance conditions. There should be jumping and schooling classes limited to three-day horses and also a *dressage* class. The three-day horses should have the complete three-day test at the last show on the circuit and perhaps a preliminary short test at the first.

The programmes should show the plan or trace of the course for each open jumping class, and the number and maximum heights of obstacles, maximum spread, rate of gallop, and total distance.

A system of handicapping should be inaugurated to encourage the presentation of young and new horses and to prevent the older ones from winning year after year. Horses of the Army Team should be handicapped at once. Winners recorded each year should be added to this list, so as to constantly make way for new blood. Handicapping is accomplished either by raising certain specified jumps 10 centimeters for each handicap classification or by adding from 4 to 8 jumps to the given course. Handicapping should not be employed in courses exceeding 1 meter 40, or in *Prix des Nations* team classes.

A program for the *Open Classes* of a show might be framed as follows:

Class I—Open Jumping.
15 obstacles. Maximum height 1 m. 30. Maximum spread 4 m. Rate 400 m. Distance 900 m.

Class II—Open High Jumping.
12 obstacles, 1 m. 40 to 1 m. 60. Maximum spread 5 m. Rate 300 m. Distance 600 m. Jump-off will be decided by raising jumps. Time will not count unless the rate falls below that prescribed. No handicaps.

Class III—Open *Dressage* Contest.
Olympic conditions to govern.

Training Ground of the Army Olympic Team at San Diego. There are 5 Water Jumps, 6 Ditch Jumps and 3 Banks that are used separately or in Combination, with Gates, Hedges, Walls, Post and Rails, Triple Bars, etc.,

Class IV—Open Three-Day Jumping.
Horses that do not compete in the final complete three day test will be disqualified.
12 obstacles. Maximum height 1 m. 15. Maximum spread 3 m. 50. Rate 375 m. Distance 1000 m.

Class V—Open Double Class.
Each rider to mount two horses. Scores to be added.
15 obstacles about 1 m. 30. Maximum spread 4 m. Rate 375 m. Distance 700 m.

Class VI—Open Three-Day Schooling.
Olympic standards to govern. Horses disqualified unless shown in final complete three-day test.

Class VII—Open Team Class.
For teams of three riders.
Olympic standards to govern. No handicap.

Class VIII—Open Jumping.
17 obstacles. Maximum height 1 m. 40. Maximum spread 4 m. 50. Rate 375 m. Distance 800 m.

Class IX—Open Consolation Jumping.
Ribbon winners of previous classes barred.
15 obstacles. Maximum height 1 m. 30. Maximum spread 3 m. 50. Rate 400 m.
Distance 750 m. Post entries.

A circuit of shows thus conducted would be interesting, popular and instructive for all concerned. It would be our best American school for international competition and would tend to develop horses and riders better by far than any we now possess. Were such a system now in operation, the problem of our Olympic Team would be vastly simplified. Spring training completed, we would tour this Mid-Western Circuit. With the results from these shows to go by, horses and riders could be definitely selected. Their training and conditioning would be completed and we could send them confidently into the ring at Los Angeles fully aware not only of what they *can do*, but knowing also what they *probably will do* when faced by the supreme test of Olympic competition.

Mr. Calvin P. Godfrey, Hotel Monticello, Toledo, Ohio, desires to obtain a copy of the July, 1927, CAVALRY JOURNAL, containing an article by his brother, Brigadier General E. S. Godfrey, entitled, "Some Reminiscences."

*NOTE: A single exception to this is the class known as the "Melbrook Bowl" at Bryn Mawr, generously sponsored by Mr. J. Brooks B. Parker of Philadelphia as his part in assisting to solve the problem of Army riders.

Rapid Forced Marches by Cavalry

By Lieutenant Colonel Charles L. Scott, Cavalry

THE following questions appear to me to be worthy of considerable study by all cavalry officers:

First—Why is there a need in future warfare for more cavalry mobility and marching speed?

Second—What effect do modern road conditions have on strategical mobility and marching speed of cavalry?

Third—What are some of the available means that make for longer and faster marches for cavalry?

Fourth—What are some of the specific methods to be followed by cavalry in long, fast marches?

Need for Increased Mobility and Long, Fast Marches

Horse cavalry of the future must operate with mechanized forces and also against them—to be able to move out rapidly ahead of its own mechanized units or to follow rapidly in support of them; to move rapidly considerable distance to defiles, river crossings and on interior lines in opposition to hostile mechanized or motor transported units will certainly be an important function of horse cavalry in the future.

It is also well to realize that aviation and armored cars will give definite information of the location and movements of hostile forces which cavalry is to oppose much earlier than such information has been obtained in past wars. To take the best advantage of these new means of securing early and definite information cavalry should move distances up to at least 100 miles much faster than ever before.

Modern Roads and Other Means Favor Faster and Longer Marches

It is believed that the following means enable horse cavalry to greatly increase both its strategical radius of action and its mobility:

a. Improved roads;
b. Supply by truck;
c. Better bred horses;
d. Assistance rendered in reconnaissance by aviation and armored cars;
e. Phillips Pack Saddle.

Roads. Read accounts of cavalry marches made during the Civil War. Note the difficulty that was encountered over poor roads, at stream crossings and steep grades. All of which reduced the rate of march, the distances marched and made supply most difficult. With similar men and horses, supplied by truck and moving over modern roads any cavalryman today could march farther and faster. The increased speed and distances that can be negotiated today over existing good roads, as compared to what could be done 25 years ago, was brought forcibly to my attention last fall when visiting my home in South Alabama. I found that hard times had driven many farmers out of automobiles, for which they could not buy tires or gasoline back into the saddle and the buggy. They all told me and experiment showed me, that on the good roads available 50% more speed and longer distances than were possible over poor roads were easily obtained under saddle or in a buggy. The ruts, the roots, the stumps, bad stream crossings, steep grades, etc., which slowed up and took so much out of a horse being ridden or driven, had been eliminated. No difficulty is experienced because of hard roads, and everyone prefers hard roads to bad going. Of course, no comment is necessary as to value of supply by truck as a means for increasing cavalry mobility.

Better bred horses. Anyone that has used an ill-bred coarse clumsy horse on a march or any long ride and has been fortunate enough to then use a well-bred one knows by experience that the well-bred horse is superior in every way to the scrub. For the first time in its history, our cavalry has a large percentage of half-breds in ranks and very soon—thanks to our Remount breeding policy—all our cavalry will be mounted on half-breds or better. These well-bred horses furnish us the means to radically change our marching methods, both as to speed and distances, in case of necessity. Furthermore, the best method to preserve and care for them on an ordinary march is to move at a good rate of march into the next camp, where the weight can be taken off their backs.

Armored Cars and Aviation. Marches in the presence of the enemy and to proper contact with the main body of an opposing force have in the past proven exceedingly difficult and extremely trying on horse flesh. The strength of many cavalry commands has been frittered away or severely taxed by distant patrolling. Many marches in the wrong direction and countermarches are on record. Because of the lack of definite information as to the location of the main strength of the enemy, marches have necessarily been slow and cautious. Armored cars and aviation covering and observing all roads will in the future locate very definitely hostile forces of any size and quickly report any large movement. In future cavalry, assisted as it should be by these two agencies—armored cars and aviation—will only need to patrol distances not in excess of 5 or 10 miles for local protection and can proceed with determination and speed to its objective with its fighting strength unimpaired by distant patrolling and useless marching.

Phillips Pack Saddle. Though mentioned last as a means for making longer and faster marches this saddle is far from being the least important. It supplies

a long felt need in the cavalry for a means to carry its vital firepower on a long fast march in such a way that a pack horse can keep up with and at no time slow down the riding horse. This pack saddle in reality greatly aids to justify the existence of our cavalry today and to make it what it is, i. e., the most effective and reliable mobile fighting force on the battlefield that it is possible to devise. We can continue to talk and theorize for years to come about cross country vehicles and devices, but, when it comes to moving firepower across country into action—pulling it out of action—handling it quickly, effectively and at will, there is nothing in sight that will surpass the horse.

Specific Methods for Faster Marches

For detailed and specific methods to be followed in making a long fast march, I refer those who are interested to the report of a 100 mile forced march made in 23 hours at the Cavalry School in April, 1931, by a provisional Cavalry Squadron. This report is printed in Vol. VI, No. 1, Cavalry School Mailing List and is too voluminous to include herein, but I briefly note some of the most important lessons learned and proven in this remarkable march.

First. That a 9-mile trot is practicable for the ordinary cavalry horse over long distances; that pack horses can maintain this gait also. Such rate of trotting covers ground more rapidly than an 8-mile trot, is a better posting trot, is the natural gait for the average riding horse. It prevents backing and filling in the column and does not tire either horse or rider as much as the 8-mile trot. A horse can still make this rate of trot with ease after having gone a long distance, if he is in shape to trot at all.

Second. Properly selected and trained pack horses can carry any known cavalry pack and keep up with the riding horse on a long, fast forced march without showing any more, if as much, fatigue as the riding horse.

Third. Frequent changes of gaits, i. e., short trots, short walks, and repeat are essential to make speed over long distances and *at the same time* preserve the horse and rider. This, in my opinion, is *the most important of all methods* for covering long distances rapidly. I will comment further on this subject below.

Fourth. Trotting on paved roads is much preferable to trotting on heavy or uneven going and will not tire or injure a properly shod and conditioned horse.

Fifth. Trots up steep hills—up long grades—tire and exhaust a horse very quickly for the reason that they put a strain on his heart, lungs, loins and hind legs. Trots *down grade* are much preferable to trots *up grade*, as in such case undue work is only put on one part of the horse's anatomy i. e., his front legs.

Sixth. On long fast marches the loins of the horse are usually the part which first shows the strain of carrying weight at speed. It is essential therefore to relieve all undue strain on the loins whenever possible. For example, don't strain them by trotting up grade; lead up steep hills; lean forward in posting; and don't pound the saddle. Stay up with your horse (in balance with him *at the walk* instead of bowing the back, slouching and riding on the loins. When a horse's loins tire, he shows it by wabbling behind at a walk. It is then necessary to dismount and lead until the loins get a long rest.

Seventh. When leading (as should be done for at least five minutes every hour), leave the rifle in the boot if danger from an enemy is improbable and make the rider walk *out at four* miles per hour. This procedure does not slow up the rate of march and the fast walk takes the soreness out of the rider, limbers and wakens him up much better than dragging along with a rifle on his shoulder at a rate of $2\frac{1}{2}$ or 3 miles per hour.

All these points were definitely proven of great value on the 100 mile forced march at the Cavalry School last year in which 209 riders and 259 horses of all shapes, sizes, types, and ages participated. I have

1. "Dixie Long", Pack Horse of 13th Cavalry. This Horse Carried a 37 mm Gun Weighing 223 Lbs. on a 100 Mile Forced March in 23 Hrs. and Finished in Excellent Condition. He was 17 Years Old, 15-2½ High. He Weighed 1080 Lbs. at the Start and 1090 Lbs. 24 Hours After the March. Nothing Much to Look at—Shows Signs of Hard Service—But Still a Grand, Game Old Horse. 2. Mare "Frills." Picture Taken the Day After Completion of 100 Mile Forced March. This Mare is Now on Three-Day Team and Promises to be One of Our Best Entries in the Equestrian Events of 1932.

proven these methods to my own satisfaction on numerous long fast rides and I am certain that they will be sustained and amplified by the forced march of a cavalry brigade which will take place this month at the Cavalry School.

Importance of Frequent Changes of Gaits

I do not believe it possible to stress too strongly the necessity for frequent changes of gait. Long trots quickly tire the horse and also the rider—long gallops are of course much harder on the horse. A good brisk trot (or even a gallop) *for a short period,* followed by a *short walk,* enables a horse to make distance rapidly for hours—for mile after mile. The short walk repeated frequently enables the horse to catch his breath, relax and rest. Just a few seconds of the walk help immensely. In fact, to realize this, you only have to try running a distance on foot. When you begin to feel the strain of running, come to the walk for 10 or 15 steps and see how it helps you. It is the same for a horse.

Examples of Value of Frequent Changes of Gaits

In support of the value of frequent changes of gaits, I cite the following:

a. In a maneuver at the Cavalry School in 1930, before the frequent changes of gait were stressed, I saw a student in command of a regiment of cavalry move this command six miles at a continuous trot at the rate of 8 miles per hour. The day was not hot, but this long continued trot up and down hill took a great deal out of horses and men. It resulted in a justified protest from the regular regimental commander.

b. The next year, 1931, I saw a student in command of the same regiment, with a battery of Field Artillery attached, do 14½ miles in 1½ hours on a very hot sultry day without in any way affecting a single horse in the command. How was it done?

The problem in which this command participated was a pursuit, in which an infantry division had to be intercepted at a river crossing about 15 miles distant. This Cavalry command first withdrew from action and galloped 2 miles across a zone swept by distant machine gun fire. Upon reaching cover, it walked 5 minutes to rest and cool out the horses. The march to its objective was then taken up at a rate of 7½ miles per hour on the following schedule—trot 7 minutes at 9 miles per hour—walk three minutes—repeat. Reports from aviation on the progress of the infantry division showed this rate of march of the Cavalry was not fast enough. How was the rate of march increased? By increasing the length of the trot periods? *Emphatically, no!* This would have been the most certain way to exhaust horses on a hot day. The rate of march was increased to *8.9 miles per hour* by the following method. Trot 7 minutes at 10 miles per hour—walk 2 minutes—repeat. The Regiment accomplished its mission—one horse released from the Veterinary hospital two days previously and carrying a M.G. pack had to be dropped out. The Artillery kept up with the command and not a single horse-draft, pack or riding, except the one horse mentioned above, showed the slightest fatigue at the end of this fast 14½ mile movement!

An opposing regiment of Cavalry in this same problem also made an equally successful rapid movement. To accomplish its mission it was necessary to make *9 miles per hour.* It was successfully done at this rate for 9½ miles without exhausting a single horse by the following use of the method of frequent changes of gaits—trot 6 minutes at 10 miles per hour—walk 2 minutes at 4 miles per hour—gallop 4 minutes at 16 miles per hour—walk two minutes—repeat. Here, too, I am certain that a continuous 8-mile trot for one hour—in addition to not being fast enough—would have exhausted many horses and have been much harder on the men, who were in no way affected by the march as executed.

Flexible March Schedules

The necessity for *flexible* march schedules cannot be too strongly stressed. The cavalryman who makes out a march schedule and follows it blindly regardless of road condition, configuration of the ground or unforeseen incidents is not in reality a cavalryman—at best he is only a poor mathematician. Make your march schedule in advance—certainly—but don't follow it blindly. Figure ahead how you can vary it and be prepared to do it. I have seen commands trotted up hill or on bad going for the sole reason that the march schedule said it was time to trot. Such procedure for just a mile or so is equivalent to adding ten miles or more to the march, as far as the condition of mounts is concerned. Again, I have seen commands slowed down by bad going making up this time lost by trotting for long periods. I'm convinced that the proper procedure in such cases is *not* to make up such time by increasing trot period over 7 minutes in duration, but to do it by shortening the halt periods first and then the walk periods next if necessary. For example: your march schedule calls for alternate 7 minute trots and 3½ minute walks with a 10 minute halt each hour. You come to a seven minute trot period where conditions make you walk for the whole seven minutes. This puts you about one-half mile behind your schedule. Make it up by reducing your halt to 8 minutes and possibly your walks to 2 minutes, *then throw in* a short trot in the time so saved and you are on schedule again.

In conclusion, I wish to say that the more I work and experiment with the ordinary every day cavalry horse seen throughout our service, the more I appreciate his capability and courage. I am convinced that, if reasonably conditioned, intelligently ridden according to the principles outlined herein, he can go—in a period of time from 24 to 48 hours in duration—much farther and faster than the best of us can ride. When, however, the rider gets tired, begins to slouch in the saddle at the walk, pounds the loins of his horse at the trot, gets too tired to lead at the proper intervals, and does things that are easy for himself, though they may be hard on his horse, he has shifted *his* work over to a good animal and admits by such procedure—then and there—that he has played out before the horse.

The Use of Chemical Mortars in Cavalry Operations

By Lieut. L. M. Grener, 3rd Cavalry

WE live in an age of change and progress. In every activity of life there are being developed new tools and new methods. Science is revolutionizing industry.

The weapons of war are also being changed. The innovations introduced during the years of war from 1914 to 1918 were but a prelude to the greater changes and larger improvements in equipment and method which have been developed in the years of peace which have followed.

The task of evaluating these new developments, of judging their usefulness, of taking those which are good and adapting them to the practical needs of the combat arms, of rejecting those which are impractical, and of remodeling the fighting machine to better enable it to use its available weapons, has been one of the chief concerns of those who have directed our military affairs during the past ten or twelve years.

There are many people, in and out of the army, who have become so enchanted by the spectacle of modern science transforming the world that they can see nothing but perfection in anything new, and nothing but archaic uselessness in anything old. There are others, though they are fewer, who see no good in anything new, but constantly preach a return to good old methods. They would place their trust in the weapons and methods tried and proven by experience, and they view all innovations with great distrust.

Both of these classes are dangerous. Fortunately those who have held the reins of power in our army in the past ten years seem to have trod the happy middle ground. It is the only safe ground. One must retain the old until the new is proven better but one must always be open to conviction, must always be ready to take advantage of a development which seems valuable and practical.

Chemical warfare is one of these new developments. Possibly of all the new developments it is the one most pregnant with possibilities of decisive influence on the conduct of future wars.

The uses of chemical weapons in infantry operations and their effect on such operations have been partially put to test. Infantry in formulating its attitude toward chemical warfare has the experience gained in the last war to draw upon. Cavalry, as such, has had no such experience. The last war, at least in that theatre of operations, and in that phase in which our troops participated, was a stabilized war, and our cavalry had little part in it. What, then, has been the attitude of the cavalry toward chemical warfare?

We have been inclined to view chemical warfare as something applicable only to trench warfare, something we would not have to worry about as long as we were used in our proper role. We have counted on our mobility to get us away from gas. We have counted on the very nature of cavalry operations to relieve us of the necessity of remaining in the presence of gas. We have counted on the nature of our probable missions to take us away from the main routes of supply where it would be feasible for the enemy to use gas.

Of course we have realized that cavalry is always liable to be called upon to abandon temporarily its proper role, and in an emergency when infantry is more needed than anything else, to operate essentially as infantry. Under such circumstances we would be liable to have to face gas. Consequently we have considered it essential that cavalry troops be adequately trained in measures of protection against gas.

To the offensive side of chemical warfare we have given but little consideration. Associating the use of chemicals with stabilized warfare wherein cavalry, if employed, would lose its essential characteristics, we have given little attention to the whole subject. Even screening smoke, with all its possibilities has seemed to have but little application to the type of action in which we hoped to be engaged. Smoke was, until recently, put out only by the use of candles, artillery, and the 4-inch Stokes mortar.

To lay smoke by the use of candles requires that troops be present on the line to be screened, or that previous preparations of some magnitude be made. This method is not flexible; it cannot be placed in such a manner as to screen wide turning movements or rapid maneuvers. Even with infantry it has but a limited application.

Artillery, on the other hand, can place smoke anywhere within its range. It can place a screen immediately in front of the enemy or on either of his flanks. But 75 mm. artillery, which alone will ordinarily be available to cavalry is a very inefficient means of laying a smoke screen. The capacity of the shell is too small. The screen which can be laid by a battery or even a battalion is very small and, except under the most favorable conditions, of somewhat uncertain effectiveness. Furthermore, the small amount of artillery which will be ordinarily present with a cavalry force will usually be badly needed for other missions, and it will be but seldom that even a part of it can be spared for the firing of smoke.

The 4-inch Stokes mortar was effective and efficient within its range. But the range was too short. The main effort in any cavalry engagement will ordinarily be made by a maneuvering force which will make a very wide envelopment, an envelopment which would take it far out of range of the Stokes mortar at the very time when concealment was desired.

This, then, was the situation as to screening smoke and chemical agents in general, as it concerned the cavalry, until recently. Then the development of the 4.2-inch chemical mortar opened up a whole new range of possibilities. This new weapon was developed primarily to furnish chemical troops with a more effective mortar for the support of infantry. I doubt whether its application to cavalry was very much considered during the early stages of its development. It seems, however, to very satisfactorily meet the needs of the cavalry and to be capable of extensive use in cavalry operations. It seems to furnish a means for the dissemination of smoke, and possibly of other chemical agents, which will fit into the cavalry scheme of things. True, some changes must be made as to mount and means of transportation, but these changes are being considered and will doubtless be effected. The basic requirements have been met by this new weapon.

The special characteristics of the action of cavalry which must be considered in the development or adoption of any weapon designed for, or to be adapted to, its support are speed and mobility.

Cavalry action will be rapid. The very nature of the missions on which cavalry will ordinarily be engaged, as well as the utilization of its peculiar assets, will make its commander endeavor to strike a decisive blow quickly. The maximum fire power of the holding attack will be immediately developed, and the main effort will be made by force quickly dispatched, moving at a rapid gait to its line of departure. The main effort may, under favorable conditions, be made mounted. Ordinarily, in engagements of any considerable size, it will be made dismounted. But in either case a quick decision will be sought by a rapid movement to a line of departure as close to the objective as possible, followed by a determined advance by the bulk of the available forces so disposed as to develop their maximum strength at the outset. There will be comparatively little echelonment in depth, and reserves will be comparatively small.

A chemical weapon in support of a mobile force must itself be mobile. It must be capable of rapid movement and quick emplacement. It need not necessarily be capable of rapid movement across difficult terrain, for it will ordinarily be emplaced near the pivot of maneuver. But it must be well up when the action starts, so that it can be quickly put in action. From its position in rear of the pivot it must be ready immediately to support with smoke either the pivot in the holding attack or the maneuvering force in the main effort. This brings up the second general characteristic of cavalry action and the second main requirement for a supporting chemical weapon—a long range.

Cavalry will, wherever possible, seek a decision by wide maneuver. The resulting separation for forces does not, as is the case with infantry, become dangerous. This is particularly true when cavalry is operating against an enemy force of less mobility. Frontal attacks or mere envelopments will be exceptional, and wide turning movements, such as infantry cannot ordinarily risk attempting, will, with cavalry, be the rule.

The line of departure of the maneuvering force will often be at a great distance from the pivot of maneuver. To be of any value the chemical mortars must be able, from their position near the pivot, to reach to the line of departure of the maneuvering force, for it is there, or in that vicinity, that there will be the greatest need for concealing smoke. The mortars must also be able to lay and maintain a screen of considerable length.

Considering these general characteristics of cavalry action it seems apparent that there is great need for a smoke-laying weapon of adequate range and mobility. Maneuver is not possible without cover behind which to move. Smoke can create artificial cover and render possible movements which would otherwise entail too great exposure to hostile fire. To a force which attacks or defends in a long, thinly held line, the blanketing of enemy fire by smoke may be very important. In other cases smoke can be used to deceive the enemy as to the direction and nature of the attack to be delivered, giving our maneuvering force the benefit of surprise.

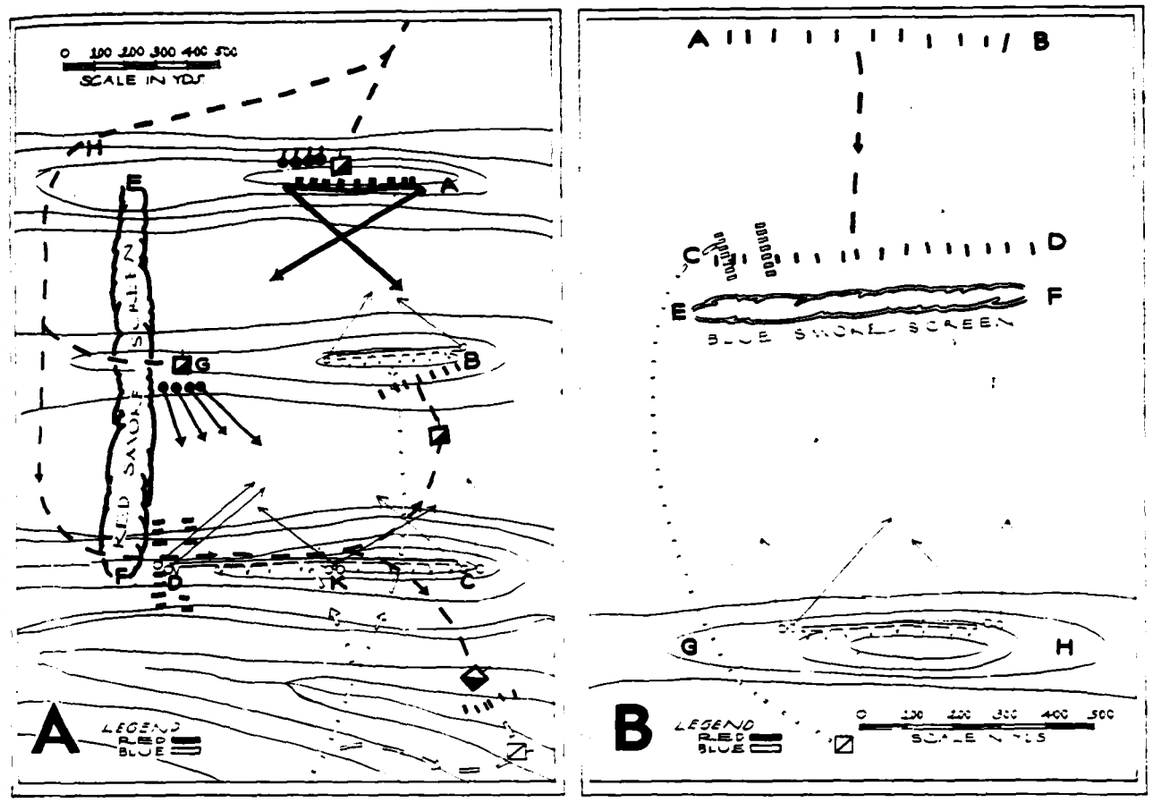
The 4.2-inch chemical mortar measures up well to all the noted requirements, except that of mobility. Its range, while not all that might be desired, will probably prove adequate in most situations. It may, furthermore, be increased. Its volume of fire is great. A battery of four mortars under average conditions can maintain a screen 1500 yards long. The problem of mobility is, it seems, capable of solution. Several experimental mounts have been devised, and it is to be expected that shortly something will be adopted which will be fairly satisfactory.

Assuming, then, that such a mount is forthcoming and that a chemical company equipped with eight mortars is attached to a cavalry division, just how could these mortars be used in specific situations?

It may be well to consider first the case of a cavalry division in a meeting engagement with a hostile cavalry force of about the same size. Each side will deploy a pivot, about a regiment, and will seek information as to enemy dispositions. Our commander will probably decide to attack, turning one or the other of the hostile flanks, depending on the information he has received concerning enemy dispositions and the terrain. The maneuvering force, about a brigade, moving to its line of departure will probably be observed by troops in the hostile pivot and will often come under the fire of automatic weapons. If, however, a smoke screen is laid across the flank of the hostile pivot, the maneuvering force will, even in open and unfavorable terrain, often be able to come close to its objective before coming under fire and before it must start the actual attack.

During a maneuver at the Cavalry School in May, 1931, a smoke screen was used in just such a situation with great success. The sketch accompanying (Sketch A) although more or less schematic, will show essentially what occurred.

The Red advance guard, about a rifle troop and two machine guns, encountered the Blue advance guard of about the same strength. Leading elements seized ridges A and B respectively, and the advance guards were soon entirely deployed on those lines. The Blue main body was seen by the Reds to be going into position along the ridge C-D. The Reds had two platoons of mortars. These the commander ordered into position in rear of the pivot, directing them to be prepared to lay a smoke screen on the line E-F. The signal for the screen was given by the commander of the maneuvering force, who fired a projector signal from H when he was about to cross the ridge near E. In this case the screen was actually laid by using candles to simulate the fire of the mortars, but the actual use of mortars firing W. P. would not have materially changed the action.



The maneuvering force, one squadron, followed by the Machine Gun Troop less elements with the pivot, moved out behind the ridge E-A. The signal was fired from H, the screen was laid, and the squadron, still followed by the Machine Gun Troop, moved as indicated behind the screen. The machine guns went into action on the ridge at G, and the squadron proceeded to the ridge on which the enemy main body was deployed, formed its order of attack and advanced. It charged toward the hostile flank in column of troops through the screen, which by this time was thinning, the mortars having stopped firing when the squadron reached the ridge to the right of F. The leading troop became visible to enemy machine gunners near D at a range of about 50 yards. The guns were then being moved by hand toward the screen in an effort to bring fire to bear on whatever Red forces were advancing beyond it. The machine gunners only got in one hasty burst before they were ridden down. The squadron swept down the enemy line almost unopposed. Confusion reigned among the Blues. Machine guns near K took the squadron under fire for a short time and would have obtained some casualties but would not have seriously affected the issue.

Red machine guns near G, on having their fire masked by the advancing squadron opened up on the Blue advance guard on the forward ridge at B. The leading troop of the attacking Red squadron, having swept over the enemy main position, turned to the left and took the Blue advance guard in rear, completing its destruction.

The commander of the rear troop of the Red attacking squadron, seeing a body of Blues mounting up in a draw to the right, charged them and routed the Blue reserve. In less than ten minutes after the smoke screen was laid not an organized body of Blues was left to offer any further resistance.

This was a small affair—one regiment on each side. But it was a typical situation, one which with minor modifications will frequently be met by a cavalry unit of any size. The brilliantly successful attack of the Reds in this problem illustrated very pointedly the possibilities offered by the use of chemical mortars firing smoke in operations of this character.

Often the use of smoke may make possible a mounted attack, leading to a quick and complete decision. Seldom will such an attack be possible relying solely on

natural cover, and faced with an enemy modernly armed with automatic weapons. In some cases it may be advisable and possible to place smoke on both flanks of the enemy position. He would thereby be still more mystified. Not knowing on which flank to expect the impending attack, he could prepare for it on neither.

Cavalry will frequently be employed in delaying action. When so employed it will ordinarily seek to delay the enemy in successive positions. Fire will be brought to bear on him at long ranges, forcing him to deploy and advance more slowly. The cavalry will then withdraw before it has become seriously engaged, to repeat the action on the next favorable terrain.

In this type of action chemical mortars could render valuable assistance. The withdrawal of the delaying force from each of its successive positions could be facilitated greatly by the use of smoke placed on the advancing enemy, or in front of the position being abandoned.

If, in this type of action a favorable opportunity should arise for the delaying force temporarily to assume the offensive in order to still further demoralize the pursuit, the availability of an effective smoke-laying weapon would add greatly to the essential element of surprise. For example, imagine a (Blue) cavalry regiment on a delaying mission against a far superior (Red) force of infantry. (See Sketch B.)

One squadron occupies a ridge, G-H which offers a good field of fire. It is supported by the Machine Gun troop. The enemy is forced to deploy along A-B but, being greatly superior, advances steadily. The delaying force, after a short resistance, lays a smoke screen along the line E-F. The attacking infantry has seen this happen before. It will advance rapidly, it will have its rifles carried any way, it will be unprepared for immediate action, being intent solely on getting on the other side of the screen to bring fire to bear, if possible, on the retiring cavalry. If, now, the other squadron moves out under cover of the smoke screen and strikes the pursuer in flank, say as he reaches the line D-C, it seems probable that it might almost destroy a very superior force.

This example is purely theoretical, but I believe it will serve to illustrate the possibilities offered by an intelligent and bold use of smoke in such operations.

Counterreconnaissance was once one of cavalry's principal functions. Many of the cavalry leaders of the Civil War built their reputations on the brilliant performance of counterreconnaissance missions. In many cases they made their most valuable contributions to the successes of their respective armies by the accomplishment of such missions. Now the increasing preeminence of the Air forces as agents of strategic reconnaissance has somewhat lessened the importance of cavalry counterreconnaissance. Still, however, it may frequently be so employed, for in the situation where the enemy seeks information by terrestrial reconnaissance it will be just as vital as it ever was that his efforts be thwarted.

In that phase of counterreconnaissance operations which is usually the first, namely the enemy's efforts to gain his information by the infiltration of small patrols through our screen, and our efforts to prevent his so doing, the use of chemical agents of any sort will, of course, be hardly profitable. Having failed, however, to obtain the desired information by the use of small patrols, it will be expected that the enemy will attempt to force his way through the screen. The screening cavalry must then concentrate to oppose the hostile thrust. It may oppose it by attacking and seeking to destroy the enemy cavalry, in which case the use of chemical agents will be much the same as in any meeting engagement. It may, if weaker, resort to delaying action, in which case the availability of chemical mortars, as shown above, would be extremely valuable. Or it may attempt either an active or passive defense.

Cavalry engaged in an active defense, whether that defense be undertaken in the performance of a counter-reconnaissance mission, or of any other mission, will seek to hold the enemy with a part of its force, reserving the balance for an offensive blow when the opportunity presents itself. In an active defense smoke would be very valuable. The defensive position will perforce be but lightly held, and smoke could very well be used to blanket the automatic weapons of the enemy, or even his infantry firing line, thus lessening the danger of his obtaining decisive fire superiority over our weak defending force. When the time comes for us to assume the offensive, smoke could well be used to deceive the enemy as to the direction and nature of our attack just as in true offensive operations.

Cavalry, operating as such, should be very reluctant to engage in a passive defense. By so doing it loses its very character as a mobile force. However, circumstances may arise when cavalry will be forced to undertake a passive defense. Then cavalry will act essentially as infantry, and its chemical mortars would be employed exactly as are the chemical mortars supporting an infantry force.

Another type of defensive action on which cavalry will more frequently be employed is rear guards. The remarks already made on the employment of mortars in delaying action would apply.

It appears, then, that cavalry on most of the missions to which it may be assigned can advantageously employ chemical mortars. This weapon, though originally designed to support infantry, can just as effectively, possibly more effectively, be used by cavalry.

This will be true whether the cavalry in question is cavalry as it exists now or whether it be partly, or even completely, mechanized. In any case it will have the same missions and act in essentially the same manner. In any case it will attempt to carry out its missions by making the maximum use of its mobility.

The use of airplanes in laying smoke, and in spraying other agents, has also great possibilities. This use of chemicals is, however, another subject. The main reliance must be placed on mortars, for airplanes will not always be available.

I believe, therefore, that there should be as an integral part of a cavalry division at least one chemical company equipped with eight 4.2-inch chemical mortars, suitably mounted and transported, and that it should carry a large supply of smoke munitions.

The International Settlement

By Captain Stanley J. Grogan, Infantry, (DOL)

SHANGHAI, "The Gateway to China," at the mouth of the Yangtze River, has an urban agglomeration consisting of six (6) main areas.

(1) The Old City dating from the eleventh century A. D.
(2 The International Settlement.
(3 The French Concession.
(4 Chapei, a northern, outer suburb.
(5 Pootung, an eastern suburb.
(6 Nanton, a southern suburb.

There are three (3) distinctive administrative areas:

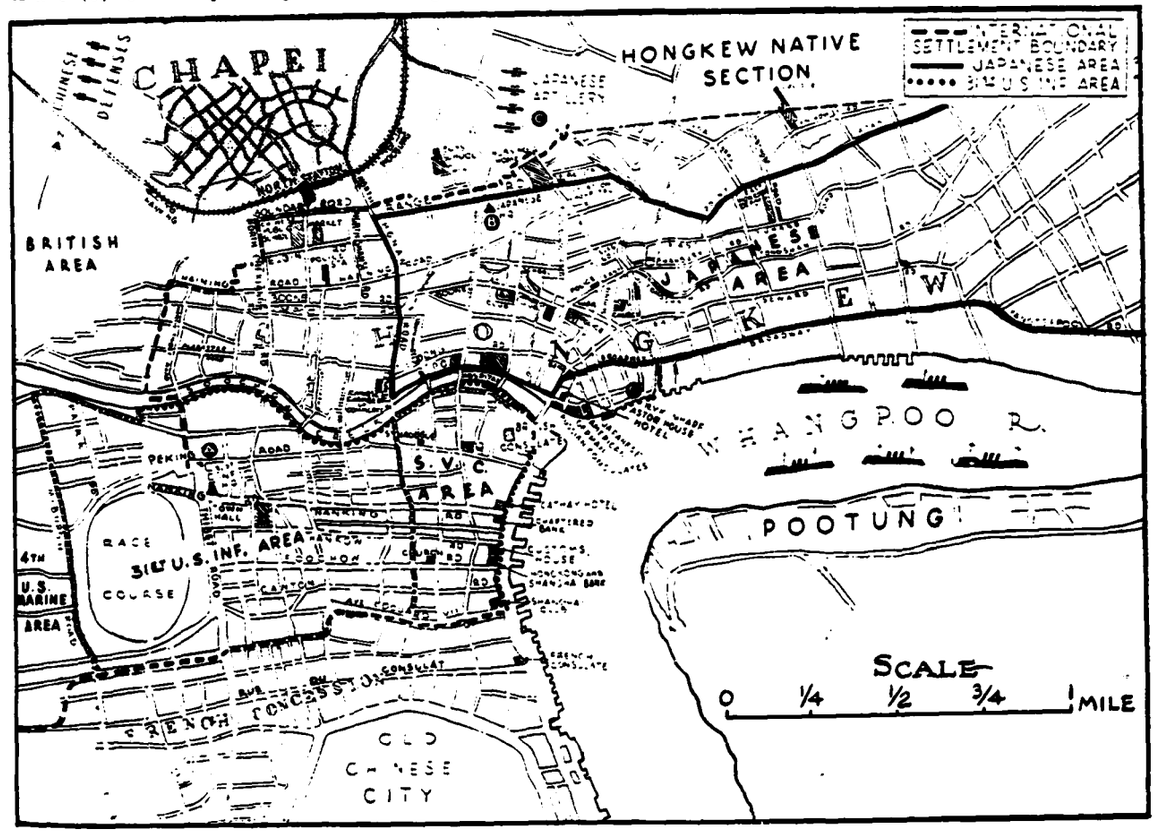
(1 The International Settlement.
(2 The French Concession.
(3 The Chinese Greater Shanghai.

Shanghai first came to the attention of the Western World, in a political sense, on August 29, 1842, the date on which the Treaty of Nanking was signed, bringing to an end the first war between England and China. By the terms of this treaty Shanghai was one of five (5) Chinese ports opened to foreign residence and commerce. This treaty did not provide specifically for exterritoriality or extraterritoriality i. e., communal or international law rule. The English government said extraterritorialty was applied in that treaty though not actually embodied, in that the treaty read, in part, as follows, regarding foreign merchants:

> "They with their families and establishments shall be allowed to reside for the purpose of carrying on their mercantile pursuits without molestation or restraint," in the five treaty ports, one of which was Shanghai.

On October 8, 1843, the Nanking Treaty was supplemented and regulations for trade were agreed upon by China and England and by this supplementary treaty England became "the most favored nation" and the two governments agreed upon tariff provisions.

On November 14, 1843, Captain George Balfour, Indian Artillery, established the British Consulate at Shanghai, became the first Britian Counsul at Shanghai, and on that date—November 14, 1843—Shanghai was opened, formally, to foreign trade.



Shanghai

The American Consulate

Man o' War Row

Captain Balfour rented quarters containing fifty-two (52) rooms at an annual rent of four hundred dollars ($400.00) with the Taotai he arranged for land for a settlement. Since it was illegal to sell outright land belonging to His Imperial Majesty it was arranged to rent the land in perpetuity at an annual rental. No definite boundaries marked this first settlement or "British location." The settlement was one of 150 acres, with the Whangpoo River as the eastern boundary, the Yankingpang River as the southern boundary, the western boundary undefined, and the north bounded by what is now the Peking Road. Later the western boundary was put at Barrier Road (now Honan Road). Britain regarded this location as hers. Some historians hold that while this location was exclusively British it was a "concession" and they quote the following definitions by Dr. Tyau in his book, "Treaty Obligations Between China and Other States":

Concession: "A piece of ground conveyed by deed or grant in perpetuity to a lessee state for the residence of its nationals, the same to be administered by it, 'saving the sovereign rights of the Emperor of China.'"

Settlement: "A site selected for the residence of all foreigners, within which they may organize themselves into a muncipality for certain purposes and be governed by their elected representatives."

Now, the British admitted all who come to "British Location" stipulating only that whatever regulations were imposed on British residents should also be borne by the others. Some historians declare, therefore, that the entry of other than British nationals under these conditions made the location a 'half settlement' instead of a whole concession.

America's first treaty with China, the Treaty of Wanghai, was signed on July 3, 1844. Caleb Cushing negotiated the Treaty for the United States. The American Secretary of State, Daniel Webster, merely instructed Mr. Cushing to arrange a treaty, and he wrote Mr. Cushing: "Let it be just."

In this treaty extraterritorialty was distinctly provided for; China was expected to protect United States citizens within her borders, and the United States was granted all rights and privileges given to Great Britain by the "most favored nation" clause.

On October 24, 1844, the Treaty of Whampoa was signed by France and China. It differed from the British and American treaties with China only in that it denied to China the right to arrest French criminals in places open to foreign commerce.

The Belgians and the Swedes were next to negotiate treaties.

In 1849 there was a slight rift between the three treaty nations—England, America and France, when France insisted that land could not be purchased in "French Ground" without the consent of the French Counsul, The United States and England maintained that China had no power to give exclusive rights to any one people (the French) after having conceded general rights to all. The French based their claim on an agreement entered into on April 6, 1849 by M. Montigny, first consul for France and Ling Taotai. This agreement provided for the establishment of and government of a French concession with definite boundaries, which were:

South—Part of moat along City Wall
North—Yangkingpang River
East—River side from Canton Guild to Yangkingpang river.
West—Creek, Kuan-ti-Miao, to Chow family bridge subject to further extension if desired.

American and French merchants went into the "British Location" to settle and maintained that they had equal rights with the British as a result of the treaties of their respective governments with China. H. C. Wolcott, first acting American consul, established a consulate in Hongkew, across the Soochow Creek, in February, 1854, and raised the United States flag in "the American settlement." Britain and Taotai protested but the situation politically was unchanged. Mr. H. B. Morse in his book, "The International Relations of The Chinese Empire," says (Vol. 1, p. 349) re the American settlement:

"It was not created" but "just growed. It was, in fact, a settlement by suffrance."

The International Settlement, as such, dates from July 11, 1854, when the three Treaty Consuls,—Alcock, Murphy, and Edan,—for England, United States and France, respectively, drew up a code of regulations applicable to the British and French concession

The Bund

areas, giving them an international Municipal Council. China agreed to the regulations. One of the main reasons for drawing up these regulations was to get a common governing body because the English and American naval authority present in the harbor from time to time was independent of the ministerial or consular authority on land. A year previously, on April 12, 1853, the Shanghai Volunteer Corps, came into being at a meeting of the community attended by the consuls and naval officers of the three Treaty powers. It was determined to adopt a policy of armed neutrality and organize a volunteer corps due to the proximity of the Imperial Camp on Soochow Creek and of the rebel camp—the Small Swords— in the Chinese city of Shanghai. The French, however, helped the Imperialists drive out the "Small Swords."

On June 26, 1858 the Treaty of Tientsin ended the British-French war against China and extraterritoriality was further elaborated. Treaties of 1842-1844 and 1858-1860 defined the legal basis on which intercourse between the Occident and China was to be conducted: although modified from time to time, the main outlines are still the basis of the legal status of foreigners in China.

In 1862 the French formally withdrew from the Land Regulations of 1854 that marred the birth of the International Settlement and ever since 1862 the French Concession has been a distinct municipality. The Land Regulations of 1854 while drawn up by the British, American and French Consuls covered the British and French concessions.

The American Settlement in Hongkew was at this time called "the Cinderella among the settlements." Edward Cunningham, of Russell and Company, and George F. Seward, United States Consul, in 1863 asked for one municipal government for both settlements. The union was effected on September 21, 1863, and what is sometimes called the "International Settlement north of the Yangkingpang" was born. Seward and Huang Taotai agreed to the following boundary lines for the United States Concessions.

Starting from a point opposite the Defence Creek it extended down the Soochow Creek and the Whangpoo, to three (3) miles up the Yangtzepoo Creek, and then in a straight line back to the point facing the Defence Creek.

This union brought the American concession within the Land Regulations of 1854.

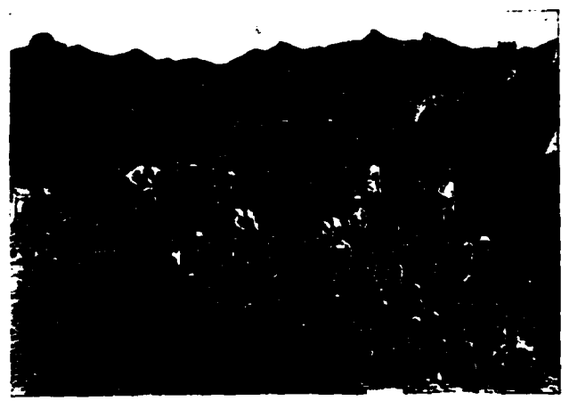
An International Mixed Court was established in the Settlement in 1864.

In 1870 control of the Shanghai Volunteer Corps was given solely to the International Municipal Council, and a rifle range was built.

The Volunteer Corps consists of infantry, machine gunners, field artillery, with a total strength of around 1600 including its reserves. Its members include Americans, British, Italians, Portuguese, Chinese and Japanese.

There is also the Shanghai Defense Force, of professional soldiers, amounting normally to a mixed division (British strength with armored cars and attached troops. In 1928 the strength of this force was reduced to that of a British brigade.

For more than 60 years the United States Consuls, who were layman and consul merchants, were the sole American courts in China. In 1848 the Congress of the U. S. decided that "jurisdiction in criminal and



Visiting the Great Wall

civil matters shall in all cases be exercised and enforced in conformity with the laws of the United States, which are hereby, so far as necessary to exe-

cute said treaty, extended over all citizens of the United States in China."

Land regulations were agreed to with China in 1845, 1854, 1869, 1898 and 1899.

The International Settlement exercises complete powers of self-government, including police control. The executive power is the Municipal Council, elected until 1926 entirely by the foreign tax payers. But the Treaty Powers permitted Chinese to live within the settlement, taxed them but did not permit them a voice in the government. The Chinese population became 95% of the Settlement. Student demonstrations and a wave of Chinese nationalism resulted in the Rendition Agreement of 1926 which gave Chinese a voice in the government of the Settlement, and provided that three Chinese be members of the Council. The Council consists of:

Five British members.
Three Chinese members.
Two Americans members.
Two Japanese members.

The boundaries of the International Settlement and of the French Concession have been extended from time to time, by the building of roads, as the result of internal crises that would result in China granting an extension. Definite dates of International boundary extensions were November, 1848, June, 1803, July, 1899 and International roads were extended in 1926. There are twelve nations represented in the International Settlement. The extension of the International Settlement in 1899 gave it an area of 8.35 square miles or 5,584 English acres. It is 7.5 miles at its greatest length and 2.27 miles at its greatest width.

There are five distinct steps marking the growth of International Settlements from a trading post to an international commercial and industrial center:

1. Granting consent for Chinese to reside within boundaries of Settlement and 95% of population became Chinese.
2. Change from trading post to manufacturing center after Chinese-Japanese War of 1895.
3. Development of harbor after Boxer outbreak enabled Shanghai to become one of the great shipping ports of the world.
4. Adoption of policy of neutralty by International Settlement making it of great political importance for factions could meet there and plan against government and it was a safe harbor for political refugees.
5. Revolt of Chinese residents against paternal government and growing spirit of nationalism and student demonstrations resulting in Chinese getting voice in Settlement government.

The foundation of the International Settlement rests on:

(1) Treaties.
(2) Land Regulations.
(3) Political force; moral force—"God helps those who help themselves."

The United States does not assume responsibility for the government of any concession. The American concession "just growed." American citizens live in all concessions. They enjoy the rights and privileges of all "treaty foreigners." In Shanghai the American School and the American Church are in the French concession, a distinct municipality, and many Americans live there. Nearly all American business houses are in the International Settlement which has Americans on its Municipal Council, the executive power.

Over a century ago Napoleon Bonaparte said of China:

> "There lies a sleeping giant. Let him sleep, for when he wakes he will move the world."

Europe woke the giant. John Hay, the American minister said:

"The storm center of the world has shifted—to China. Whoever understands that mighty Empire has a key to world politics for the next five centuries."

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Army Officers Aid in Designing New Lantern

A NEW type of gasoline lantern, designed with the aid of Army officers, is now being manufactured by the Coleman Lamp and Stove Company of Wichita, Kansas. The "Coleman Sport-Lite" is 12 inches high, weighs 3 pounds and produces a light of 150 candle-power. The Pyrex clear glass globe protects the mantle from wind, rain and insects. The fuel capacity of $1\frac{3}{4}$ pints is enough for 7 to 9 hours of service. The retail price is $5.95. Any Post Exchange Officer can secure them.

Test by personnel of the office of the U. S. Cavalry Association indicates that the lantern is practical and gives a marvelous light.

On Foot Through the Cagayan Valley

By Lieutenant T. Q. Ashburn, Jr.

"A tour of duty in the Philippine Islands is not complete without a trip through the Ifugao and Bontoc country. The natives, their life and customs, are far more interesting than the Moros of Mindanao and Sulu. Although the tribes are non-Christian, it is perfectly safe for a white man to travel among them unarmed."—MILITARY HANDBOOK OF THE PHILIPPINE ISLANDS.

AFTER days of preparation, arranging for transportation, telephoning ahead for accommodations at rest houses, consulting with constabulary officers, hiring guides and purchasing food and equipment, we found ourselves at Bontoc, the jumping-off place for our great adventure. Three days north of Babuio, the mountain health resort of the Philippine Islands, we were already out of touch with civilization except for the single telephone line that connected out-of-the-way rest houses with constabulary posts scattered like needles among a haystack of mountains.

Our trip up the zig-zag trail from Manila to Baguio had seemed like a dream. A winding ribbon of road, spiraling ever upward, chiseled in the bone of a mountain range, stood, an everlasting tribute to the dream and perserverance of an army engineer; the coolness and tang of the air an invigorating tonic after the muggy, fetid heat of Manila; the scent of the pine needles too good to be true! It all had seemed a dream, for one instinctively felt that two such extremes of climate and scenery could not by any freak of nature exist in the Philippine Islands; not even seven hours by automobile from Manila. And from the first time we saw an Igorote, clad only in a "G-string," at No. 1 gate, we thrilled to the lure of the primitive. Even after becoming accustomed to the non-Christian tribes we never ceased to feel a little catch in our throats when looking down from the clouds over "Happy Valley" or at the breath-taking scenery that a munificent Creator had splashed throughout the Mountain Province to atone for his oversight in the other parts of the Philippines. Non-Christian or savage, one felt instinctively that this country must produce a finer type of people than the civilized lowlands. At least they were finer physical specimens, with magnificent limbs moulded in bronze and a primitive code which they lived up to! But I digress.

At Bontoc we found our two cargadores waiting for us. Small, with high cheek bones and crystal-clear eyes, barrel-like chests, and arm and leg muscles standing out like cords, they wore only a "G-string." Grinning from ear to ear, they informed us that their names were, respectively, Dumlao and Amado. Without bargaining beforehand for good rates, we engaged them on the spot and demanded that they take us to an "Oolog."

Striding ahead like two panthers, they conducted us to a long nipa shack, raised high off the ground by bamboo poles, and called to the girls inside who came to the windows and smiled shyly at us. So this was an "Oolog!" This primitive shack, nesting among the pines, was where the unattached girls of the tribe lived and received their boy friends! Trial marriage. Modern? Bunk! For many thousands of years the people of the northern mountains of Luzon have practised this custom. The picture of the two girls clad only in banana leaves would seem to prove conclusively that Mother Eve still roams the far corners of the earth; at least in an "Oolog" if no longer in Eden.

We left Bontoc at 7:00 a. m. the next morning and had luncheon at Baluag Camp where we came across an old woman smoking a cigar as big as she was. With her scrawny neck and monkey face protruding from an old "Mother Hubbard," her cavernous cheeks and sunken eyes, and with one dirty bare foot peeping shamelessly from beneath her dress, she resembled an old scarecrow more than a human being.

After partaking of a cold meal on the trail, our cargadores tried to work us by demanding more than their schedule called for. Being ignorant of their customs, we agreed to pay them one peso (fifty cents) per day for carrying our forty pounds of equipment. Being successful in their demands, they passed the word along and thereafter it was impossible for us to secure cargadores at the fixed rate of seventy centavos (thirty-five cents) per day.

We learned later that some Americans had been in the habit of giving twenty centavos or less, extra, each day for chow money. As the Igorote seldom gets enough to eat, this is not a bad plan for getting good service, although it should be impressed upon them at the time that this is a voluntary gift and not a requirement. We also learned that cargadores should be hired daily instead of for the entire trip because they are then both cheaper and fresher and there is less risk of them developing sore feet. But, unfortunately, we didn't learn this until too late.

In our baggage we had included some articles of barter such as tobacco, which the entire Igorote family smokes, matches, which are always eagerly received, buttons, greatly desired by the young men as ornaments for their hats, needles, and perfume of the five and ten cent variety. While small change could usually procure what was needed, the natives apparently placed a higher value upon the above-mentioned articles.

After agreeing to pay our cargadores what they asked, we continued on the trail and finally arrived that same afternoon at the private rest house of Mr. Sarol in Tinglayan. The term "Rest House" was to all intents and purposes a misnomer for neither was

it a house nor was it restful. A mere bamboo shack on stilts, it differed from an "Oolog" only in size—it was smaller. Nevertheless, it was a shelter even if the rats did carry away my sock which, in an unguarded moment, I had left on the floor under the rough bench

Photo by Air Corps, U. S. Army

Air View of Camp John Hay

of bamboo which served as our bed. Thereafter we learned that an iron-clad rule of the trail was that one must never leave shoes or clothing on the floor at night on account of the huge rats that infest all the "rest houses." Having served two years in the Philippines, I was prepared to have my socks carried off by the ants but not by the rats.

The next morning we awoke stiff and tired, to resume our journey. The trip from Tinglayan to Bangad was uneventful except for our difficulty in making ourselves understood at Luboagan, where we desired to purchase a "Minook," as Dan called it. Finally, by flapping his arms and cackling like a chicken and then by repeating the performance and squatting to give an imitation of a hen laying an egg, he managed to make himself understood. By the time we got the chicken, I was convulsed with laughter and the two cargadores were flat on the ground howling in glee. Even the natives were so tickled that the tears were running down their faces for the primitive gives way to his emotions unrestrainedly. I started to enter the nipa shack to pay for the chicken when the owner, gesticulating violently, motioned me away. Since this was the first time in history a native had ever refused money from an American, my curiosity was aroused. Later I learned that the bamboo poles laid horizontally on short supports to form a cordon around the house, which I in my ignorance had mistaken for a fence, signified that there had recently been a death in the family and that it was bad luck for the bereaved to have a stranger enter.

After a welcome break of chicken in our diet which had heretofore consisted of sandwiches and flat-tasting boiled water, we celebrated by drinking some San Miguel beer which had providentially found its way to this small barrio in Northern Luzon. Then in spite of a consuming desire for a mid-day siesta, we "hit the trail" and entered the sub-province of Kalinga where we were met by the "King" in all his glory. He had received word of our coming and was dressed for the occasion as the picture clearly shows. Fortunately, in return for a little "Cumsha" in the shape of tobacco, some perfume and a dozen large pearl buttons, we had no difficulty in persuading him to pose for his picture. I say fortunately because ordinarily the mountain people believe that an "Anito" (evil spirit) looks out of the camera lens and that a shorter life is certain if the camera is pointed at them. Sometimes pictures can be obtained by getting the native to look through the finder, thus arousing his curiosity, while another photographer gets his picture.

Finally, we left the "King" and pushed on to the constabulary station tucked away in the mountains of Luboagan where we spent the night this time in a wooden shack instead of a nipa one. With the experience of the previous night still fresh in our minds, we hung our clothes on a rope stretched across the room and slept the rest of the weary.

After breakfasting on fried eggs, secured from our friends the constabulary, we left Luboagan and on the way to Limus were spell-bound as the superb beauty of the country unfolded before us. Mountains, embraced by pine trees, climbing to the skies; a veritable stairway to Paradise! Breath-taking chasms that awed by their stillness. Gorge-cutting falls that babbled of eternity. Beautiful green rice paddies carved like wisdom teeth in the very jaws of the hills. Step upon step of rice terraces, tilled by the mighty carabao, plucking a living for primitive man from the very visage of Nature.

Occasionally we would pass bands of Igorotes, traveling in groups of a dozen or more for self-protection, beating their "Devil Chasers" (short canes slit like a clothespin so as to whang when struck upon the ground) to ward off the white man's "Devils;" the women and children, with great loads upon their heads, turning aside their faces as we passed. Igorotes—Indians—Indians—Igorotes! Which were they? Were we in the Philippine Islands or in our own United States? It seemed hard to decide.

At Limus, a small barrio, we met the man who mutilated himself in order to frighten his enemies. That he succeeded in striking terror in the hearts of all who surveyed him is well borne out by the picture. Pushing on to Pinucpuc, we met Major Dosser of the Philippine Constabulary who entertained us most of the evening with descriptions of the people of Apayao and some of their customs.

It seems, according to the Major, that the tribe is known locally as the Isneg and they usually treat travelers very well. In some rancherias (towns) however, the people appear surly or suspicious. In others they will all take to the hills or only a few men will remain. None of these things denote danger unless

A River Valley in Benguet

large bodies of armed men congregate without women and children.

Isneg do not care to give their names. No man should be asked directly what his name is unless the person asking knows him well and has forgotten it. Ask the man with him and the information will be forthcoming.

No Isneg woman should be joked with or touched by anyone. We had to caution our cargadores about this for they had rather fancied themselves with the women in Bontoc.

It is not necessary to drink bassi that is offered. If the traveler pleads that he is afflicted with a weak stomach, his refusal will give no offense. If a drunken Isneg insists that the visitor drink with him, the latter can pretend to drink and all will be well.

In some places the owner of a house will make energetic protests against the stranger entering. It is considered an omen of bad luck for a stranger to set foot in a house where a child is expected.

With all this useful information carefully digested, we left Pinucpuc the following morning and had occasion to gain some first hand information about still another Isneg custom. In order to get to Ripang which was to be our next stop-over, it was necessary to cross the Saltan River which at the time was high and dangerous. After a great deal of persuasion we had the Presidente (Mayor) of Pinepuc build us a stout bamboo raft for three pesos but when the raft was completed, our two cargadores refused to set foot on it. We urged them in every way, at first with soft promises and cajoleries, then with threats, but all to no avail. Solemnly, they informed us that the death of a child forbids the father crossing a stream of any size for one year. It seemed that Dumlao had lost his four months old son less than a year ago and his boon companion, Amado, refused to go on without him. Finally, after much argument and a voluminous amount of interpreting, the Presidente came to our rescue and provided us with two other cargadores from his rancheria who guided us to Ripang where we were able to secure fresh eggs and a "Minook" from the Municipal Secretary.

A Zig-Zag Trail in Benguet

We left Ripang early the next morning in order to have luncheon at the Presidente's house in Talafugu where we met Diego Kinaguran, the most famous fighter in the Province. Small, grey-headed, with piercing black eyes that still snapped in spite of his years, he beamed like a full moon when I referred to his fame. Chuckling with pride that his exploits were still remembered in far-off Manila, he told me that he had fought both the Spaniards and then the Americans in the early days until he was defeated by the latter in 1905 and had to surrender his son, Juan, to the Provincial Constabulary Commander as a guarantee of good faith. Juan was educated by Captain H. Knauber, Provincial Commander at that time, and is now Sanitary Inspector of Apayao. The Old Man seemed very proud of his son and was quite disappointed that we had to leave without meeting him.

Before departing, however, we learned how Governor Harris of the Mountain Province abolished head-hunting in the "Days of the Empire." It seems, according to Old Diego Kinaguran, that when the governor first arrived in the Mountain Province, he found that the first requisite of manhood was an enemy's head. Neighboring rancherias were constantly warring among themselves and in each barrio the man who took the most heads was elected chief, by virtue of his prowess. Gathering all the chiefs of the rancherias together, Harris told them that he represented the "Great White Father in Washington" and that they must adopt the white man's customs and abolish head-hunting. Indignantly, they arose from where they had been squatting in a circle around the Governor and stated proudly that for generations they had followed the customs of their ancestors and that never would they consent to abandon this ancient and honorable custom.

"Very well," said Harris, "if you won't adopt my customs, I must adopt yours. Now you are all chiefs, selected for your prowess in taking heads. I am a greater chief than any of you and have never taken a head. Consequently, I am ashamed. Therefore, in order to prove my power to you, I am going to take the heads of all your dearest relatives! You can't take

my head for I have the Army and the Constabulary behind me. Now think it over. Do I adopt your customs or do you adopt mine?"

The result was that head-hunting or rather the practice of collecting heads publicly has been abolished to this day. Throughout the recital of this tale, Old Kinaguran chuckled and chuckled as he recalled how Harris had caught him where the hair was short.

Upon being pressed for more information, the lovable Old Man opened up and told us how highly the Igorotes had prized their warrants as non-commissioned officers in the Constabulary. It seems that Governor Harris organized the Igorotes into Constabulary companies and made the sons of Chiefs first sergeants. One day an Igorote ran amuck and killed a man in his own town. The first sergeant of the nearest constabulary company was sent to bring in the murderer. Now it happened that this first sergeant was the son of the bitterest enemy of the chief of the rancheria where the crime was enacted. Nevertheless, the people of the town not only allowed their hereditary enemy safe conduct but actually captured the head-hunter and turned him over to the sergeant because they had promised Harris to abolish head-hunting.

On the way back to headquarters, the prisoner attempted to escape and his captor shot him through the leg. Since this all happened on the mountain trail and the wounded man was much bigger than the sergeant, the latter was in a terrible quandary. His orders said to bring in the prisoner dead or alive and if he went back for help, the man might escape. Therefore, his duty was obvious; he pulled out his pistol and killed the prisoner. Then he reported to the Governor.

Shortly thereafter, an enraged deputation from the dead man's village called on the governor and demanded the first sergeant's head. Harris tried to explain that the sergeant thought he was in the performance of his duty when he killed the man but the visiting chief said "No, he was not! When he shot him to prevent his escaping, that was performance of duty. But when he killed him, that was murder. Now, we want this man's head!"

Harris argued and argued and asked the chief if he wouldn't accept ten pigs, twenty chickens and three carabao in exchange for the sergeant's head; more than had ever been offered for one life!

But the Igorotes stubbornly refused the offer. They demanded a head for a head! Finally, in desperation, Harris asked if there was nothing that would satisfy the tribe's honor except a head. The natives conferred among themselves and then triumphantly announced "Yes! We demand either this man's head or his warrant as first sergeant!" So the governor had to reduce the soldier to a private and transfer him to another post to live down the disgrace.

After regretfully taking leave of the Presidente and Diego, we pushed on to Banuan and from there to Kubagao, the capitol of Apayao where we made arrangements with the constabulary officers to use their banquillas for the trip down the Abulug River the next day.

This trip took us about eight hours but it was a welcome relief from the monotony of hiking every day. It was much easier to sit in a banquilla, and let the scenery roll by as the current carried us downstream, even if our hearts did leap into our mouths several times as we miraculously dodged jagged rocks in the stream. The remainder of the trip from Tauit to the mouth of the Futol (dagger) River was uneventful and we spent the night in the house of a fat Spanish mestiza with three double chins who styled herself "Dona Castoria." In spite of her bulk and Grande Dame airs, when once her tremendous inertia was overcome, she could make even a carabao steak, smothered in grease, taste good.

From Dona Castora's to Appari where we put up at the poor hotel of another Spaniard named Fernandez was but a day by rowboat and before we knew it we were at our destination, the mouth of the Cagayan Valley!

From that moment on our trip lost interest and we could scarcely wait to get back to civilization and good food. Wasn't it Napoleon who said "An Army Marches On Its Stomach!"?

Grounds of Governor General's Mansion, Baguio

Amphitheater, Baguio

The Japanese Language Detail

By First Lieutenant John Weckerling, Infantry (D.O.L.)

WHEN I was ordered to Japan "for the purpose of pursuing a course of study in the Japanese language," as my orders read, I naturally consulted persons whom I supposed at the time to be acquainted with conditions in Japan and with the requirements, aims, and scope of the language course. I was variously told that "the detail was a cinch"; "a matter of four years leave"; "why you will have a palace to live in, complete with tinkling brook, stone idols and lanterns, etc." • • • "You can have a houseful of servants for $10.00, etc., etc." However, my own idea in asking for the detail was "serious," in a manner of speaking, but it was very nice of course to hear that things were so very perfect from the standpoint of the pay check.

Nevertheless, I had visited Japan during 1925 and was not prepared to believe everything in regard to this haven for limited incomes.

I do not intend to give the impression that living conditions in Japan are bad. They are not. For a time after the great earthquake in 1923 foreign houses were scarce and, when available, rents prohibitive. Things are changing, however, and foreign houses are being built rapidly and the number of foreigners in Japan is decreasing. Rents are reasonable and compare favorably with those of the United States. For that matter some may find the Japanese type of house not at all bad.

Amusements are getting better and many things which foreigners consider indispensable can be bought in Japan with increasing celerity. However it is not the purpose of the present article to discuss living conditions in a detailed way but to give some idea of the Japanese language and the methods of study pursued by the officers who are detailed as students.

The officer who comes out to Japan with the idea that this is "four years leave" is going to be just as disillusioned as the officer who thinks he can rent a palace (with lacquer bridge) and servants complete for twenty dollars. On the other hand it is not entirely a four-year grind.

The Japanese Language

To begin with the Japanese language is one of the most difficult languages in the world. Up to the year 400 A. D. the Japanese had no written language, but about that time a number of court scholars imported a part of the Chinese ideographs and applied them arbitrarily to the Japanese words. The original idea of the Chinese character or ideograph system of writing was that of drawing a picture or characterization of the object supposed to be represented. However thru the centuries great changes in their manner of writing were evolved and they were shortened considerably. Nevertheless to this day these evolutions may be traced or actually seen in the case where the writing of a character has changed but little.

Other invasions of Chinese ideographs occurred and were used in the same manner as related above. Therefore we find that the readings or sounds of these present day characters will have, in most cases, a number of Chinese and Japanese readings. However the great length of time that has passed since the adoption of these ideographs together with the fact that the Japanese mouth and tongue could not frame the harsh-sounding consonants of the Chinese, makes it impossible for the Japanese and the Chinese to understand each other today in speech. The general idea of written things is, however, understood.

Of course the Chinese never adopted the Japanese language, so there is no reason for them to understand a Japanese talk, but the Japanese did have the tremendous influence of the Chinese ideographs and their sounds upon their language. They even did such things in their enthusiasm for the culture of the Middle Kingdom as to use the pure Chinese sounds of many words and to put two Chinese sounds together to make them a Japanese word. Notwithstanding today the spoken languages are completely different and each must start from scratch in learning the other's tongue.

The Influence of Other Foreign Languages on Japanese

With the limited relations with European countries due to the fact that Japan was not "discovered" by them until the 16th century and principally due to the exclusion of all foreigners by the Tokugawa Shogunate in 1639, there was little or no foreign influence on the Japanese language up to the opening of Japan by Perry in 1854 except for the extremely few words that have been taken from the Dutch and Portuguese traders and missionaries and adopted into Japanese. It must not be thought, however, that the vogue for things Chinese ever entirely waned and many scholars and educated persons even today are enthusiastically reading the Chinese classics and literature. With the opening of Japan to Western influences and the Restoration of power to the Imperial house in 1868, there followed the events known to the world today so well that they do not bear repeating. The small insignificant Japan of 1868 (so thought of by foreigners) hardly out of feudalism (in fact it was not abolished until a few years later) amazed the world by becoming a first-class power in a surprisingly short time. These events, of course, had a great effect upon the language. English has become the predominate tongue among the foreign languages and is taught in all schools. It is the technical and commercial language, and many words are adopted into the Japanese with a native accent.

The Army however requires their officers and non-

commissioned officers to know the intricate parts of rifles, machine guns, etc., by the very difficult native names.

Various Styles

One of the most perplexing things to foreigners is the fact that in addition to the ordinary conversational Japanese there are various styles, such as the letter writing style, speech and literary styles. In each of these styles there are words, expressions and phrasings that are peculiar only to that special style and which, if used for instance in conversation, would sound extremely ridiculous.

Also in writing the characters the Japanese will not as a general thing write them as they are printed in the newspapers. He will abbreviate them (in the approved method if educated) or in his own style if he does not happen to know the correct way of abbreviation. The

JAPANESE CHARACTERS

The character.	*Slightly abbreviated.*	*Greatly abbreviated.*
東	東	东
櫻	櫻	桜
間	間	间

style of greatest abbreviation called "sosho" (literally meaning "grass writing") looks like nothing clearer than snake tracks to the uninitiated, especially when written carelessly. At that many Japanese have confided to me that another man's handwriting is almost entirely unintelligible in parts to them but that the general meaning can be guessed.

The Language Course and Methods of Study

The usual method of study is for the teachers to come to the homes of the students. The text books are those that have been written by foreigners who have made a long study of Japanese. Most students combine the study of these textbooks with the more pleasant direct method of learning to speak fluently, i. e., conversation.

Language students are given a monthly allowance of $45.00, which is just sufficient to cover the cost of books and to pay the teachers for two hours of instruction daily.

The present Military Attaché is, however, making a trial of the school system and the three officers who reported in Japan in October, 1931, are combined into a language study group under an experienced teacher for the first period of six months. Classes are held daily except Sundays for a period of three hours—the remainder of the time being devoted to preparation and study. If this method proves a success it will doubtless be continued.

Other than to be prepared to pass a comprehensive examination the student officer is very much on his own as to methods of study to be pursued.

Most officers, especially those who are married, stay in Tokyo for the full four years with the exception of the time spent in travel, duty with a Japanese military organization or when away for the summer. Bachelor officers, however, frequently spend a long period of time, occasionally six months, living in the interior. There are advantages and disadvantages to either method chosen and each must be considered by the students individually.

The character as written hundreds of years ago.		*The character of today.*
	YAMA or mountain. The idea was of a mountain with three peaks.	山
	KAWA or river. Notice the stream.	川
	HI or sun.	日
	MIZU or water. Notice the resemblance to river.	水
	KI or tree. Note the branches and the roots.	木
	ONNA or woman. Note the resemblance to a woman carrying a bundle—the usual fate of women in primitive times.	女
	KO or child.	子
	HI or fire. Note the flames rising.	火
	UMA or horse. In the old character the legs, mane and tail can be plainly recognized.	馬
	TORI or bird.	鳥

intensive study, especially for those who have been in Japan concentrating on language study for over a year, is practically impossible. There are easily accessible mountain and seashore resorts close to Tokyo where cottages may be rented at a fair price rental which most officers will find within their incomes if managed properly.

Sports

Some form of exercise should be indulged in while studying Japanese. In Tokyo there is a large tennis club with which officers may affiliate at special diplomatic terms. There are many beautiful walks in and around Tokyo. Golf is possible at Karuizawa, a mountain resort, in summer. Mountain climbing, hunting, skiing and skating can be had within five or six hours from Tokyo. Some students go to the Y.M.C.A. in Tokyo for handball or swimming. However the new American Embassy has a very nice pool which will be available in 1932. Members of the diplomatic Corps in Japan (which would include student officers) are permitted to ride horses of the imperial stables at specified times. Polo was started at the Japanese Cavalry School by a former language student and games are sometimes arranged between teams representing the School and the members of the diplomatic Corps in Tokyo. Good mounts are extremely scarce, however.

Amusements

There are no presentations of the legitimate drama in Tokyo in English except for the rather high standard of amateur productions of the Tokyo Amateur Dramatic Club. However there are several good theatres presenting "talkies" of the latest vintage. At present building is a talkie theatre which when completed will compare favorably with some of our own cinema temples. The Japanese are rapidly becoming adept in the production of "revues," in Japanese of course, but which are done in the foreign manner. These are rather interesting, especially to those of the students who are fairly advanced in the language. The native drama known as Kabuki, may also be interesting to advanced students. Among the Kabuki plays, however, the more modern ones are likely to have the greatest appeal to foreigners. Few care for the "judo" as an exhibition (known to Americans as "jiu jitsu") which is made extremely dull by experts, strange as it may seem. The defense is so good that the spectacular holds of "judo," from the viewpoint of the spectator, are seldom seen. "Sumo," the form of wrestling popular with Japanese, seems like so much pushing and tugging from the foreign point of view and is not very interesting in our eyes.

Baseball is probably the most popular sport in Japan. However professionalism has not as yet entered the game to a great extent, hence the best games or the Japanese World's Series are the Six-Team University League matches and the annual Waseda-Keio matches. The latter two teams, even tho they do not win the championship, attract the largest crowds. This match, in fact a series of three games, might easily be compared to the interest of Americans in the Army and Navy football game. The Meiji Stadium has been enlarged to accommodate 60.000 persons, but proves insufficient when the Keio-Waseda matches are played. The fall of 1931 saw the coming of the big league stars, Cochrane, Grove, Simmons, Gehrig, Frisch, O'Doul, etc., who played the best teams in Japan a series of games. As yet the Japanese have developed only one or two pitchers who could hold the big leaguers down to a reasonable score, but they field and run bases with the best of them. The main criticisms of the big leaguers were lack of hitting power, hustle and judgment in plays, but they praised the Japanese very highly notwithstanding. Quite naturally the games were well attended, especially in Tokyo where tickets were at a premium. There should be another visit in 1932, certainly one in 1933.

Group of American Officers and Japanese Officers of the General Staff

Most of the big stars of the concert world come to Tokyo including European stars who seldom visit America. Galli-Curci, Heifetz, Paderewski and many others appear here regularly.

The radio broadcasting is mostly in Japanese and of no especial interest to foreigners except students who listen in for the practice it gives them in Japanese. However occasionally there is an evening of foreign music by the Tokyo Symphony Orchestra. The latter organization also gives concerts.

Social

Officer students are on the Diplomatic List and are usually invited, with their wives, to the larger official affairs. To what extent an officer goes about socially in Tokyo is largely dependent upon his pay and personal inclinations. The requirements of study, too, do not permit of wide social participation for the first year or so. The officer himself will usually be the best judge of the amount of social participation he desires after he arrives in Japan.

A certain amount of association with foreigners is however, in the opinion of the writer, not only desirable but essential. The idea that some may shut themselves off from all intercourse and plunge into desperate study is a mistaken one, I believe. While such seclusion may give an initial advantage it is certain to cause the too diligent hermit to become "fed-up" long before his tour of duty is completed. It is easy to get into

very strange states of mind in the Orient, or for that matter, wherever one is completely divorced from his usual surroundings, and this fact should be borne in mind by the student or prospective one.

The language students are always invited to the following official parties given by the Imperial Household Department:

New Year's Presentation at the Palace.
Cherry Blossom Party at the Shinjuku Palace.
Chrysanthemum Party at the Shinjuku Palace.
The Imperial Household Minister's Reception at the Hama Detached Palace.

Contact with Japanese

Contact at first with Japanese will be limited to teachers, servants, shopkeepers and the Japanese employes at the Embassy. It is extremely difficult to keep up relations with Japanese who will be a help to you in your study of the language. The officer student will find that, for the most part, the ones that he will meet will all speak good if not perfect English, or if that is not the case, will want to improve their English at his expense. This will not discourage the energetic officer, however, for there are many Japanese of the type that he wants to meet and talk to who do not speak English, however few they may seem the first six months or so that the officer is in Japan. Some officers make arrangements with university students to exchange conversational practice on an hour for hour basis.

The Military Attaché arranges from time to time stag parties to which Japanese officers of all grades are asked and if the officer student is adept contacts may be continued with these officers.

Cafés or "beer halls," as they are known among the language officers, probably belong under the three previous headings at once, viz., Sports, Amusements and Contact. There are the modern tea house and are rapidly displacing, if they have not already actually displaced, the geisha, at least in the affections of the modern youth. If not visited too often they are an excellent means of assisting the beginner in the Japanese language in helping him overcome the first timidity in speaking and in finding out just how the common terms are used. After all the time spent with the teacher, while highly instructive, is apt sometimes to have its limitations.

Tour of Duty with Japanese Military Organization

The Mission in the Japanese language study is "to acquire a working knowledge of the Japanese language." When the officer student has been in Japan about two and a half or three years he is then sent for a six months tour of duty with a Japanese military organization, usually outside of the city of Tokyo. This duty will, if anything, tell the student whether or not he has achieved his objective in the language, as one is in constant association with the officers of the regiment to which assigned and there is much mutual entertaining, especially immediately after arrival and reporting to the Regiment and just before departure back to Tokyo. The language officers usually improve greatly in fluency, and the ability to conduct a conversation with persons of any grade or station during this assignment, tho they are apt to forget the minor academic points acquired from books.

The Japanese Grand Maneuvers

Generally officers are sent to the Japanese Grand Maneuvers to accompany the Military Attaché during the third or fourth years of their detail.

Toward the end of the language detail the officer students are required to spend a short time in the office of the Military Attaché, as determined by the A.C. of S., G-2-War Department, and the Military Attaché.

Conclusion

The young officer of the ages around 28-33, who is anxious to have a "specialty" on his record in the War Department and perhaps attempt something out of the ordinary in the way of military duties, acquire a broad outlook of world affairs and to be able to witness the inner workings of one of the best armies of the world, not to mention the knowledge and understanding that comes of four years of residence in Japan and association with Japanese of all classes, can do little better than try for this most interesting detail.

Left:—Lieut. Wechsler and Officers of the Machine Gun Company, the Infantry School, Chiba, Japan. Right:—Prince Chichibu, Heir Presumptive to the Imperial Throne, Commanding his Company in the 1932 Tokyo Review. The Prince is a Captain, a Recent Graduate of the Staff School.

Kosciuszko the Patriot—Father of American Artillery

By Elizabeth Camille Brink, Military Intelligence Division, General Staff

THIS year that marks the 200th anniversary of the birth of the Father of Our Country, marks also the name of a great Polish Colonial patriot, Tadeusz Kosciuszko, whose name will be associated with George Washington and the founding of the American Republic as long as our history endures. More than a century has passed since he died in exile, an impoverished and broken-hearted failure, yet the American soldier and citizen still thrills to the name of Kosciuszko, whose gallant and useful services in the American Army during the Revolutionary War have been credited at different times with saving the American cause. And the American artillery man as he sends fire data to his battery from his O.P. may well pause to pay honor and respect to Kosciuszko—the Father of American Artillery.

A worn and faded manual which now reposes in the Library of Congress at Washington is the testimonial of his services to the artillery. The "Maneuvers of Horse Artillery" adapted to the service of the United States was prepared by Kosciuszko at Paris in 1800. at the request of General William R. Davie, then American Minister to France. Translated by Colonel Jonathan Williams eight years later, a copy of the manual was presented to President Jefferson, who despite his ideas of peaceable coercion had nevertheless the foresight to realize that a time might come when the field artillery manual would speak in eloquent terms. That time was near at hand. In 1812 the United States and Great Britain were at war. and with no system of artillery instructions except those prepared by Kosciuszko. The manual was then purchased from the West Point Philosophical Society for $200 and the "exercises for cannon" and "maneuvers for horse artillery" were officially distributed to the service by the War Department with the now time-worn formula "for the information and guidance of all concerned." Kosciuszko may not have looked into the future and penetrated all the mysteries of range-finding, antiaircraft, and airplane observation, yet even an honor graduate of Fort Sill, poring over the musty pages of the manual, will see in Kosciuszko a kindred soul—a true artilleryman, who was proud to make a little easier the path of the infantry, then as now the "Queen of Battles."

Fortune placed Kosciuszko in his early life in a variety of situations. The younger son of a poor but noble Lithuanian family he was educated to be a military engineer and became a star graduate of the Royal Academy at Warsaw. Through scholarships awarded him he was permitted to study for five years in the institutions of learning of the principal European capitals where advanced study in military engineering gave him a position of eminence in his chosen profession, with which later he was to distinguish himself so brilliantly in the greatest services he rendered to Washington and the Continental Army—the field military engineering and fortification.

Hardly had Kosciuszko finished his education when he became imbued with the cause of liberty, of fighting for a freedom denied his own country. Turn back the pages of history one hundred and fifty-six years, to the year of 1776. It is the time of the great American revolution. The soldier pioneers are streaming through the passes—up the Shenandoah Valley, through Virginia and Pennsylvania and on to Philadelphia "the City of Brotherly Love." Through the mountains, by wagon, train, by flatboat, by horse, and afoot they came, not forgetting their rifles. Washington had blazed the trail. In Philadelphia the American soldier was first to know the beloved Polish patriot, who, impelled by his hatred of oppression and ardor for the cause of liberty, had, upon learning in Paris of the struggle between Britain and her North American colonies, hastened across the Atlantic and associated himself with the gallant patriots of our revolutionary period. "I have come," said he, presenting himself to Washington at Philadelphia, "to fight for the cause of American independence." He was the first of the noted galaxy of foreign officers who volunteered for the cause of the Colonies and to join the armies of Washington.

The highly trained technician arrived at a time of great moment. His first service was to fortify Philadelphia—at that time one of the vital nerve centers of the new-born republic, against attack by the British fleet. For this vital contribution Congress awarded him the rank of colonel in the Engineering Corps. His next assignment was with Gates' army of the North in 1777. This was the beginning of a dark period for Washington's Army. With little clothing and poor food, and having suffered one defeat after another, the army learned that General Burgoyne was coming down through New York from the north. Having demonstrated his ability in the fortification of Philadelphia, Kosciuszko was now commissioned to devise a plan for the defense of Saratoga and to check the British advance. He fortified Bemis Heights. Burgoyne's force was crushed by the Americans in the Saratoga Valley and hope flamed anew in the American colonies. The successful operations which led to the surrender of Burgoyne at Saratoga, and the part which Kosciuszko played in this battle reveals his inestimable worth to the Continental Army. It was the turning point in the War—for a victory by Burgoyne at that time might easily have brought in its wake complete defeat

and placed an entirely new face upon subsequent world history. General Gates acknowledged his indebtedness in his official report to Congress, and Washington at the time reporting the value of his work stated: "Kosciuszko is a gentleman of science and merit." Jefferson credits Kosciuszko with selecting the position from which the Americans fought. and with covering its weak point with redoubts from the hill to the river.

Kosciuszko

This victory put new heart into both the civilians and soldiers of the Revolution, at a vital time when reverses rather than victories were the rule. Following this decisive and victorious engagement of our history, the independence of the United States was recognized by many European powers, though the War still continued.

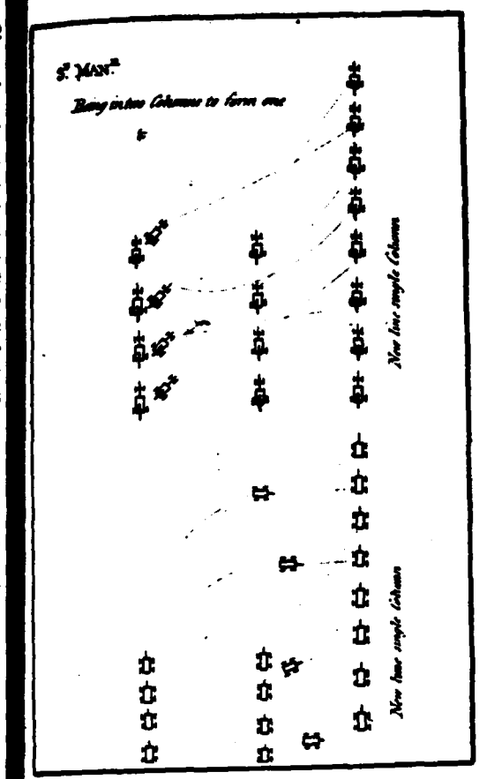
Historians point to Kosciuszko's greatest achievement in the War for American independence, in his fortification of West Point on the Hudson—whose site he is supposed to have chosen, and where years afterwards a monument was erected to his memory as "the hero of two worlds." West Point then controlled the main line of communication from New England south to the central and southern colonies. The importance of its fortification was that the Hudson River was the only route by which the British could operate with troops from Canada and New York. Hence, it was a position regarded by Washington as indispensable. But Kosciuszko pushed up the fortifications rapidly and in 1778 the gigantic task was completed and West Point was impregnable. He also laid out additional forts to protect West Point in case British forces were sent from New York. Washington again recognizing his merit says in a dispatch: "To his care and sedulous appreciation, the American people are indebted for the defenses of West Point."

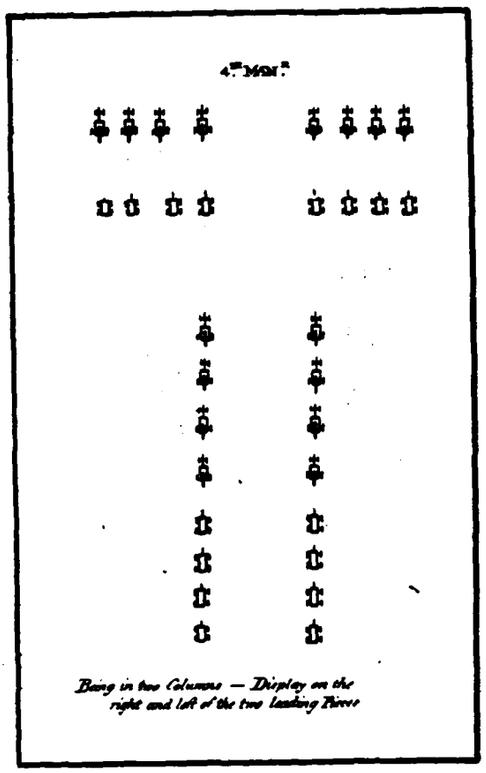
Kosciuszko was now made engineer in the Army of the South in 1780, with Washington's most valued and trusted officer, General Nathaniel Greene, in command. Later, Kosciuszko succeeded Laurens in charge of military intelligence. His service in the south covered virtually the whole range of modern Staff work—from supply to operations and troop movements. At those times when war often became guerilla warfare, the brilliant Kosciuszko, despite his rank, fought with the rest as a common soldier. His devised means for rapid movement of troops and provisions, in the way of improvised pontoon bridges often served as means of escape for the American columns retreating from Cornwallis and the King's forces. "His zeal for public service seems incomparable" wrote Greene of the young Polish engineer.

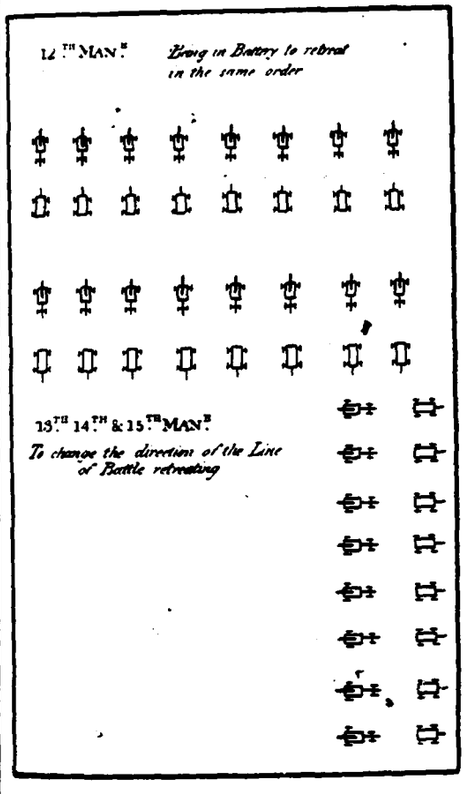
He remained in the south until the end of the war. When the United States became a reality Congress passed a resolution: "That the Secretary of War transmit to Kosciuszko the brevet commission of Brigadier General, and signify to that officer that Congress entertains a high sense of his loyal, fruitful and meritorious services." A spot of land where Columbus, Ohio now stands was also designated to him; and he was one of the three distinguished foreigners to be elected as member of the "Society of the Cincinnati" established in 1783. But Kosciuszko, unwilling to accept payment for his services to America, willed the money and lands offered to him to Thomas Jefferson. The famous document that Kosciuszko left with Jefferson at Philadelphia reveals the strength and noble purity of the principles of liberty in the heart of the Pole. Having seen slavery in all its phases in the south he foresaw a broader scope of human freedom in America, the goal of liberty extending to all peoples. Kosciuszko's will stands out as a flaming torch lighting the path of human progress.

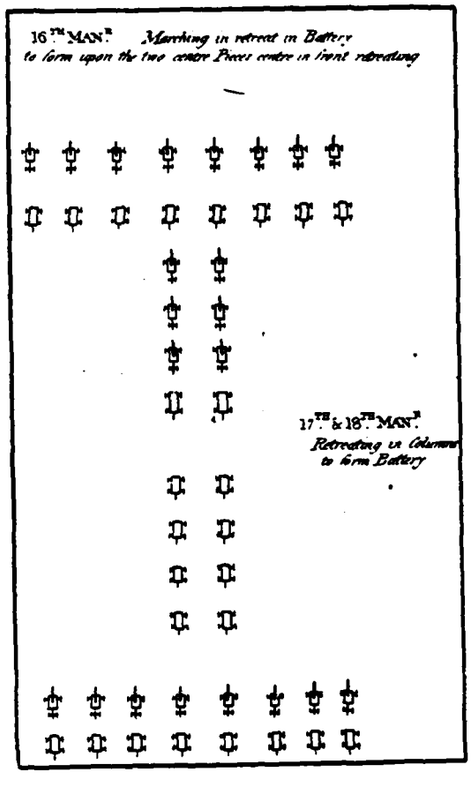
> "I, Tadeusz Kosciuszko, being just on my departure from America, do hereby declare and direct that, should I make no other testimentary disposition of my property in the United States. I hereby authorize my friend, Thomas Jefferson, to employ the whole thereof in purchasing negroes from among his own slaves, or any others, and giving them liberty in my name; in giving them an education in trade or otherwise; in having them instructed for their new condition in the duties of morality, which may make them good neighbors, good fathers and mothers, husbands and wives, in their duty as citizens, teaching them to be defenders of their liberty and country, of the good order of society, and in whatsoever may make them happy and useful; and I make the said Thomas Jefferson executor of this.
>
> 5th of May, 1798 T. Kosciuszko."

Of Kosciuszko, Jefferson wrote: "He is as pure a son of liberty as I have ever known, and of that liberty which is to go to all. and not to the few and rich alone." These qualities and nobility of character later









brought him to a high place in Poland, where he continued as the idol long after the cause he so valiantly fought for was lost.

In America, Kosciuszko saw the genesis of an experiment which later was to prove of great value to him in Poland. The valiant struggle for independence of the ill-equipped colonial farmers and their success against one of the best trained armies in the world, led the Polish patriot to visualize a day when his own peasant population might successfully throw off the foreign yoke and build up a national life of their own. Kosciuszko made a noble attempt to realize this dream. Confirmed and strengthened in his ideals by his association with Washington and those who fought for American independence, when Kosciuszko returned to his native land he was soon to play a more conspicuous part in the cause of liberty. In 1791, the attempt to resist the tyrannical Russia, and to free Poland from despotic and deadening influences which that power so long exercised over her destinies, called forth the most gallant effort in the life of the noble Polish patriot. His conduct at this time was such as to merit the everlasting esteem of his countrymen and of the world.

The voice of Kosciuszko, calling upon his countrymen to deliver their land from a servile yoke, raised the whole Polish nation in arms. His proclamation for liberty breathed a spirit of patriotic self-devotion which rekindled a sympathetic feeling in every land. The simple peasants awakened to their first feeling of national consciousness rallied round him. Exchanging the implements of husbandry for the implements of war, the soldiers inspired also the peasantry, who, arming themselves with pikes and scythes, rushed fearlessly upon the cannoneers of the north and carried their batteries of artillery.

One incident which sheds great glory upon Kosciuszko was the attack against the Prussian army. An army of 40,000 soldiers of the warlike Frederick and commanded by Frederick William in person was advancing upon Warsaw. With 15,000 men, Kosciuszko attacked this formidable army in a long and bloody engagement. Though the Prussian army was not driven from the field, the object of the attack was gained, for so great was the setback given to the Prussians and so small the loss to Kisciuszko's forces that Kosciuszko was further enabled to cut to pieces the Russian forces encamped near Warsaw and to establish himself in a position to defend the city. In the meantime Kosciuszko had organized a successful war of diversion in southern Prussia, which caused Frederick William to withdraw his army for protection of his own dominions. But fortune, which had thus far followed his banner as he long successfully resisted the concentrated attack of an overwhelming Russian force, was soon to desert him and Poland; for single-handed and alone Poland could not contend with the colossal power of Russia aided by the disciplined Prussian armies. In the end the army and purposes of Kosciuszko were defeated when in a later battle he fell covered with wounds, and with him fell the hopes of Poland, whose national existence was soon extinguished and whose territory was divided among the conquerors. His failure remains one of the most noble and tragic struggles for national freedom.

Revenging herself for the frequent defeat of her armies the Empress Catherine of Russia imprisoned Kosciuszko. He was confined in a dungeon and set at liberty only after her death. High honors were offered him by the young Czar to enter the Russian service, but he declined and became an exile from his country. The wounds from which he never recovered, which made it almost impossible for him to walk, did not deter him from revisiting his friends in America in 1797, where he was acclaimed as a true friend of the Republic which he called his second fatherland. It was here he left his famous will with Jefferson. In 1817, at the age of 71, he died in a Swiss village where he lived with some friends. His body was removed in great state to Cracow, where it was buried in the cathedral by the side of Polish Kings.

And so in this year of grace 1932, when we celebrate the birth of the Father of Our Country, and recall the stirring events of 1776, when America, a frontier country, had not yet come of age; let the lofty patriotic Kosciuszko not be forgotten. As we come to the present, there is no measure by which we can weigh the services of the noble Pole to our nation. To name a few of his services to our army and nation is not enough. It explains in part why we honor and revere him at this present time. But there is a further reason. The name of Kosciuszko represents the character of achievement that we all admire. It embodies and visualizes that for which all America stands. The years that followed his service to America and brought his whole life to bear upon his own national problems reveals a sureness and courage, and a clear, courageous grasp of the essentials of freedom. The new trail that he struck for the common people of his own country has been followed with a procession of ideals that have led them up to, and opened the gates to the present united Republic of Poland.

Brilliant and dazzling as were the battles gained and the feats of armies routed, they fall into insignificance when one speaks of the superior and ennobling virtues which adorned the character and immortalized the name of Kosciuszko. His generous self-devotion in the cause of liberty, his constancy of purpose to principles which guided his conduct, were surpassed only by the purity of principle and uprightness of intention which dictated them. He combined the qualities of heart which most exalt the human character with the qualities of mind requisite to the happiness of man and country.

Throughout history his name will remain as a symbol of liberty. Outside the city of Cracow an imposing monument bears only this supremely eloquent inscription, "Kosciuszko, the Friend of Washington." Close by the White House in the Capital of our nation, Washington, another memorial symbolic of his lofty patriotism reads, "And Freedom Shrieked as Kosciuszko Fell."

A Neutral Observer At Shanghai

I ARRIVED at Shanghai late in February and had an early opportunity to talk with various officials of the Nationalist Government. The impression I got from them was that they were highly gratified by the success of the Chinese 19th Army in withstanding the offensive action of the Japanese military and naval

COLONEL L. D. GASSER AND REGIMENTAL STAFF
Left to Right: D. M. N. Ross, Adjutant; Lt. Col. G. A. Lynch, Executive Officer; Captain Harry Adamson, Intelligence Officer; Captain E. H. Conner, Plans and Training Officer.

forces at Shanghai which had recently taken place and was continuing. I asked if what had taken place at Shanghai would tend to unite China in support of the Nationalist Government, and the Chinese officials, with one exception, told me that it certainly would.

I met several Chinese ladies of position and intelligence who were taking an active part in Red Cross work, organizing hospitals, caring for the wounded, etc. I saw several truck loads of wounded being brought to one of their hospitals.

I had an opportunity soon to visit the sector held by the Americans. Colonel Gasser, commanding the 31st Infantry of the American Army, had done excellent work in organizing this sector and strengthening it, not only for repelling attacks but also for protecting his men. He had given rigid orders to prevent firing and altogether, in my opinion, is simply splendid. The regiment has made a fine impression, the behavior and appearance of the men being excellent. It is most unfortunate, however, that they have had to wear old heavy O. D. uniforms evidently left over from the World War stock.

The American infantry holds a sector facing the Chapei area of the city where the Japanese have been unable to make any advance whatever. The Japanese join the American on the right, and the American Marines join them on the left? The Marine sector extending to and joining with the British on their left.

When I visited the lines, rifle and machine gun fire was being carried on almost continuously immediately in front of the sector, but this fire was directed to the flank against the Japanese, and not against the American. During the night there was some intermittent shelling, mainly carried on by the Chinese against Japanese points of importance.

At daybreak on the morning of the 24th, I went to visit the Japanese front north of Shanghai and between that city and the Woosung forts at the mouth of the river.

It appears that the Japanese, having been unable to advance through the Chapei District without incurring heavy losses, had decided to drive through the Chinese left, making the main effort with their right, but that their attack had resulted in but limited success, the Chinese having made a surprisingly effective resistance. The Japanese line was thus bent back to the Woosung forts on the right, or north.

After about an hour's drive by car I reached the headquarters of General Uyeda, commanding the Japanese forces, and had an interview with him.

At that time the Japanese air service was bombing, with over 200 pound bombs, what appeared to be a Chinese center of resistance in a suburban town not over 2500 yards from division headquarters, and there was much machine gun and rifle fire on the immediate front. I was surprised to see this bombing at what was clearly an artillery target, aerial bombing being, of

International News Photos, Inc.
31st Infantry Troops in Position

course, an exceedingly expensive and inefficient method for use against such targets.

General Uyeda's force consists of a reinforced division, including three infantry brigades, a battalion or more of mountain artillery, a battalion of field artillery about 70 mm. and a battalion of 5.9 howitzers.

He also has a little cavalry. The General said that he had met with unexpectedly stiff resistance from Chinese forces on his right.

Headquarters was established in what appeared to be an old farm building. A message center was going with much talking on the six or seven telephones in use. In a corner several officers were studying an airplane mosaic. Others were looking at maps and the General, with his Chief of Staff (a major general) and one other officer, was at the table in a small alcove over which a tent was pitched, the roof of the house probably being leaky.

A military funeral, attended by several companies of infantry, was taking place near the Division Headquarters.

All the equipment that I saw was excellent, as were also the uniforms. The men were of splendid physique, but they impressed me very much as being listless. This may have been due to the weather, which was cold with a biting wind, but more probably it was because of their lack of success against the Chinese.

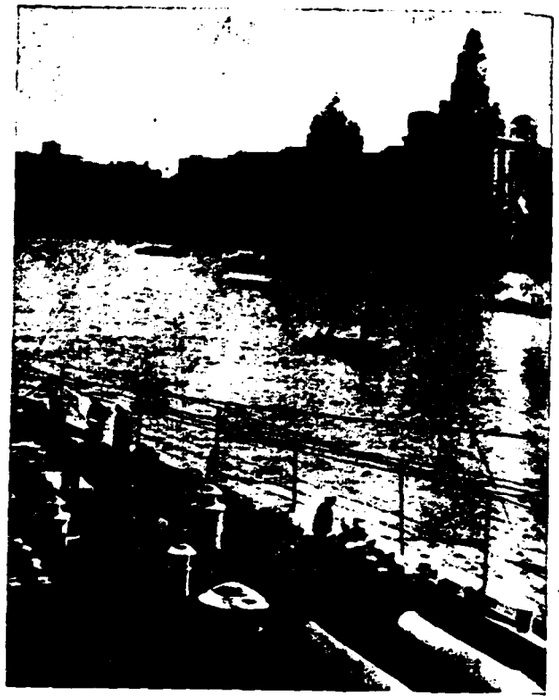
The consensus of opinion at Shanghai is that the Japanese have fallen far short of what was expected of them. It is certain that the marines and sailors, when they attempted to take Chapei, were driven back in a hurry by the Chinese. That, of course, was street fighting, which is very difficult.

I was told that the Japanese naval fire has been inferior and that their troops cannot shoot well. The terrain is perfectly flat, and observation consequently is poor. I saw no balloons. I had heard that the Japanese were going to use smoke tactically. I did not see any being used, but it was hardly necessary, as the whole view was obstructed by smoke from burning farms and villages. I was told that some of the airplane bombs in striking the ground had failed to ex-

Photo by U. S. Recruiting Bureau
Soochow Creek

plode. My informant offered to show me a large dud nearly buried in the ground, but I did not have time to go and see it.

After leaving the Japanese Headquarters, I returned to Shanghai and then proceeded to the Chinese front. The General in command was not to be found at his headquarters. I was much interested in the Chinese troops and talked to a number of the infantrymen. Most of them seemed to be men of nineteen or twenty



The U. S. S. Pittsburgh at Shanghai

or even younger, some mere boys being among them. They were poorly equipped, not well uniformed, but their morale was exceedingly high, due doubtless to the success so far attained and to the fact that for the first time perhaps they are now receiving rations and pay and are the heroes of the hour. Apparently it is the opinion of all in the 19th Chinese Army that they have gained a signal victory over the Japanese. As this is the first time in modern history that this has happened, the high morale is easy to explain.

Some observers have always maintained that, if properly trained, equipped and led, the Chinese would make good soldiers. They have developed fairly good methods in using railroad artillery and seem to know how to utilize a defensive organization in depth so that the troops do not present much of a target but are able, when the Japanese advance, to develop machine gun and rifle fire upon them and even to mix it up with them with hand-grenades and the bayonet. Many of the wounded had bayonet wounds, so I was told by a Chinese Red Cross worker.

I saw a very ingenious system of machine gun defense in which the grave mounds with which the country is dotted were used for gun emplacements. The works were invisible from the air and nearly so from the ground. The man I talked with said they did

not fear the aerial bombing, because the Japanese could not hit them.

My opinion with respect to the situation was that the Japanese, while awaiting reinforcements from Japan, were consolidating the rather slight gains in ground they had made and were preparing to attack with the intention of smashing the left of the Chinese and driving them to the southwest. Their reinforcements of a division were expected to arrive at Shanghai in a few days.

The 19th Chinese Army had also been reinforced so that the Chinese then had a force estimated at nearly 60,000 as opposed to the Japanese total of 20,000. It was clear that the Japanese were much in need of their expected reinforcements.

I understand that they were somewhat surprised when they attacked what they thought was the Chinese left, to find other Chinese troops still further to the north and on their own flank. The forts at Woosung were, when I left, still held by a few Chinese infantry, and were in the right rear of the Japanese. I thought I could see Chinese infantry infiltrating towards the Japanese right rear as we passed Woosung going out, and the forts were then under bombardment.

I did not have the opportunity to observe the use of tanks by the Japanese. There are quite a few canals, but otherwise the ground is suitable. The use of gas by the Japanese would have done the trick, as the Chinese have no protection against it. I was told that the Japanese were getting from five to ten thousand gas masks. This would indicate that they intended to use gas. Probably they were holding its use in reserve as an extreme measure.

Experience here gives recent confirmation to our conclusions that tenacious infantry cannot be shot out of a position.

Courtesy of *The New York National Guardsman*

A Provisional Intelligence Section

By Major Eustis L. Hubbard, Unit Instructor, 308th Cavalry

IN February, 1932, when the newspapers and magazines were filled with accounts of the fighting at Shanghai, a number of Reserve Officers in Pittsburgh who were interested, organized a provisional G-2 section to follow events in China and Manchuria, and to take advantage of what appeared to be a splendid opportunity for the S-2's of the various reserve units to get some practice in the duties they must perform if called to active duty.

In the conventional problem on combat intelligence the student must, before he can arrive at a logical solution, "Think himself into the situation," as the saying is. In this exercise the participants were furnished daily with accounts of actual fighting, at the other side of the world it is true, but made vivid with actual photographs from the scene of action, and their interest was intensified by the presence in the combat area of our own infantry and marines. We even knew accurately where our own troops were stationed and were able to show their location on the map.

Major W. A. Kimble, Infantry Reserve, and Colonel Samuel J. Taylor, Infantry Reserve, were active in promoting interest in the project, and Major Kimble was appointed acting G-2, 99th Division.

A roster of all available interested officers was prepared, which showed the name, organization, address, and telephone number of each, as well as the date and hour on which his business would permit him to come to 310 Westinghouse Building to take his turn at preparing a daily report. If for business reasons any officer who was detailed was unable to be present, he called Major Kimble, who from the roster selected a substitute and made the necessary adjustments, also by telephone. This system proved very flexible, even when there were as many as three substitutions in a single day.

When there were enough officers present, as there usually were, some prepared the work sheet and its resumé, while others prepared the daily overlay, to accompany the report, which in its final form was made out by the officer detailed to do so.

To the adjusted roster were added from time to time other names as additional officers became interested.

Each day, two or more officers assembled at headquarters, including at least one who had had some experience, and those who were to prepare the current report. At first a regular army instuctor assisted and coordinated the work; although later the Reserve Officers themselves took over the section and ran it.

From newspaper sources wall maps were prepared to which data were added after they had been evaluated by comparison of various news flashes, references, etc., available at the Carnegie Library and elsewhere.

The preparation of the situation map of the Shanghai area presented some interesting problems in map reading. Names of villages mentioned in dispatches were spelled in a variety of ways, while the location of important points such as Kiangwan, Tazang, Kiating and Liu-Ho had to be carefully checked from all available sources and transferred from maps and sketches with varying scales or with no scale to the situation map.

In order to avoid mistakes data were first entered on an overlay and finally transferred to the master map. Newspaper reproductions of oblique aerial photographs as well as sketches were useful, but here again the scales were distorted and it was necessary to adjust them from several directions.

Frequent reference to TR 190-10, (conventional signs) was necessitated, while in endeavoring to arrive at the probable organization and equipment of the opposing forces, our own C. & G. S.-S. Tables of Organization proved useful. Few of the officers who prepared the reports departed without a more definite knowledge of the organization of our own Infantry Division, road spaces, and computation of time and space factors, than they had formerly possessed. The confusing nature of the newspaper accounts was for the purpose of instruction of actual value, since the necessity for careful evaluation of information and for careful confirmation of all data became apparent at once.

From the C. & G. S. S. pamphlet, "A Study of Combat Intelligence," the form for the G-2 Journal was prepared and mimeographed, so that newspaper clippings could be pasted in the column, "Incidents, Messages, Orders, etc.." A copy of this pamphlet was pinned to the map where it could be consulted when needed. Each participant in the exercise, before his turn came to prepare the report, secured a number of the forms for the journal and entered his clippings at home, the night before his report was due. From this journal he then prepared his work sheet, summarizing each paragraph in a resumé. Bringing his journal and work sheet to headquarters with him, usually during the lunch hour of the day on which he was detailed, he then prepared his formal report and an overlay showing the situation to date. A copy of the current report signed by its author was pinned to the map where it could be consulted by anyone who desired to do so, while pictures and extra clippings were pasted in a big scrap book which Colonel Taylor provided.

Particular emphasis was placed by the instructor upon the work sheet resumé, upon the evaluation of information, the confirmation of identifications, and the location of the opposing units, with the result that in many cases the forecast under "Probable intentions" was surprisingly accurate and confirmed by later events.

Brigadier General Edward Settle Godfrey

Born at Kalida, Putnam County, Ohio, October 9, 1843

Died at Cookstown, N. J., April 1, 1932

A grand cavalryman of the old school has passed on. Seldom, indeed, has the career of a typically military personality been so intimately identified with so many notable events as that of General Godfrey. His service spanned that period of our country's relatively most rapid and really phenomenal agrarian development, by and during which the wonderful West emerged from lawlessness. That greatest of all American evolutions was truly an ideally staged empire drama of adventure, of privation, of encounter, of conquest, and of settlement.

He therefore, was necessarily an actor in the popularly outstanding chapters of American history that treat of the early land lure and of the later gold and silver lures; of exploits of noted scouts; of achievements of the pony express; of thrills of the buffalo chase; of the give and take of outlawry and ruthless reprisal; of adventures and sacrifices of the overland coaches; of transcontinental railway victories over savage and beast and stubborn vasts of virgin domain. These chapters were of a period that brought forth whatever of the real man all its characters had. And, midst dangers both many and great, General Godfrey aided in running into and through all those chapters the fadeless line of Army blue.

And so it was that, in line of duty and by circumstances, he figured in some quite exceptional events, both of professional importance and of historic consequence; he contacted every kind of plains and mountain Indian this country knows; he was in forty Indian fights before he was ten years in the saddle; he participated in three of the greatest Indian campaigns of later history and was in their respective severest engagements. The first was at Washita River, Indian Territory, in 1868. The foe were Cheyennes, Arapahoes and Kiowas, led respectively by Chiefs Black Kettle, Little Raven and Satanta.

The second campaign referred to culminated at Little Big Horn River, Montana, when the gallant General George A. Custer and 265 officers and men of the fearless and feared Seventh Cavalry were victims of Chief Gall and his swarming Sioux. General (then First Lieutenant) Godfrey was in Major Benteen's command, was in the party first on the battle-field and first personally examined the slain commander, who had been shot in head and heart, but not mutilated in any way. During the long survival of that battle, he was frequently called on or referred to for related opinion, version or judgment, both by individuals and by the War Department, all of which entailed a large, though willingly borne, burden of correspondence.

The third battle was at Bear Paw Mountains, Montana, in 1877, when wily Chief Joseph and his disciplined Nez Perces were defeated and captured after a 300-mile pursuit and a six-day siege. Captain Godfrey received the brevet of Major and was awarded the Congressional Medal of Honor "for most distinguished gallantry in action against hostile Nez Perces Indians at Bear Paw Mountains, Montana, September 30th, 1877, in leading his command into action, where he was severely wounded." His white horse was killed under him, and he was badly injured by the resulting fall. But he was assisted to another mount, rejoined the dismounted troops and led them until very seriously shot. Both times he saw the Indian kneel, aim and fire.

Upon his own request, he was relieved from a Board on Drill Regulations in order to join his troop in the field against hostile Sioux in the Pine Ridge Campaign, engaging in the actions at Wounded Knee and Drexel Mission, Dakota, December 29-30, 1890.

When promoted Lieutenant Colonel, 12th Cavalry, in March, 1901, he had nearly thirty-four years of service in the 7th Cavalry. He had joined that regiment upon graduation from the Military Academy in 1867 and, consequently, very soon after the regiment's organization in 1866.

He was instructor in cavalry tactics at the Military Academy from 1879 to 1883.

During September and October, 1897, he was in command of troops from Forts Apache, Arizona, and Wingate, New Mexico, to arrest Zuni Indians who in performance of tribal ceremonies had committed murder. The objective was bloodlessly attained by boldness. Despite warnings, he went alone on foot to the village, impressed his views upon the head of the tribe and returned to camp to await developments. And that procedure was wholly vindicated the next day, when those wanted were delivered at the camp.

He was in command at Fort Duchesne, Utah, from April to October, 1898. Thereafter, he was stationed successively at Huntsville, Alabama; Macon, Georgia; Havana, Pinar del Rio, and Columbia Barracks, Cuba, Fort Sam Houston, Texas; Legaspi, San Pablo, and Iloilo, P. I.; Fort Walla Walla, Wash.

He commanded the Department of the Columbia in May and June, 1904, commanded the First Brigade, Maneuver Camp, American Lake, Washington, July, 1904, and was at Fort Riley, Kansas, commanding regiment, post and School of Application for Cavalry until January, 1907. On the last date, he was promoted Brigadier General. He then commanded the Department of the Missouri until retirement for age.

CALVIN P. GODFREY

Military Publications in the Mexican Army

By First Lieutenant C. C. Clendenen, Cavalry

THE publication, under government auspices, of no fewer than three military journals in Mexico is evidence of the keen desire of the Mexican officer to advance himself professionally and to bring the Mexican Army to the highest state of efficiency possible. The three, taken together, are designed to appeal to a wide circle of readers, from the highest senior officers to the newest recruit, and they are replete with material calculated to broaden the professional outlook of the Mexican Army.

Probably the most important of the three magazines is *La Revista del Ejército y de la Marina*, the official organ of the Ministry of War and Marine. It is the medium by which orders and proclamations to the service at large are published and it is the newspaper in which units of the army and navy may exchange items of interest. We are pleased to note, for example, that both the 12th and 30th Regiments of Cavalry, stationed respectively in Michoacán and Guerrero, are enthusiastically playing polo, while the former regiment has a baseball team of which it is quite proud.

La Revista del Ejército y de la Marina includes a section devoted to each arm of the service, a section of articles of general interest and a historical section. A glance at any issue should convince the American reader that Mexican military history contains a wealth of material which would well repay a little study. The reader cannot fail to be impressed by the number of articles translated from the French. In common with the armies of all Latin American countries, the Mexican Army seems to be more strongly influenced by French military thought and doctrine than by that of any other nation.

Recent issues of *La Revista del Ejército y de la Marina*, devote a considerable amount of space to our own experiments in mechanization. The September, 1931, issue contains a translation of an article which appeared in the INFANTRY JOURNAL of the Fort Eustis maneuvers, while the October issue contains a full translation of a press account of the same maneuver.

In the November-December issue, General Cristobal Rodriguez, the Director of the magazine, writes an editorial upon "The Revolutionary Army and the Progress of Our Country." General Rodriguez holds the view that not merely did the Army assure the success of the revolutionary ideals in battle but that the Army is at present an important factor in furthering the social and economic aims of the Government—a view which seems to be official in Mexico.

Consequently, the present day Mexican Army has a twofold mission; first, to prepare itself for battle against possible enemies of Mexico; second, to act as a school for numbers of people who are out of the reach of a more conventional educational system.

General Rodriguez touches upon the progress made in recent years in furtherance of the first of these missions. He believes that the present day Mexican Army is the most efficient the Republic has ever possessed. A Technical Commission, under the direction of General Salvador S. Sánchez, has produced various manuals of instruction, which together formulate a common doctrine of war for the entire Army.

Simultaneously with this, the Army has maintained over an hundred "Escuelas de Tropa," the function of which is the instruction of the rank and file of the Army. Throughout Mexico, the Army has been engaged in the construction and operation of schools, gymnasiums and public gardens.

The second of the Mexican military magazines is *El Intendente*, the official organ of the Department of Administration (Supply) and Accounts of the War Ministry. Its mission is to educate the army in the importance, organization, functions, and operation of the Administrative Department. The present government in Mexico is fully awake to the necessity of a smoothly working system of administration and supply in its armies. The lack of such a system in the past has been one of the greatest weaknesses of Mexican forces in the field—a weakness which the present régime is determined to cure.

In the third of the Mexican official military magazines, *El Soldado*, the Army expresses itself as an educational force in the social regeneration of the nation. The present Mexican government realizes that in its army it has a medium by which it can reach persons who cannot be reached by more orthodox schools, that the discharged soldier, returning to his home village can be a great force for either good or evil in the nation.

In furtherance of the idea that the Mexican Army must be an educational force in the nation, *El Soldado* contains numerous inspirational articles and numerous anecdotes of the heroes of Mexican history. Each issue stresses the necessity of the individual soldier improving himself by study and thought. In addition, every issue contains material of direct benefit in the improvement of the soldier's practical military knowledge. For example, the March, 1931, issue includes an illustrated article on the determination of the horse's age, while in another issue is a very clear and complete plate showing the nomenclature of the parts of the horse's hoof.

El Soldado is also the medium in which the soldier is encouraged to express himself, as the officer expresses himself in the pages of *La Revista del Ejército y de la Marina*. Numerous articles, verses and discussions by enlisted men bear evidence that the Mexican soldier takes a keen interest in the efforts of his government to improve his lot.

NOTES FROM THE CHIEF OF CAVALRY

The Leadership Test for Small Cavalry Units, 1931

THE Leadership Test for small cavalry units for 1931 was held at Fort Riley, Kansas, during the week beginning October 26th, and was won by a platoon of Troop E, 13th Cavalry, led by 1st Lieutenant Paul G. Kendall. Other platoons competing were from the 2nd Cavalry and the 14th Cavalry.

The division of the test into two phases; viz. an individual phase and a leadership phase, has proven more satisfactory in the past than any other scheme which could be devised and was continued in the 1931 test.

Each platoon was tested alone, but all took identical tests. Each was accompanied by an umpire throughout the leadership phase. Special umpires at each "control point" judged the efficiency of the platoons in the combat phase which took place at that point. At various points situations required mounted combat, reconnaissance of a village, special reconnaissance of a railroad, breaking camp during hours of darkness and night marching, and dismounted combat with ball ammunition.

The individual phase was given a weight one-fourth that of the leadership phase. In the leadership phase particular stress was laid on tactics throughout. The dismounted combat gave an excellent opportunity to judge the tactical ability and leadership of platoon and squad leaders and the *combat efficiency* of the platoon as a whole. The greatest weight was very properly placed upon the fire effect of the platoon as judged by the number of targets hit and the total number of hits.

Individual Phase

This phase was held on the first day of the test. The mounted course for the platoon leader and the troopers individually was over five miles, at 12 miles an hour, over natural and artificial obstacles of various sorts. Distributed along the course at unexpected points were seven pistol targets and six saber heads. At the end of the course the platoon leaders were required to run about one and one-quarter miles dismounted cross country.

Leadership Phase

This phase involved a march of 67 miles in 29 hours and varied tactical situations under simulated war conditions. Full field equipment, including ammunition was carried.

Situations at Control Points

a. Initiation of the March. A warning order to the effect that his platoon would march at 7:00 a. m. of a certain date on a reconnaissance mission was given each platoon leader at 9:00 p. m. on the day preceding his departure. At 6:30 a. m., the following day, at the troop picket line, the platoon commander was given his orders and maps.

The platoons were scored by the same umpire on their marching, adjustment of equipment, security, and orders.

b. Just before leaving the reservation the platoon was presented with a situation which would require mounted combat. Two rifle squads represented the enemy. Although the scheme of maneuver was slightly different in the various cases, each platoon handled the situation satisfactorily, with decision, good leadership, and proper dissemination of information secured.

c. About two miles south of Riley Center the platoon was met by two special umpires who judged the platoon on its reconnaissance of Riley Center, its marching and the watering of animals.

d. Several villages were reconnoitered en route, but, as it was not practicable to furnish a special umpire, no scoring was done. Upon completion of reconnaissance, the platoon leader was given a message by the umpire to the effect that an armored car platoon would take over the reconnaissance mission and that the platoon was to move into concealed bivouac and await further orders.

e. Halt for the Night. Three camp sites were available, a poor one too close to the road, another a sort of picnic grove and a third which offered fine concealment and security. No platoon selected the poor camp site. One went directly to the camp site with good security, and two hit upon the solution that the Board and special umpires felt was the best; to go into the grove, care for animals, cook supper, and then after dark move to the other bivouac. During the night the security of the camp was tested.

f. At 3:30 a. m. the platoons were ordered to clear camp at 5:00 a. m. and to arrive at Milford Gate at 10:00 a. m. This required breaking camp and marching in the dark for about one hour.

g. All platoons arrived on time at Milford Gate, where they were met by a special umpire for dismounted combat. This test was considered important and was purposely made difficult. The ground was rough, and the targets, except the first group, were indistinct.

The leadership and marksmanship of the winning platoon were particularly good in this problem. The day was quite cloudy and dark, and the targets of the third group were hardly visible with field glasses. This platoon hit nineteen of the twenty targets.

Later the platoon was ordered to cover a withdrawal.

h. Upon return to Fort Riley, the horses were inspected and scored by the veterinary umpire.

The test was very successfully accomplished and demonstrated once more the value of this sort of training.

Professional Notes and Discussion

Why Is Cavalry Still Necessary?*

By Lieut. Gen. G. Brandt, Retired, Formerly Chief of Cavalry, German Army

BEFORE replying to the question as to whether cavalry will in modern armies still be employed, there must first be explained what modern cavalry looks like, what it does and what can be required of it.

The cavalry of the period preceding the Great War, armed only with carbines and lances, has disappeared. Its place has been taken by a mounted machine gun organization equipped with all sorts of light and heavy firearms, just as infantry. Fire combat is its main method of fighting.

What has caused all countries to reorganize their cavalry in this manner? The realization that the great mobility of cavalry alone, if not combined with a greater fighting power, is useless. The final purpose of every movement is combat. Of what use is the most perfect and the swiftest ride, if cavalry, owing to lack of fighting power, is not able to attain the main objective, success in battle? While, before the World War, the fire power of a cavalry regiment was about equal to that of two infantry companies, now it is equal to that of one infantry battalion. In combination with its mobility a cavalry regiment is even superior to a battalion, and there must be taken into account that a battalion comprises three rifle companies, whereas a cavalry regiment has four field squadrons. In the appraisement of cavalry as against infantry a great change has occurred owing to this fact.

As with other arms, so also with cavalry, a new enemy has appeared on the scene in the shape of the armored car, as long as, owing to a lack of proper understanding, no use of it is made also by cavalry. Modern cavalry without armored cars is nowadays unthinkable. However, it is not the purpose of this article to investigate to what extent cavalry should be provided with motorized armored cars.

Airmen and armored cars have relieved cavalry of distant reconnaissance. But when it is necessary to explore a terrain lying closer and to comb it finer, mounted reconnaissance cannot be dispensed with.

All countries are holding the same view, namely, that the bulk of the cavalry should be kept together in independent, mobile formations, and that infantry divisions should be given only so much cavalry as they absolutely need for their purposes. The standard of assignment of cavalry to infantry divisions oscillates between one and three squadrons reinforced by bicyclists, heavy machine guns and armored cars. The main mission of this cavalry consists in reconnaissance work and security service within the zone of its infantry division. Thus far no country has seen fit to renounce assignment of cavalry to infantry divisions. Even the expected perfection of a light armored reconnaissance car will hardly change anything in this matter. The armored car, in spite of its many and big advantages, will in certain points always remain an opportunity weapon, which will be unable to overcome the numerous terrain difficulties in the same manner as a horseman. It cannot be used for night reconnaissance, as the noise of its motor betrays it.

Independent army cavalry in the hands of the higher commanders constitutes a very mobile, hard hitting body of troops used mostly for tasks where the mobility of infantry is not adequate.

These tasks may require an attack or a defense. If it is a purely defensive problem, then the army cavalry would not be used, as the task in question could be performed also by infantry in automobiles or by bicyclists. They have a great marching speed, but are confined to roads, and in battle they possess the mobility of infantry, which would suffice for defense. But for a delaying action mobility would not suffice. The drawback of their inability to secure themselves independently on the march to a battle can be put up with in an emergency, if they are to be employed only where the important thing is to block quickly a hole and to prevent the enemy from breaking through a line.

For tasks taking them far from their own army units in connection with a distant reconnaissance or security service, and also for attack, they can be used only jointly with army cavalry. The main burden will have to be assumed in this connection by the army cavalry, while the bicyclists would constitute a valuable reinforcement of its fire power. For such tasks army cavalry is indispensable.

The question whether armored car units will later replace army cavalry, must remain for the present unanswered. Up to this time no country has ventured to introduce purely armored car organizations in place of army cavalry. There are enough reasons for this hesitation. The armored car will always remain a special vehicle which in case of mobilization cannot be replaced from the stock in trade, nor, like a horse, be bought on a farm. To keep on hand in time of peace a large number of armored cars costs much money. A sudden progress in technical developments and the evolution of a light effective defensive weapon applicable en masse may render the accumulated peace-time stock of armored cars and tanks fit only for old iron. In time of peace there are never sufficient means available for expensive experiments on a big scale. The question whether and to what extent armored car units are to be preferred to army cavalry, will most likely be decided in a war between two modernly armed great nations. This question cannot be answered at a desk with the aid of plans and maps.

Since the independent cavalry cannot be dispensed with in operative tasks in which it, remote from its army, must fight entirely alone, thus mainly in enterprises against the enemy's flanks and rear, then it should be suitably organized for such tasks. It should be formed into efficient fighting units; thus into cavalry divisions and cavalry corps. In the solution of operative problems there enter numerous secondary problems, such as reconnaissance, security, protection of flanks and of the rear, requiring such considerable forces that only a strong formation can meet the requirement. How little, for instance, was accomplished in September of 1914 by the single French cavalry division in the rear of von Kluck's army, and what could have been accomplished if it had been not a single division but a corps of three cavalry divisions?

In no other arm of the service does the error of splitting up a force manifest itself so much as in army cavalry. The nature of a cavalry fight requires the striving for a quick decision brought about by surprise. With the present great repelling power of machine guns a weak adversary suffices to stop an independent cavalry force which does not appear from the start in sufficiently large numbers. For this reason the idea of organizing the army cavalry into independent brigades instead of divisions should be rejected. It tempts to the frittering away of cavalry and disaccustoms the leaders and men to marching and fighting in big formations.

The predilection still noticed now and then for independent cavalry brigades originates in the first place in the desire to have as many independent cavalry units as possible and is a compliment to partisans of independent cavalry (*Heereskavallerie*). However, it is based on purely theoretical considerations not supported by practice and disproved by war experience. One may imagine these cavalry brigades distributed everywhere in order to be able to hurl themselves here and there according to the situation. In this way one becomes from the start dependent upon the enemy's actions and gives up the initiative. If independent cavalry is to be used in this manner, then carrying this idea through to a logical conclusion, one should infer that independent cavalry is not needed at all, since an independent cavalry brigade possesses no attacking power worth speaking of and is mainly suitable for defensive tasks. For a rapid insertion in one place or another for the purpose of the organization of a defense at a desired point, infantry in automobiles and bicyclists are more suitable than independent cavalry.

Should, in an exceptional case, the situation require employment in separate cavalry brigades, then it would be more advantageous temporarily to split up a cavalry division than to improvise for employment in a big enterprise a larger body from single brigades. War experiences should caution us against improvisation of cavalry division staffs and cavalry corps staffs.

As long as the technical science has not created an armored car capable of getting across country like a horseman, cavalry cannot be dispensed with, and, on the other hand, so long as there exists cavalry, it should be trained to operate and fight in big formations.

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* With the permission of the publishers, translated from the issue of January 29, 1932, of "Deutsche Wehr," German military and defense publication, Berlin W 35, Potsdamerstrasse, 32 a.

Reflections on the Tactical Rôle of the Cavalry of the Large Infantry Units

(A propos of an article on "The Cavalry")

INTRODUCED by the following editor's note: "The article on 'The Cavalry' by our contributor, Major Brenet, which appeared in the 'Revue de Cavalerie' of September-October, 1931, has been read with the greatest interest in France and abroad. It has been reproduced in part and commented upon by the British and American Cavalry Journals.* We publish below an article by Major Georges Picot, who, while approving Major Brenet's article in the main, finds a few objections as to details in certain of the ideas expressed. The discussion remains open. N. d. I. R."

Digest of the text:

All the arguments of Major Brenet rest upon four postulates:

1. The division should be covered at 15 kilometers.

2. A regiment of cavalry is necessary and sufficient to assure this security.

3. The commander of an army corps should seek information at a day's march to the front.

4. A group of armored cars will fulfill this mission perfectly.

The division should be covered at 15 kilometers.

Insufficient if the division is to move more than 10 or 12 km.

If, indeed, the covering troops are not installed defensively (hence, immobile) during the whole movement, the security will be doubtful, especially at night, and this latter is grave, for movements at night will be more and more unavoidable.

A regiment of cavalry is necessary and sufficient to assure this security.

Subject to proof.

Simple curtains of fire will arrest its progress eas-

* U. S. CAVALRY JOURNAL, November-December, 1931.

ily, and there will not be time to overcome these resistances before the arrival of the main body.

If the enemy in superior force progresses, the regiment will fight delaying actions, but the zone of security will shrink.

In either case, what becomes of the covering?

The army corps commander should seek information a day's march to the front.

This appears to be correct.

• *A group of armored cars will fulfill this mission.*

Nothing is less certain.

Major Brenet says himself that "armored cars are stopped by the least ditch two or three meters wide • • •, by the least body of water 80 cm. deep, that they are incapable of combing a wood • • • of visiting a village whose approaches are barred. • • •."

Under these conditions, will they succeed in pushing a day's march ahead?

If they do get there, can they stay there, supported by "a squadron of track-laying armored cars and a few motorcyclists" in contact with an enemy who is the least bit active? Certainly not.

Information should be sought at a day's march but will be of no value unless it is *permanent;* that is, emanating from a force strong enough to keep contact along the whole front and to keep the command in touch with the situation hour by hour.

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A center army corps has its first echelon divisions on a front AB on D-1 day.

This army corps is ordered to go forward, in liaison with the corps on its right and left, to a line CD, situated at a day's march in advance of AB.

What would be ideal for the army corps commander? A movement sheltered from enemy terrestrial and aerial observation; that is, *at night.* Thus he will conserve his freedom of maneuver and avoid the deployment of his units.

The line CD (or, better, a line beyond) must be held at the moment when the main body leaves AB. If this movement is made on the night of D-D plus 1, a strong covering force will have been sent on D day to CD, with a quadruple mission:

1. "Inundate" or "rake" the whole zone of action in order to locate the enemy and to determine his "apparent contour."

2. Estimate the strength of enemy resistances met with. Use maneuver if they are not continuous. Dislocate them if they are linear only. Make and preserve contact if they are solid and deep.

3. Occupy and hold the objective assigned until the main body arrives.

4. Fight a delaying action if the enemy advances in force.

The covering force to fulfill its mission should have a strong proportion of horse cavalry and armored cars, to "inundate" the zone of action and to fight a delaying action at need; of infantry, tanks and artillery, to overcome continuous resistance and to hold the objective during the night.

Suggested as the composition of such a force: a cavalry brigade of two regiments of horse cavalry and of two or three armored car squadrons, a battalion of infantry (portée), a company of tanks, one or two groups of portée artillery.

At the end of the day, the objective once attained, or the front fixed, supplementary battalions, brought in trucks, would relieve the cavalry and would assume the defense of the position during the night. *(Editor's Note.* French cavalry is not heavily armed and apparently is not regarded as self-supporting at night. In the World War, part of the wear on horse flesh was chargeable to the nightly retirement behind infantry outposts and the morning march to get out beyond these outposts again.)

The maneuver which we have outlined would restore to the advance guard its security role, which the progress in armament and the creation of new engines have caused it to lose.

It is paradoxical that the advance guard operated in 1914 at the same distance as in 1870, although rapid fire cannon and the machine gun had made their appearance in the meantime.

It is more paradoxical still that the birth and the development of aviation and of mechanization have not had more influence on our pre-war conceptions: the advance guard still operates today at short distances, as in 1914, almost as in 1870.

The method of advance of our first echelon divisions makes one think of the blind that are seen in the streets, advancing slowly with short steps, striking with the ends of their canes the ground on which they are going to step, tottering continuously and ceaselessly exposed to being upset or crushed by a passerby whose approach they could not have suspected.

If the present methods are followed, we shall have to be resigned to all the drawbacks and dangers that are inherent in them: precarious security, impossibility of dissimulating movements, premature deployment, haphazard engagement, and mixing of units, fatigue and greater losses, great expenditure of ammunition, etc.

The alternative is for the advance guard to operate at a day's march with forces sufficient to contain the enemy; then there will be complete freedom of maneuver.

The Army would regulate the general conditions of the movement by prescribing the lines to be attained by the advance guards and the main bodies.

The army corps would maneuver in two echelons: an *advance guard,* the reinforced cavalry brigade whose action would permit the corps commander to plan his maneuver intelligently; a *main body* made up of the infantry divisions. The blind man would then recover his sight. He would hold two trump-cards, space and time.

The cavalry has a preponderant role in these preliminaries to offensive combat.

During the battle, the cavalry brigades would remain in reserve at the disposition either of the corps commander or of the commander of the army cavalry.

Each army would thus have at its disposal a provisional cavalry division of a variable number of brigades, capable of covering a flank, of stopping a gap, of participating in a flanking movement. The important rôle played by the cavalry divisions in the period of mobilization (covering of the *frontier*) requires cavalry brigades to be organized into divisions in time of peace, and up to the completion of the concentration.

After a successful battle, the cavalry brigades of army corps would attend to exploitation and pursuit. Their action would certainly be more vigorous than that of our heterogeneous *reconnaissance groups.*

The greater part of the war missions now assigned to cavalry divisions would be carried out by the provisional divisions or by the corps brigades. Only the missions at a very great distance could not be assumed by them, but we are here of Major Brenet's opinion: the time is past when the distant missions could be entrusted to horse divisions or even to mixed divisions: mechanized units are necessary.

The Diesel Engine Must Come to the Army

By 1st Lieutenant William P. Withers, Cavalry

THE modernization of armies follows the age-old principles of warfare, unchanged in fundamentals but radically different in application. Modern writers stress the lessons of the World War and preach vehemently their *doctrines.* All agree, however, as to the importance of the increased power of the machine gun and of its adaptation to military vehicles. Mechanization is absorbing the attention of the great powers of the world, and in this field the Diesel engine is destined to come to the front as the carrier of groups armed with machine guns and armored against them.

During the last war, mechanized warfare was not sufficiently developed to furnish definite solutions to our military problems of *today.* There is considerable uncertainty concerning the efficacy of this new type of warfare. In motorization of transport, however, all of the armies engaged in the World War had ample experience, and the lessons learned have been utilized to advantage. The progress in design and manufacture, as well as in tactical use, of transport vehicles is well-defined and gratifying.

Although the tactical exploitation of mechanization presents problems widely divergent from those of motor transport, or motorization, the experience gained during the war is not to be lost. Too many officers now in the Army recall the clogged roads and crossroads, the abandoned vehicles, the unkept rendezvous, the unfulfilled missions, due to the unsatisfactory handling of transportation. The causes of these fiascoes are various, some unavoidable, some due to lack of training, but many to the vehicles themselves as furnished.

Without attempting to classify them according to importance, I will point out a few considerations for the successful use of mechanically propelled vehicles:

The distance which a vehicle may travel without refilling its tank;

The safety of the crew of such a vehicle during movement;

The safety of the crew under battle conditions;

Hazard to persons engaged in *handling* fuel for vehicles;

Reliability of power plant, especially in starting engine.

In addition to these, there is the fairly new problem of shielding power plants to preclude interference with radio.

These principles which concern the successful use of mechanized units are self-identifying to laymen. Technical discussion has no place in this article, and later I hope to follow up some of the technical problems with discussion from the military point of view. Let us now consider the matter of the distance which a vehicle may travel on one tankful of fuel. It is possible of course to put automotive equipment on a tank car and propell it across the country. Likewise, a vehicle may be designed with such space economy that a very small tank, say a twenty-gallon tank, might be considered necessary. No one can say today just how far we will want an armoured car or a tank to go without having to be serviced with fuel.

Fuel requirements will vary with types of vehicle and with missions. No one can deny, though, that, if we achieve a radius of action three or four times as great as that of any vehicle we now have, *we have in our grasp a means of combating the increased firepower of the machine gun*—with which to use to multiple advantage that same increased firepower for our own purposes.

If gasoline continues in our service as a fuel for enclosed combat vehicles, the day will come when we shall have to pull blackened bodies from the twisted ruins of a tank—when we *shall see* crews of vehicles hesitate to enter them with these memories in their minds. Fire in such a case is caused by two things, the inflammability of gasoline and the position of the ignition system, where faulty care or accident is bound to produce fire. Fortunately, we do not have to submit to such danger. We have modern power plants in which the fire hazard has been entirely eliminated.

Even if we eliminate fire hazard in the vehicle, we still have to consider the safety of *those who are* engaged in handling the fuel from its source to the *battle-front. The pilot returning* from a flight over enemy lines gleefully boasts of the destruction of a gasoline dump, for he well knows the consternation such a loss and its accompanying danger strike in the hearts of opposing commanders.

Always, perhaps, shall we have with us the problem of maintenance of both chassis and engine in our com-

bat vehicles. After carefully inspecting his equipment, servicing it, sending it back for second or third echelon repairs, husbanding his resources carefully for attack, what can turn a commander's blood to cold gravy more quickly than seeing his organization crank up for the push-off, only to leave behind several units that just won't start? As long as we have gasoline and spark plugs with us, just so long will a cold morning strike dismay among us.

We need not elaborate on the necessity of radio in combat vehicles. We spend now on individual installations from one hundred to five hundred dollars to suppress the interference caused by the ignition system in the power units of our vehicles. Naturally, when these units are developed, that amount can be cut down. But, as long as we have ignition systems—as long as we have to ignite our fuel with a spark—that long shall we pay tribute to the engine designer and maker. The Diesel engine will eliminate this source of trouble.

Suppose you are in a combat vehicle 150 miles from your base, reconnoitering enemy advance elements. The rough roads have helped to use up your gasoline, have joggled your connections, have tried your patience. Your driver notifies you that a leaky gas line has lowered the fuel supply to the point where more must be obtained at once. You radio your base to tell them to have gasoline brought up, but the loose connections in the ignition system render your voice an unintelligible burble. Likewise the code is garbled. Through the crackling interference you detect your C. O.'s voice demanding repetition. You stop, cut off your engine, and get your message through. You give the order to start but the driver looks at you mournfully, steps out to check his engine. Something is wrong—it won't start. Then comes the noise of approaching vehicles. Your platoon is assembling with news of enemy forces on the way. Perhaps you do get it fixed. Maybe you can hook on another car and be towed in. On the other hand, it might well result in an abandoned vehicle or worse. Who wants to try it?

The point is, as we eliminate one source of our troubles, we progress just so much toward the realization of our goal. We put just so many more vehicles in the jump-off; we save just so many men in the maintenance organizations all the way back to the big bases; we leave just that much more room in the mind of the harassed commanders; we give just so much more confidence to the soldier who sits in the vehicle. We strike just so many more blows against our enemy.

The Diesel engine is a power plant that has just recently been adapted to mobile vehicles. It has been used in power boats for years, but American engineers have outstripped others in their progress toward an automotive Diesel engine.

A Diesel engine will go three to five times farther with the same or heavier load than a similar installation of the gasoline-spark-plug type, and *will do it on the same gallonage or cubical content in the fuel tank.* The radius of action is increased fourfold.

For fuel Diesel engines use oil, the kind of oil used in furnaces, gas plants and ice plants. It is readily obtainable in any city and in many villages where economy requires a Diesel engine in the town lighting plant. Light a match and dip it into the fuel oil. Your *match goes out.* The oil can be *ignited,* if heated first or compressed first, but not by a bullet, or a severe shock or detonation, nor by ordinary fire. With an engine like this in your combat vehicle, what if your car does turn over? The fuel can't ignite. What if your fuel line does leak? Diesel fuel oil carries with it no fire hazard.

Such oil can be stored in a convenient place at the dump, instead of isolating it. The oil might be ignited by a bomb, especially if it contained thermite, but it burns slowly and does not detonate.

Though this fuel does not burn easily, we need not expect trouble in igniting it in the combustion chamber of the engine. While the vehicle requires a generator to charge a battery for lights and starting motor, the engine itself requires no electrical current, no spark, no outside source of heat. By compressing within the cylinder to a point around 500 pounds per square inch, the Diesel engine prepares its fuel for automatic ignition. A Diesel engine of the type developed in this country for automotive use can be easily turned over by the standard starter and bendix assembly. The viscosity of the lubricant or of the fuel offers no obstacle whatever to this practice, and at 20 degrees below zero immediate and certain starting is assured.

My last point is directed to the Communications Officer and to the man who put him where he is—the man who wants the communications to work—to the Commander. We have come to rely on the radio to accomplish this. Now, there is nothing about a Diesel engine which can possibly interfere with the satisfactory operation of a radio set, be it sending or receiving, voice or code.

Every fact I have uncovered points to safer, cheaper, more reliable operation of self-propelled vehicles when they are engined with Diesels. Diesel engines must come to the Army.

The Foreign Military Press

Reviewed by Major Alexander L. P. Johnson, Infantry

BOLIVIA.—*Revista Militar.*—October, 1931.

"Information concerning the armies of South America—Argentina," by Lieut. Col. O. V. L.

The military forces of the Argentine Republic comprise three components: the Army of the Line; the National Guard, and the Territorial Guard. The Army of the Line consists of the active army and its reserves. Service is compulsory. Upon completion of their active service conscripts pass into the reserve and remain in that category until their thirtieth year of age. The National Guard consists of officers, N. C. O.'s of the National Guard and citizens between 30 and 40 years of age. The Territorial Guard comprises officers and N. C. O.'s of the Territorial Guard and citizens between 40 and 45 years of age.

The national domain is divided into five administrative military zones, to each being assigned one division and certain other formations and services. The division commander also functions as zone commander and as such shoulders the responsibilities incidental to mobilization.

The division staff is organized in five sections: I. general staff; II. recruiting and orders; III. supply and administration; IV. medical and veterinary services; V. military justice. The division consists of headquarters and headquarters troop; infantry headquarters and three infantry regiments (each with one accompanying battery of four 75's); one regiment of cavalry; artillery headquarters and one regiment of field artillery (four batteries of 75's and one battery of 105's); one batallion of engineers (pontoniers); ammunition and field trains, and divisional hospital. In addition, there are three independent cavalry brigades, two Alpine detachments and two regiments of Mounted Infantry. The cavalry brigade consists of headquarters and headquarters troop; three regiments of cavalry; one M. G. Squadron; one battalion Horse Artillery (two batteries of 75's) and one detachment of Mounted Engineers (pontoniers). The Alpine detachments consist of headquarters; one regiment of Alpine Chausseurs; one platoon of Alpine Scouts; one battalion mountain artillery, and one company engineers (sappers). The regiment of mounted infantry has 2 battalions (19 officers and 360 men).

The peace strength of the Argentine army is about 4000 officers and 20.000 men. The first levy comprises 150.000 men. The total mobilized man power of Argentina amounts to approximately 700.000 officers and men. Argentina has neither an antiaircraft nor any coast defense system. The infantry armament includes the Argentine Mauser rifle, model 1909; the Colt and Maxim type machine gun and the Argentine Madsen automatic rifle. All these use calibre 7.65 ammunition. The cavalry is armed with the Mauser carbine using infantry ammunition, the lance, sabre or machete. The artillery materiel represents a variety of models, some of rather old type.

The cultural level of officers is high. Professional training is provided by the following institutions: 1. The San Martin Military Academy, founded in 1869, which offers a four year course of instruction to about 1.500 cadets. Graduates assigned to the artillery or engineers are required to pursue a post-graduate course of two years. 2. The infantry, cavalry and artillery schools offering courses extending from 15 days to six months; and 3. the Superior War College, founded in 1900, which offers a three years course in higher staff and command training to about 35-45 officers. In addition to these, there are also a school of military aviation, a signal school, a school for physical training and fencing, as well as a N. C. O. school and a school for musicians.

CANADA.—*Canadian Defense Quarterly,*—January, 1932.

"General Pershing and the Battle of Hamel." by W. B. Kerr.

The author takes issue with the statement in General Pershing's memoirs regarding the use of American troops by the British at Hamel, on July 4, 1918, without the consent of the Commander-in-Chief of the A. E. F., whose comment is quoted along with the details of the incident to the effect that it "showed clearly the disposition of the British to assume control of our units . . ." The author seeks to answer the query: "did the British in the Hamel affair do anything contrary to the will of the Americans involved?" He cites General Sir John Monash's "Australian Victories in France in 1918" (pp. 52-55) to show, that the American 33rd Division had for some weeks been in training with British and Australian contingents, that this fact suggested the idea to General Monash to invite American cooperation, and that he applied to the Fourth Army and secured permission to use 2000 United States troops in the affair. The author believes that General Pershing's own version: "the British requested . . . Read . . . to permit some of the troops . . . to take part," is ambiguous since the word "request" implies an exercise of authority short of command. The situation is, in the author's opinion, clarified by Divisional Adjutant Huidekoper, whose "His-

tory of the 33rd Division" states that "General Rawlinson had asked permission of the Commanding General of the II American Corps to utilize certain American units in an attack which he contemplated making." The author attributes all responsibility for the incident to Major General Read, commander of the II Corps who, knowing the orders he had received from General Pershing, and the latter's attitude towards the use of American troops, nevertheless, believed that he might allow himself some latitude in carrying out instructions. "Accordingly he granted the permission, probably wholeheartedly, and sanctioned the employment of eight companies, 2000 men of the 33rd Division, with the Australian Corps." Upon reconsideration of the matter, the force was reduced to 1000 men and General Monash rearranged his plans accordingly. General Pershing, when informed of the plan, disapproved the same and "advised Read that our troops should not participate." This left General Read in a difficult position, but he decided that "advice" after all "was not imperative, and that he might let the matter stand."

On July 3, General Pershing, then in Paris, saw Field Marshal Haig and later called Read on the telephone giving him "further and positive instructions that our troops should be withdrawn." At the same time Haig communicated with Rawlinson, and Monash was instructed that no American troops were to be used. Preparations for the attack had progressed too far for such sudden changes. Monash protested, Rawlinson explained the situation at British G. H. Q., and as a result Read was informed "that no change could be made without orders from Field Marshal Haig," who, however, "could not be reached." Field Marshal Haig, when informed of the situation, decided to let "everything go on as originally planned" and thereby assumed the responsibility for disregarding Pershing's directions. Nevertheless, the author concludes that Major General Read was primarily responsible for the employment of American troops contrary to General Pershing's wishes by accepting Rawlinson's invitation. Responsibility in the second place, the author believes rests upon the shoulders of the American Commander-in-Chief, because by his "advice" on July 2, "he had permitted Read the option of continuing the Americans in the line of battle." The author believes that there is "no evidence of a disposition to control but every evidence of courtesy and consideration," and that the British acted contrary to General Pershing's wishes only when "forced . . . either to cancel the operations or to use the Americans."

CHILE.—*Memorial del Ejercito de Chile*,—December, 1931.

"Mountain Warfare," by Major Ernesto Salbach.

From a tactical point of view mountains represent a highly specialized theatre of war. Their height and ruggedness, defiles, scarcity of roads and railway communications, dearth of telegraph and telephone lines, frequent storms of considerable intensity and, in certain regions, the presence of snow perpetual or seasonal, abrupt changes of temperature and numerous other conditions tax the endurance of man and beast to the extreme. These regions seriously affect the technique of fire of all arms and they slow up considerably all military operations. Past experiences indicate that the tactics of lowlands are inapplicable to military operations in mountainous regions even though the underlying principles remain the same.

In crossing the Caucasus, Alexander the Great lost 50% of his army in six days. Hannibal, crossing the Alps in 218 B.C. lost 25,000 foot soldiers, 75,000 horsemen and 37 elephants, or 20% of his effective strength while covering a distance of 300 km in 16 days. Francis I crossing the Alps in 1515, lost 47,000 infantry, 2,500 cavalry and 370 guns, while the same feat in 1800, cost Napoleon 40,000 infantry, 3,4 cavalry and 40 guns, covering a distance of 200 km in 14 days. San Martin, Argentine patriot, crossing the Andes in 1817, lost 5,000 men and 16 guns, 1,000 mules and 2,000 horses, covering a distance of 2 km in approximately 13 days. These historic examples have inclined military leaders to the belief that the possession of a mountain frontier or the mountainous character of a country was sufficient protection against invasion, hence a small garrison would suffice for national defense. The World War, however, demonstrated the utter fallacy of this assumption. Moreover, it proved the decisive importance of Alpine troops for mountain warfare.

Winter and mountains, even Alpine regions has ceased to be the obstacles they formerly were to military operations by great masses. Thorough familiarity with the characteristics, handicaps and perils presented by mountainous terrain is essential to success. Far sighted peace-time training will materially reduce the hazards of war. Lack of such familiarity with the mountains, and the lack of suitable organization and training for mountain warfare were responsible for Enver Pasha's disastrous winter campaign in the Caucasus in 1914-1915, which cost the Turks 75,0 men out of an army of 90,000. Similarly the Russian army barely escaped annihilation in the Carpathians during the winter 1914-1915, while the Austro-Hungarian army, accustomed to the mountainous terrain, suffered no particular hardships campaigning at high altitudes in eight to twelve meters of snow. Italy being essentially a mountainous country, has since the beginning of the century sought to train her officers and troops in the tactics of mountain warfare. Italian troops so trained and acclimated rendered excellent services in the Alps, while troops from the south and from coastal regions not so trained suffered terribly. World War experience also indicates that while troops trained for warfare in lowlands and open plains never prove satisfactory in Alpine regions, quite the reverse is true of Alpine troops. Thus, the historic example

of the Alpine regiments of Austria-Hungary. At the outbreak of the war this splendid body of troops was taken to the steppes of Russia where they successfully opposed the Muscovite steam-roller.

At the beginning of the war Germany did not have any Alpine troops. She was compelled, however, to organize such units in course of the conflict. Ordinary troops were given special training in mountain warfare before they were so employed. Whenever conditions compelled omission of such special training, the consequences were invariably disastrous.

Mountain warfare exacts of each individual a firm character, considerable gallantry, self-confidence and will to endure privations, sacrifices and the serverest hardships. The good mountaineer must have a powerful physique and sterling morale that will enable him to subsist and keep going under the most adverse conditions. Mountains reduce considerably the importance of masses, of mere quantity. "Quality becomes paramount."

Considering the mountainous character of Chile, and the historic facts reviewed, the author advocates the organization and training of the bulk of the Chilean army as Alpine troops.

AUSTRIA.—*Oesterreichische Wehrzeitung*,—February 12, 1932.

"American-Japanese Naval Strategy," by Naval Lieut. Hans Sokol, Retired.

Considering the possibilities of a conflict between the United States and Japan, the author points out that even the purely geographical problems involved appear well nigh insoluble. Not even with British support could the United States establish an effective blockade of the Japanese Empire, hence to strike at Japan's economic life is practically out of question. It is obvious, however, that a naval decision is necessary to determine the issues of a war between these powers. This means, of course, the necessity of offensive action. The natural objective of such an offensive would be the most vulnerable or the most accessible point of the enemy's coast, unless indeed the opposing navies meet on the high seas.

A Japanese offensive against the American coast San Francisco or Panama Canal) would be a gamble as long as Hawaii remains in American possession. The distance alone is a factor which, in the absence of suitable naval bases, entails a risk no admiral would care to assume. The most brilliant victory would be barren of results. The situation is more favorable with respect to an American offensive using Honolulu as a base. Even so, it would be a very risky undertaking. Geographically, therefore, the situation is unfavorable for an offensive by either side. It leaves the possibility, however, of raids by single vessels. Thus the Panama Canal might conceivably be the objective of Japanese air raids or other attempts seeking its destruction.

The comparative strength of the Japanese and American navies impose upon the former a defensive, and upon the latter an offensive role. Japanese cruiser raids or war on commerce could hardly inflict serious injury upon America's economic life. It is hardly to be expected that Japanese submarines could successfully emulate the example of the German U-boats. The American naval personnel is technically superior to the Japanese, especially in the field of aviation which does not seem to sit well with the Japanese. The victors of Tsushima may, however, have the advantage of morale and tradition. Nevertheless, the author believes, that it is not unreasonable to assume that the intangible factor of morale likewise restricts Japanese action to "interior lines." The author concludes that "paradoxical though it may seem, a naval war between these two powers would result in a draw," and in the absence of a possibility to carry the war to hostile territory, such conflict is bound to remain one of diplomats.

The picture would materially change were Great Britain to intervene on the one side or the other. Such intervention would make available the necessary bases for naval operations and open the possibilities of land warfare. British help would supply Japan with the means for offensive action, or it would enable the United States to undertake extensive landing operations in Japan or Japanese possessions. In the event of such a conflict, the author states, European public opinion takes an Anglo-American line-up for granted. "That," he adds, "may be true today. The morrow, however, is wrapped in darkness and may bring surprises."

FRANCE.—*Revue des Forces Aeriennes*.—December, 1931.

"Military Aviation in Japan."

Since the arrival in Japan of a French military mission, in 1919, Japanese military aviation has made considerable progress notwithstanding serious casualties. In 1925, the Japanese Air Force was reorganized as an independent arm. At the same time the suppression of four divisions permitted an increase of the Air Force and a modernization of its materiel.

The Japanese Air Force consists at present of eight regiments and one balloon battalion. The organization comprises 11 observation, 11 pursuit and 4 bombardment squadrons with a total of 267, 276 and 41 airplanes respectively. Eleven bombers are equipped for night operations. In addition Japan has 39 training planes. Der Luft-Attache, April, 1931.

GERMANY. — *Artilleristische Rundschau*. — February, 1931.

"Opinions Regarding Antiaircraft Artillery," by First Lieut. Pickert.

The author reviews an article by Major Vauthier, French Army, published in 1928 under the title "Questions d'Artillerie Anti-Aerienne." The object of that essay was to dispel the prevailing notion that there is something very obscure and mysterious about the functioning of antiaircraft artillery. As a matter of fact,

the author states, a few hours of effort will suffice with the average person to acquire a fairly good working knowledge of its technique. The fire of antiaircraft artillery is uninfluenced by terrestrial conditions. Positions of antiaircraft guns must be accessible from highways yet be masked against ground observation. The high rate of speed of the moving target presents the only serious aspect of the problem. Pursuit planes, because of their high speed and irregularity of flight are particularly difficult targets. The high velocity of the antiaircraft projectile offers a partial compensation for this handicap. Even so, in the computation of all firing data we must take into consideration the amount of displacement of the target laterally, vertically or in the direction of the plane of fire during the flight of the projectile. Effort is being made in certain countries, notably France, Great Britain and the United States to increase the effectiveness of antiaircraft guns by means of increased velocity and calibre of the ammunition. The weight of mobile guns definitely limits the possibilities in that direction.

Vauthier insists that antiaircraft guns should possess the mobility of divisional artillery, and that they should use the same ammunition in order to simplify the supply problem. From this opinion the author dissents on the ground that antiaircraft ammunition must of necessity and invariably will differ from that of terrestrial artillery. Medium antiaircraft guns must possess a high operative and a certain amount of tactical mobility. According to Vauthier, the 30-second fuse marks the practical limit of effectiveness for light and medium antiaircraft materiel. Any increase in the time of flight of the projectile impairs the basic hypothesis, that the airplane travels approximately in a straight line, at the same elevation and at a constant rate of speed. Small calibre rapid fire antiaircraft guns and automatic antiaircraft guns are effective at lower elevations only with very high velocity ammunition. This class of guns should possess the mobility of the infantry cannon because of the frequency of their employment in the front line.

Range finding apparatus is of paramount importance to A. A. artillery. France abandoned the two-station system of range finding in favor of the one-station system because of the difficulty of maintaining communications. Success of the A. A. artillery depends upon the range finder and its effective and efficient use. According to Vauthier, the central fire control apparatus is likewise an important part of the equipment. He calls it the brains of the battery for it determines the firing data and transmits the same to the guns in usable form. Each battery should have two complete sets of this equipment, so that one may always be in reserve. Searchlights and listening devices are indispensable for night firing. An efficiently organized wireless communications net is equally vital. Frequently a delay of a few seconds in the transmission of information may have serious consequences. Vauthier also insists upon the provision of battalion fire control equipment to facilitate centralized control of the three batteries at favorable moments.

European opinion differs as to the organic assignment of antiaircraft artillery. Vauthier believes each division should have one organic light A.A. battery of four and one automatic A.A. battery of six pieces. These, in his opinion, will provide complete antiaircraft protection for the division. Others hold that A.A. units should not be assigned organically below the corps. German authorities believe that the division must be capable of independent action, hence it should have organic antiaircraft artillery.

Immediate command over antiaircraft artillery is likewise subject of a lively controversy. Vauthier believes that A.A. artillery should not be placed under the artillery commander or the Air Force Commander as that would tend to relegate the antiaircraft artillery to second place. He advocates a separate Antiaircraft Artillery commander on the corps staff.

The author observes that one of the outstanding tactical problems of today is the antiaircraft protection of a division in route column. Owing to the present state of development of aviation it is impossible to protect the column effectively at every point against aerial attack or observation. The presence of an organic divisional antiaircraft unit would not improve the situation materially. Road and traffic conditions will generally prevent the leapfrogging of antiaircraft units along the route of march unless they be assured an absolute and automatic right of way at all times such as is enjoyed by city fire departments. In any event, it must be regarded as axiomatic that the traditional route columns of great length are altogether things of the past. Vauthier emphasizes the importance of "*concentration et surprise*" as the basic principle in the tactical employment of antiaircraft artillery. Irregular, spasmodic bursts of fire are preferable to sustained action, while the dispersion of antiaircraft artillery will entail failure to even a greater extent than in the use of other arms.

—*Deutsche Wehr*,—January 22. 1932.

"Japanese-American Incidents in Manchuria."

Arrest of an American officer in uniform and the maltreatment of the American vice-consul at Harbin indicate the impossibility of continued denial or ignoring of the existence of an actual state of war. It may be going too far to connect these incidents, caused by subordinates, with the Japanese High Command on the scene, or to consider them as deliberate expressions of Japanese contempt for the United States. Yet one cannot escape the feeling that the United States has lost considerable prestige in the Orient, and that as a result of her possible withdrawal from the Philippines coupled with her avowed pacifistic policy she will continue to lose a great deal more. It is not thought that Japan is pursuing a policy of deliberate provocation, although it seems quite probable that she entertains a low regard for America's indecisive foreign policy which may convey to Japan a sense of security. There still is a wide gulf between diplomatic notes and reference to the Kellog and Nine Power pacts, and energetic action.

GREAT BRITAIN.—*Journal of the Royal United Service Institution*,—November, 1931.

"The International Situation—A European Danger Signal." by Major E. W. Polson Newman, B.A., F.R.G.S.

European nations are grouped in two camps. In the one are those nations which benefited territorially or otherwise as a result of the Great War, and have pledged themselves to a peace based upon the *status quo*. In the other are those nations which lost territorially or otherwise and, therefore, favor a readjustment of conditions. Notwithstanding these basically conflicting policies there is a general policy of international cooperation. It is obvious, however, that European cooperation and the status quo cannot long continue to exist side by side. Sooner or later both groups will have to choose between peace, progress and economic stability obtainable only by a readiness to make national sacrifices if necessary, and inevitable war which is bound to result from their present determination to preserve or redeem at any cost national possessions.

Although the proposed Austro-German Customs Union had the appearance of a purely economic arrangement, it was in fact a significant danger signal. It came as a warning that the status quo created by the treaties of Versailles, St. Germain and Trianon was about to revive the old problem of the balance of power. The present mental state of Europe bodes ill, and nothing short of an imminent danger of another European war is likely to restore her balance of judgment. Much talk about disarmament generally presages a serious crisis, and the present occasion may not be an exception to the rule. Perhaps, the imminent danger of war with all its consequences may have a deterring effect and incline European nations in favor of peace even at the price of certain sacrifices. The contention, that the maintenance of the status quo is an essential safeguard of peace is untenable in the interests of Europe. Enforced peace can only pave the way for future wars. The victors must be prepared to part with certain portions of their gains. Adequate compensation must be provided, however, for reasonable concessions made in an honest attempt to rectify grievances which arose from errors and injustices of the peace settlements.

It is impossible to maintain the relative strength of European nations on the basis of 1918. Adjustment by sensible and straightforward anticipation is preferable to an otherwise inevitable clash of arms. The chief obstacle to such a course lies in the prevailing attempt to seek the impossible, of having everything both ways: cooperation and the status quo. In the words of Mussolini, "the question of the Polish Corridor and that of the Hungarian frontiers are serious problems which Europe has to face today. The conditions imposed upon the Hungarians by the Treaty of Trianon cannot be regarded as justice . . . neither of these questions is easy of solution, but no solution is possible unless an attempt is made to find one."

HUNGARY.—*Magyar Katonai Szemle*,—September, 1931.

"Contemporary Problems of Rapidly Moving Troops." by Major Joseph Németh.

Rapidly moving troops comprise all elements of an army possessing greater mobility than infantry and non-motorized artillery. Without attributing peculiar significance to such group of arms, the author subjects to a searching analysis their special characteristics with a view to determining their proper tactical employment.

World War experience inclined military authorities towards the elimination of cavalry in favor of more up-to-date organizations, such as cyclists, motorized infantry, tanks and armored cars. The author believes that the ineffectiveness of cavalry in the World War was as much due to high commanders who failed to employ that arm properly as the traditional cavalry spirit which looked upon dismounted action with disdain and contempt. After the first flurries of adverse judgment, military authorities gradually came back to a more sensible view as to the usefulness of the cavalry arm. It is now generally conceded that the time has not yet come when we may dispense with the services of the cavalry altogether. It still remains an important factor in reconnaissance. Air Service cannot obtain the detailed information commanders in the field must have. Such missions must necessarily be entrusted to ground troops.

Cyclist units, though capable of greater speed than horsemen are largely confined to roads. As roads become impassable, or where they are totally lacking, cyclists quickly lose whatever advantage they possess over cavalry. The cycle pushed by hand becomes an encumbrance which seriously impedes the soldier's marching speed and reduces his mobility below that of the infantryman. Motorized infantry, unless transported in cross-country trucks, is similarly road-bound. But even under the most favorable circumstances motorized infantry, while en route, is highly vulnerable. Neither can it see nor hear; moreover, it depends for its immediate security upon other elements. Armored cars are similarly handicapped although less vulnerable because of their high speed and protective armor. The cavalry alone is independent of roads and capable of performing the important mission of battle reconnaissance irrespective of conditions of terrain. Similarly in pursuit and retirement the cavalry remains an indispensable arm. To be sure, modern battle conditions have made of the cavalry an arm of opportunity, hence it can accomplish its missions only when properly employed and led. Cavalry training should, therefore, be based upon sound tactical lines. Close order drill is no longer of importance. The German cavalry drill regulations actually eliminated that phase of instruction for units larger than the platoon. All cavalry drill formations and movements must be considerably simplified and harmonized with the infantry drill. Dismounted action needs to be emphasized. March endurance must be cultivated and developed. Cavalry must be taught to take advantage of darkness and fog, and it should strive to attain a high degree of efficiency

in reconnaissance, security and screening operations. Co-operation with motorized infantry, cyclists and artillery should form an important part of cavalry training. Current opinion favors a substantial increase in the fire power of the cavalry, although there is a divergence of opinions as to how that should be accomplished. Some advocate an organic horse artillery component for each regiment, others seem to rely upon an increase in the number of machine guns and automatic rifles. The French cavalry regiment includes an organic armored car company.

The subject of proper cavalry tactics still is highly controversial. Some authorities regard cavalry as mounted infantry and advocate its use as such. Others still believe that cavalry should remain mounted as long as it can accomplish its mission by doing so. Thus, Budeny, cavalry leader of the Soviet Army, adheres to the old cavalry doctrine that the trooper should dismount only in case of absolute necessity. Prevailing opinions in the United States and Soviet Russia agree that cavalry action of the war of the future will be characterized by isolated combats of small units scattered over a wide front. In both countries cavalry training emphasizes equally mounted and dismounted action and includes mounted fire action.

The motor as a means of transportation is an important strategic factor, but it is wholly dependent upon road conditions and the state of development of the motor industry of a given country. Under favorable conditions it confers upon the high command an important advantage. The motor in its tactical aspects, as in the case of tanks and armored cars, raises the important question whether or not it should determine the tactical employment and action of the infantry. There may be situations, especially in operations of mechanized forces, when the motor will exercise such decisive influence. In most cases, however, this will not be so. The seizure of ground, the capture of prisoners and materiel still remain essential elements of the mission of every attack. These are normal functions of the infantry. Tanks can only assist in the execution of these missions. The author prefers a 10-15 ton tank carrying an armor of 25-30 mm thickness and capable of a speed of 15-20 km.p.h. Such a tank, in his opinion, will meet all requirements of open warfare operating either in conjunction with infantry or independently.

Armored cars, though restricted to roads, can be successfully employed on reconnaissance, in the service of security, in pursuit or retreat, and in raids against hostile communications. Their great speed favors the element of surprise in their tactical handling. It must be remembered, however, that they are not capable of sustained action.

In summing up the results and effects of motorization and mechanization, the author concludes that in the war of the future the engine will render valuable assistance but the time has not come when it can take the place of the fighting man.

NETHERLANDS. — *De Militaire Spectator*, — January 1932.

Having rounded out a hundred years of usefulness this ably edited publication appropriately marks the beginning of its second century with a special Jubilee Number dedicated to Her Majesty, the Queen. It contains among others a number of articles suitable to the occasion including congratulatory messages from the highest military authorities of the realm. May we add our felicitations with the best wishes for continued prosperity and success.

SPAIN.—*La Guerra y Su Preparación*,—September-October, 1931.

"The New Military Laws of Soviet Russia," by Lieut. Col. Beigbeder, Spanish Military Attaché in Berlin.

The military laws of Soviet Russia, superseding those of August, 1928, contain the following provisions:

1. Aetive military service is divided into four classes:

a. A certain number of recruits serve two years with units of the active army.

b. The majority of 750,000 men who become available annually for active service, are enrolled in divisions of the Territorial Militia. Their term of service varies from eight to eleven months according to the arm of service to which assigned.

c. The remainder, after the requirements of the active army and the territorial militia have been filled, are assigned to special training cadres organized in each locality. These provide military instruction for one month each winter during five consecutive years.

d. Specialist workers perform their obligatory military service of two years in factories and industrial plants producing war materials.

2. For the training of officer personnel military instruction is compulsory for all students of universities and technical institutes. This training consists of courses of theoretical instruction and a period of practical field training of 3-4 months duration with some military organization. Upon conclusion of this course of instruction all candidates are subjected to an examination and, if successful, receive appointment to the grade of platoon commander.

3. Military service is a privilege reserved to workers and peasants. Those not belonging to these privileged classes must, nevertheless, render some service to the state. Formerly they were obliged to pay a military tax. The new law, however, creates special labor organizations in which those excluded from military eligibility must serve a period of two years. They are employed on public utilities and improvements. In time of war they are to be assigned to the auxiliary services and the service of the rear.

4. The Ossoaviachim organization with a membership of five million conducts military training camps, schools, airdromes, target ranges, centers of equitation etc. for the military training of youths of pre-military age along lines adopted by the fascist militia of Italy

BOOK REVIEWS

FOCH. THE MAN OF ORLEANS. By B. H. Liddell Hart. Little, Brown and Company, 1932. 463 Pages. $4.00.

Captain Liddell Hart's latest work (which is far more than a biography) presents a World War book of high importance, albeit a rather irritating mixture of fact and controversial criticism after the event, with touches of philosophy by way of interpretation. For a student it is of deep interest and value: the account and the student's own knowledge from other material will profitably combine to clarify the tortuous course of the Western Front campaigns and their mysteries. The more casual reader will find it no less interesting and stimulating.

The question is irresistible: *does* Captain Liddell Hart find that any commander of the army of any nation engaged in the war did his job reasonably well? Pétain scores higher than the others. Foch, against the background of the whole conduct of the land warfare in the West, with *glimpses* of the Eastern theatre, is shown inflexible to stubborness at the start, academic, his conceptions of his tasks changing but slowly from the doctrinaire stand of the Ecole Supérieure lecturer and disciple of Clausewitz: and always the incurable and often the superficial opportunist. With other conceptions of these tasks could the Marshal have shortened the war? Yes, if you accept Captain Liddell Hart's views.

Foch's disappointment in the Treaty negotiations and in the Treaty itself, and his relations with Clemenceau, are considered in illuminating detail.

The Commander and the Man are drawn as persons of notably different traits. The theme of Foch's spiritual tie with Jeanne d'Arc, expressed in the title and recurrent in the later chapters, fails of convincing: it is a pretty notion, but tenuous. An Epilogue, stressing the force and the mysticism of his character, seeks to evaluate the influence of his career: the key is found in the book's closing phase—"the suggestion of invincibility which became the fact of victory."

Captain Liddell Hart is rarely over-enthusiastic towards America's part in the war. Thus we learn that the essential contribution of the A. E. F. to events culminating on November 11, 1918, was twenty-four double-size divisions. As for craftsmanship, there is evidence of hurried work, though for the most part the study is readable, vivid, more than excellent. By contrast, a mawkish, labored bit notes "the night of internal crisis" when Foch was born!

There is an index, and a well-selected year-by-year bibliography which includes American and German sources.

DIE MARNE—DEUTSCHLANDS SCHICKSAL? Ein Wort gegen die dramatische Geschichtsauffassung in der militaerischen Literatur. (The Marne—Germany's Fate? A Word against the Dramatic Concept of History in Military Literature.) By Wilhelm Marx. Lieutenant General, German Army, Late Inspector of Artillery. Berlin, E. S. Mittler & Sohn, 1932. pp. 63. Price 40 cents.

As the title and subtitle imply, this is a small work in which General Marx decidedly opposes the concept in the literature of the World War and particularly in the semi-official work of the Reichsarchiv, that the First Marne was lost through faulty leadership of the younger Moltke, and that Schlieffen would have won the war.

Though containing only 60 pages actual text (including a three-page foreword) the pamphlet is so rich in thoughts that no brief review can do it full justice. To a certain extent the brochure is also a strategic study, for which reason it presents a highly interesting addition to the literature of German strategy, irrespective whether one agrees with the author or not.

The little work takes up the dramatic element in military history, the deviation from the Schlieffen plan, the strength of the right wing of the German army on the western front, the errors during the battles, the mission of Lieutenant Colonel Hentsch, the "secondary" reproaches, and concludes with a review and a section devoted to the harmful effects of the dramatic concept in history.

The author maintains that it is foolish to believe that the fate of a large nation depends on one mortal, as exemplified by the widespread notion that Germany lost in Schlieffen the only man who could have won the war. He defends Moltke and Buelow and attempts to prove that Hentsch saved the right wing from a perilous situation.

The right wing was numerically as strong as the smaller number of troops in the field and the strategic situation permitted, and even the transfer of the two corps to the eastern theater of war was a strategic necessity and aided in improving the situation in Poland.

Apart from the technical difficulties of a march and supply, it is scarcely to be assumed that a reserve army following the right wing could have attained the victory, for the secrecy of a great envelopment had been lost through Schlieffen's publication, and indeed was possible only against an inferior enemy. The French and British, however, were capable and would have frustrated the envelopement by timely measures. Even Schlieffen could not have defeated both nations, for both would have fought for years for their existence.

THE ART OF RIDING. By Lt. Col. M. F. McTaggart, D. S. O. Charles Scribner's Sons, New York. Price $3.50.

To those of us who have read Colonel McTaggert's earlier books, the author needs no introduction. In his latest work he has taught us what many so-called horsemen do not know—that there is an *art* in riding. He not only teaches us the principles of horsemanship, but compels the reader to think things out for himself and to apply those rules which he sets forth.

In chapters on *The Seat*, Colonel McTaggert gives as his first rule the correct placing of the rider in the center of the saddle. Balance for horse and rider is the goal towards which all horsemen should strive, and until this is obtained it is useless to attempt more advanced work. Light hands will naturally follow the attainment of a good seat. Every phase of the walk, trot and canter, as well as *mounting* and *dismounting*, is dealt with comprehensively.

The much-discussed "military" or "forward" seat, which the author states should be known as the "balanced" seat, is taken up in chapters on *Jumping*. He describes in detail the positions of horse and rider in taking obstacles in show jumping, hunting and steeplechasing. He emphasizes the fact that best results are obtained by giving the horse complete freedom, the rider having only a "feel of his mouth."

There follows a chapter devoted to the side-saddle and another to children's ponies. There are also interesting discussions of stable management and the common ailments of horses.

Colonel McTaggart emphasizes the importance of schooling, and gives some excellent exercises for properly schooling young horses.

An unusual feature throughout this book is that the author deals with the incorrect methods of riding as well as the correct method, thus bringing clearly to the reader's mind the faults so common to horses and riders, and how to correct them.

Many splendid illustrations greatly enhance the value of this work as a text book.

Colonel McTaggart, in his usual simple but convincing manner, brings out many fine points in horsemanship and horsemastership for the experienced rider as well as the beginner. We would recommend this book as one of the most authoritative ever written on that subject so dear to the hearts of equestrians— the *Art of Riding*.

■ ■ ■ ■

THE PONY EXPRESS. Arthur Chapman. G. P. Putnam's Sons. 1932. $3.50. *Reviewed by 1st Lieut. C. C. Clendenen, 12th Cavalry.*

Most of us have been thrilled, in the days when we conducted bitter campaigns against the Indians and bandits in the vacant lot across the street, by tales of the fearless Pony Express rider, dashing across the plains and through the mountains, changing horses in a breath at the relay station, and finally thundering into the terminal of his run, with his precious package of letters safe and sound. But the very romance of the Pony Express has obscured the vital part it played in linking the two widely separated sections of our country, and few of us have ever given a thought to the careful planning and organization necessary to make the Express a success.

In "The Pony Express", the author, Mr. Chapman traces the development of transcontinental communications in the era following the discovery of gold in California—a development which reached its dramatic climax in April, 1860, when a horseman galloped out from St. Joseph, Missouri with dispatches destined to be delivered in San Francisco only a week later.

Mr. Chapman traces, from authentic sources the controversy between the respective advocates of the northern and southern routes for the delivery of mail to "the Coast". (The Civil War was not far in the distance, and each section wanted to gain control of the western communications for itself.) California suffered from lack of contact with the rest of the Union. At one time the mails were routed through Arizona, while again they were routed through Utah.

This was the situation in 1860, when the well-known freighting firm of Russell, Majors & Waddell conceived the idea of delivering important messages by relays of horsemen. Mr. Chapman gives the reader an idea of the difficulties attendant upon such a project. Relay stations must be established and provisioned, superior horses procured, routes reconnoitered, and last but not least, a corps of riders must be recruited—reliable, adventurous, vigorous, young men, who would be true to their trust regardless of danger or discomfort.

The Pony Express was successful in establishing communication between "the Coast" and "the States", as we all know. For over two years, almost as regular as the clock, riders left St. Joseph and arrived in Sacramento on a weekly schedule. The Pah-Ute War in Nevada claimed some of the riders as victims, but never interrupted the service entirely. Blizzards in the Sierras were disregarded, but to provide the coup de grace, an unfriendly bulldog at a Nebraska station caused the Express to be re-routed in that territory.

Such a project as the Pony Express could not survive without liberal subsidies from the government and the subsidies were never granted. The original friendliness of the public toward the project changed sharply when it was discovered that certain of the company's officials were engaged in somewhat shady relations with government officials, and, finally, the westward advance of the electric telegraph rendered unnecessary the comparatively awkward expedient of communicating by relays of horsemen.

Any work which illustrates the vital part played by the horse in the development of American civilization must necessarily be of interest to horsemen. A few hours spent with "The Pony Express" cannot fail to be both pleasant and profitable to the reader, particularly if the reader is a Cavalryman.

SPORTS

The Modern Pentathlon

ONE of the least known but most gruelling of all competitions on the Olympic calendar is the Modern Pentathlon: an all-round competition introduced to test the skill and endurance of the 20th Century sportsman. The event first appeared in the 5th Olympiad in Stockholm, and is built around the International Olympic Committee's conception of the physical qualifications required by modern successors to the knights of old. As the name implies, you have in the Modern Pentathlon, five separate and distinct events, viz., a cross country ride against time for 5,000 meters, fencing with the dueling sword, target shooting with the dueling pistol, swimming 300 meters—a distance based on the width of the larger European rivers—and winding up with a 4,000-meter cross country run.

The competition lasts five successive days, one to each sport. The winner is determined, as in the ancient Pentathlon, by totalling the relative place of each competitor in each event. Only individual places count, as the Modern Pentathlon is not a team event.

The final elimination tryouts for the 1932 Olympic Games Modern Pentathlon Team were held at West Point, N. Y., on May 11-12-13-14, in the presence of Major General Guy V. Henry, Chief of Cavalry, Chairman, Modern Pentathlon Committee, and the other members of the committee.

Twelve men competed in the tryouts. Of the twelve, three were civilians and nine were officers of the Army. Captain C. R. Johnson, Cavalry, is the officer in charge of training.

The final selection of the team to represent the United States in the Modern Pentathlon event and their standing in the final tryout is:

1. 2nd Lieutenant B. W. Brady, Infantry.
2. 2nd Lieutenant C. J. Mansfield, Cavalry.
3. 1st Lieutenant R. W. Mayo, F. A.

The other competitors were:

2nd Lieutenant H. G. Wilde, Infantry.
1st Lieutenant A. S. Newman, Infantry.
2nd Lieutenant T. J. Sands, F. A.,
2nd Lieutenant D. F. Meyer, A. C.,
2nd Lieutenant J. A. Berry, F. A.,
2nd Lieutenant F. R. Weber, Infantry.
C. B. Smith.
E. M. Rick.
F. H. Merrick.

It is idle to attempt any prophecy as to the possibility of American success in this event. Since its inception in their native Stockholm, the Swedes have always carried off first honors. In all Olympiads, except the last at Amsterdam, the United States has placed one or more men in the first ten. It is already apparent that the American representatives at Los Angeles will be, individually and collectively, the best yet to represent us in this sport.

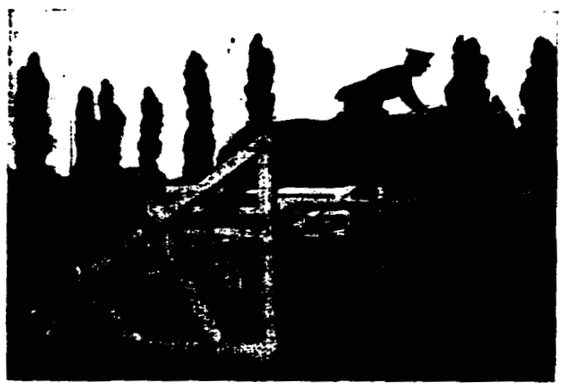
Horse Show Team of the 1st Squadron, 3rd Cav., at New Haven Horse Show

A Horse Show Team representing the First Squadron, Third Cavalry, Fort Ethan Allen, Vermont, Colonel Charles Burnett, Commanding, consisting of three officers, four enlisted men, and thirteen horses, one officer's private mount and twelve government mounts participated in the eighth annual New Haven Horse Show at New Haven, Conn. on May 5th, 6th and 7th.

This team showed in the following type classes: Three Gaited Saddle Horse, Hunter, Jumper, and Military. It entered fifteen events and placed in thirteen for a total of twenty-five places; winning seven first, seven second, seven third and four fourth places.

It is interesting to note that this team competed not only against horses owned by Reserve Officers and National Guard Officers in the military events, but in the jumping classes against some of the finest horse flesh in the east, many of which have won honors in

Lieut. Carl. W. A. Raguse During a Training Session at Fort Rosecrans, San Diego, Calif.



"High Ball", Captain Randolph Russell Up, Winner in Officers' Jumping.

the metropolitan shows. Entries included the famous horse *Cinello*, Champion open jumper at the Madison Square Garden last fall, and winner of the open jumping at the West Point Horse Show this June (this horse was purchased and imported from Italy by Mr. A. Untermeyer); *Golden Eagle*, heavy weight hunter champion and undefeated in his class; Tipperary stables entries to include *Easy Money*, a practically unbeaten touch and out jumper; *High Compression*, a horse owned by Col. W. H. Welch, which has jumped six feet in open competition; jumpers from the famous jumping stables of Mr. Hugh Bancroft of Cohasset, Mass.; winners of the recent Newark Horse Show; *Upperland*, the well known hunter from the stables of Mrs. Harry Frank, Jr.; and hunters and jumpers from the Absorbine stables of Longmeadow, Mass. A total of some ninety exhibitors and two hundred and fifty horses competed in seventy events. In spite of such competition Captain Randolph Russell on the government mount *High Time* won the Scurry, open to all hunters and jumpers; and the open jumping was won by Corporal Wood on the government mount *Come On*.

Among some of the places won by the Squadron Horse Show team, the following caused considerable favorable comment: in the Novice Jumping horses from the Squadron took first, third and fourth place; in the Jumper Open to All, Corporal Wood took first place on the government mount *Come On* (there were forty-eight entries in this class); in the Officers Jumping, Captain Randolph Russell took first and second places on the government mounts *High Ball* and *High Time*; Lieut. R. J. Merrick on his private mount *Ashville* received the red ribbon in the Novice Saddle Horse and the yellow in the Saddle Horse 15.2 and over; in the touch and out sweepstakes, Sergeant Nickerson took third place on *Alligator*; in the Officer's Chargers the Squadron placed first, second and third, Captain Apgar winning the blue on *Lady*; the Scurry Open to All Hunters and Jumpers Captain Randolph Russell took first place on *High Time*; and in the enlisted Men's Jumping the Squadron captured all four places, six of our horses scoring 100%.

The animals were taken by freight. They were on the car twenty hours each way and returned to Fort Ethan Allen in excellent condition. They were placed in the car head and tail with hind shoes removed.

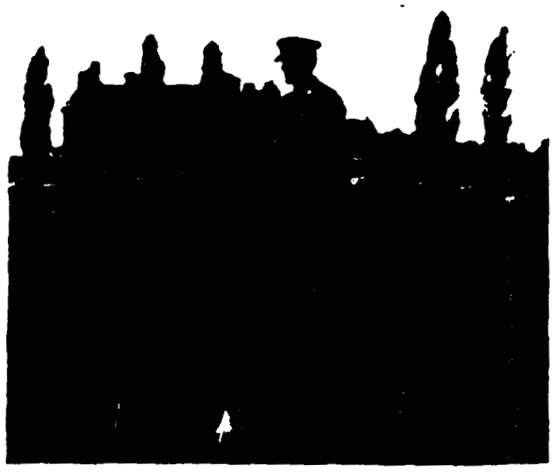
The Commanding Officer Connecticut Cavalry National Guard Regiment, Colonel W. H. Welch, provided excellent stabling for our animals and quarters for the enlisted men.

Mr. Phelps Montgomery, a Major in the Reserve Corps, acted as host to the three officers.

Everything possible was done by the New Haven Horse Show Committee to make the trip a pleasant and successful one.

The following is a summary of places won by the Squadron Horse Show Team.

CLASS	HORSE	RIDER	PLACE	PRIZE
Novice Saddle Horse	*Ashville*	Lt. Merrick	Second	R...
Saddle Horse 15.2 & Over	*Ashville*	Lt. Merrick	Third	R...
Saddle Pair	*Ashville & Joe*	Cpl. Wood & Partner	Third	R...
Officers Chargers	*Lady*	Capt. Apgar	First	C... & ...
	Ashville	Lt. Merrick	Second	R...
	High Ball	Capt. Russell	Third	R...
Best Turned Out—Enlisted Man's Horse	*Come On*	Cpl. Wood	First	C... & $...
	Joe	Sgt. Nickerson	Second	$...
Officers Jumping	*High Ball*	Capt. Russell	First	Br... R...
	High Time	Capt. Russell	Second	R...
Enlisted Man's Jumping	*Alligator*	Sgt. Nickerson	First	$...
	Buck	Pvt. Plantier	Second	$1...
	Peanuts	Pvt. Plantier	Third	$5...
	Jim	Sgt. Nickerson	Fourth	R...
Novice Jumpers	*Come On*	Cpl. Wood	First	$...
	Peanuts	Pvt. Plantier	Third	$1...
	High Time	Capt. Russell	Fourth	R...
Jumper Open to All	*Come On*	Cpl. Wood	First	$5...
Pair of Hunters or Jumpers	*Ashville*	Lt. Merrick	Second	$...
	Peanuts	Pvt. Plantier		
	High Ball	Capt. Russell	Fourth	R...
	High Time	Capt. Apgar		
The Scurry, Hunter or Jumper	*High Time*	Capt. Russell	First	$5...
	Come On	Cpl. Wood	Fourth	R...
Touch & Out Sweepstakes	*Alligator*	Sgt. Nickerson	Third	$5...
Hunt Team	*Buck*	Pvt. Plantier	Sec.	R...
	High Ball	Sgt. Nickerson		
	Come On	Cpl. Wood		
	High Time	Capt. Russell	Third	R...
	Lady	Capt. Apgar		
	Ashville	Lt. Merrick		



"Come On", Corporal Wood Up, Winner of Blue in Novice Jumpers, Jumper Open to All, and Best Turned Out Enlisted Man's Mount.

Organization Activities

The First Dragoons The Black Hawk Regiment

Fort D. A. Russell, Texas

March 3, 1932 was the 99th birthday of the First United States Cavalry. The Regimental Commander designated March 5, 1932, as the date for the celebration of this august occasion when a review, field games, horse show, and a reception were held.

The First Cavalry adopted its title, the Black Hawk Regiment, from its first engagement with the Black Hawk Indians in 1833. Since its organization, it has participated in 60 battles in the Indian, Mexican, Civil, and Spanish Wars, and the Philippine Insurrection. It is the oldest regiment of Cavalry in the Army of the United States.

The First Cavalry Horseshow and Polo Team participated in the Brackettville—Fort Clark Horseshow and Polo Tournament at Fort Clark, Texas from April 13th to 17th, 1932. The team was very successful in its venture and returned enthusiastic over the sportsmanship and hospitality of the gallant Fifth Cavalry.

On April 16, 1932, the postponed exercises for Army Day were held. Eighteen events with some seventy-five prizes were awarded to members of the regiment. Field events, races, squad drills, competitions, and clowns supplied a well-filled morning program.

Early in March the Regimental Commander instituted a nail picking contest for the children of the garrison. Surprising and gratifying results have been obtained thus far exceeding the efficiency of the magnetic nail picker. One youngster has turned in to date over 430 lbs. of nails, about eight times her own weight. The contest closes June 30th and at present competition is keen. Appropriate prizes will be awarded to all who have entered the contest.

On April 18th the 2nd Squadron and Machine Gun Troop with 2nd Pack Train attached left on a ten day practice march, negotiating the difficult passes of Pinto Canyon and Brite's Rimrock. Reconnaissance and marches were made from Candelaria down the Rio Grande to Presidio and return to Fort Russell, via Casa Piedra and Alamito. While at Presidio the 2nd Squadron and attached units held a review for General Escobar Steger, Commandante of the Garrison at Ojinaga, Mexico.

On April 30, 1932, the 1st Squadron held a review for the retirement of Master Sergeant William D. Murphy and the award of the Soldier's Medal to Private John T. Wanat, Finance Department.

On May 5, 1932, a Regimental Review was held for Major Sir Charles Mander, international representative for Rotary International. Sir Charles was made a member of the Order of the Black Hawks by appropriate ceremony following the review. Sir Charles is an enthusiatic horseman and cavalryman, having served with conspicuous gallantry under General Viscount Allenby in Arabia.

In response to the impressive and eloquent speech of Major Lacey, conferring upon Sir Charles Mander, the distinguished honor of being a Knight of the Black Hawks, he said in part, "I have served in the cavalry as a trooper in the ranks and as a leader and as a Squadron Commander in Arabia under the illustrious Cavalry Leader, Viscount Allenby.

"I never thought it would be my honor and pleasure to receive a review from a Regiment of Cavalry and particularly a Regiment so rich in tradition and loyal battle services as this famous organization which has so signally honored me. With utmost candor, permit me to say that I have never witnessed a better exhibition of horsemanship, soldierly bearing and the characteristic dash which is so typical of good cavalry in all countries and at all times."

On Friday, May 6th, the 1st Squadron and attached troops left station for a practice march to Lajitas, Texas, and return. On this march the Squadron conquered successfully the difficult passes of Fresno Canyon and the dry arid reaches in the vicinity of San Jacinto Peak.

On May 27th and 28th, the garrison will be inspected by General Short, commanding the First Cavalry Division, after which time the annual target season begins.

1st Cavalry Division

Fort Bliss, Texas

Troops of the 1st Cavalry Division, under the command of Brigadier General Walter C. Short, took the field, May 9, 1932, to maneuver in the area between the Rio Grande Valley on the west and the Hueco Mountains on the east, and the line Alamogordo-Las Cruces on the north and the International Boundary on the south. This area, about 40 miles in width by 45 miles in length, is part of the country over which "Billy the Kid", the famous outlaw, held sway many years ago.

The following troops participated:

Headquarters, 1st Cavalry Division
Special Troops, 1st Cavalry Division
2nd Cavalry Brigade (Brigade Headquarters Troop and 7th and 8th Cavalry Regiments
1st Battalion, 82nd Field Artillery
Troop A, 1st Armored Car Squadron
1st Medical Squadron
1st Cavalry Division Quartermaster Train
Detachment of airplanes from the 12th Observation Squadron and 3rd Attack Group of the Air Corps.

From May 9th to 15th the 7th Cavalry, reinforced, operated against the 8th Cavalry, reinforced. The period from May 16th to 21st provided for the employment of the 1st Cavalry Division, with the 1st Cavalry Brigade outlined, on a counterreconnaissance mission.

14th Cavalry (Less 1st Squadron)

First Lieut. S. C. Page, 14th Cavalry, has been working a squad of men daily for the tryouts for the Cavalry Rifle Team. These men are all making excellent progress and the competition is very keen.

Polo playing is now well under way and the teams are playing out doors. There are two beautiful polo fields on the main parade at this garrison. It is a real pleasure to be able to play on either of these fields. We are looking forward to a very successful polo season under the able leadership of Captain Glenn S. Finley, 14th Cavalry, aided by the hearty cooperation of the Post Commander, Colonel C. E. Stodter, 14th Cavalry.

On Saturday afternoon, April 30th a tournament baseball game was played between Headquarters Troop, 14th Cavalry and Troop F, 14th Cavalry resulting in a victory for Troop F, by a score of 14 to 5.

A return game between the Columbia University Four and the Post Polo Team was played at Fort Des Moines, May 6, 1932.

The line up was as follows:

Columbia University		*Fort Des Moines, Iowa*	
No. 1	Willoughby	No. 1	Capt. Earnest
No. 2	Reaves	No. 2	Lieut. Wells
No. 3	Bruner	No. 3	Capt. Finley
No. 4	Kizer	No. 4	Col. Stodter

Columbia nosed out the local team in the final chukker by a margin of one goal. Score 8 to 7.

On Sunday afternoon, May 8th a baseball game was played between Machine Gun Troop, 14th Cavalry and a picked team of the 2nd Battalion, 17th Field Artillery. Machine Gun Troop winning by a score of 9 to 1.

Mother's Day was observed at Fort Des Moines with appropriate ceremonies. Outdoor services were conducted by Chaplain C. O. Purdy.

104th Cavalry Notes

Troop A, Clearfield, Penna., won the Chief of the Militia Bureau's Indoor Rifle Team Match for the State of Pennsylvania during the past season. The Clearfield Troop was one of the pioneers in small bore practice in the Regiment, having won the 28th Division Match in 1931.

The annual meeting of the officers of the Regiment was held at the new Military Post of Troop G, Carlisle, April 9 and 10. All officers of the Regiment were present. These annual meetings have become traditional and have for some years formed the background for the formulation of policies of far-reaching importance to the efficiency and welfare of the Regiment.

The second year of the recruit elimination program was carried to a successful conclusion when on April 30th the Regiment was 58 men over-strength. The surplus consisted of personnel whose enlistments were scheduled to expire between May 1 and August 1. All organizations recruited beyond their strength in order to take care of expirations and at the same time make it unnecessary to form recruit detachments during the field training period. The excess personnel in process of transfer to the National Guard Reserve pending the arrival of the dates for expiration of their enlistments.

Examinations are being completed by Troop Specialists throughout the Regiment at the completion of the six months' course of training under the direction of the Regimental Plans and Training Officer, Captain H. E. Thornber. Since individual attention has been given to the Troop Specialist the past two years a notable improvement has been observed.

Regimental Headquarters has offered quarterly prizes for excellence in drill attendance, the prize taking the form of enlarged action photographs taken at the Cavalry School, Fort Riley.

The Harrisburg units of the Pennsylvania National Guard, including Headquarters Troop, Troops I and K, 104th Cavalry; Battery A, 107th Field Artillery; Headquarters Company, 55th Infantry Brigade; and several planes of the 28th Division Observation Squadron, participated in a combined maneuver at the Penn-Harris Airport on Saturday, May 21st, in the presence of over 10,000 spectators. The feature of the afternoon was plane to ground and ground to plane radio communication. The problem was worked out and carried through under the direction of 1st Lieut. C. H. Kenworthy, Regimental Signal Officer. Forces were divided equally and a sham battle was put on for the edification of the crowd, with Battery A supporting the forces defending the airport. Lieutenants Scattergood and Brenner of the 28th Division Observation Squadron did the bulk of the flying, which included reconnaissance, ground strafing, and the picking up of messages.

109th Cavalry, Tenn. N. G.

Nashville, Tennessee

On April 30th the officers of the 109th Cavalry gave Lieutenant Colonel George R. Somerville a farewell dinner at the Andrew Jackson Hotel, Nashville, Tenn. An appreciation in the following terms was presented to him:

Five Years' Indefatigable Service
for the
One Hundred and Ninth Cavalry
and
Loyal efforts in accomplishing for the regiment the following:

Staff organization and training
Designing and improving armories
Increasing Army Extension Courses 2364 per cent
Creating interesting field training programs
Specialists' schools for armory training period
Compiling texts for specialists' schools, armory training
Improved mess management with uniform menus, field training
Non-commissioned officer and specialists' schools, field training.

Henry H. Horton, *Governor*,
State of Tennessee
William C. Boyd, *The Adjutant General*,
State of Tennessee
Henry Dickinson, *Colonel*,
Commanding 109th Cavalry.

111th Cavalry, N. M. N. G.

Santa Fe, N. M.

Captain Roy C. Woodruff, Cavalry, who, since July 15, 1929, has been on duty as Assistant Instructor of the New Mexico National Guard, will be retired on September 30th, 1932, after more than thirty-three years' service.

Upon his retirement Captain Woodruff will engage in the breeding of thoroughbred horses at the Rancho Loma Verde, Coolidge, Arizona.

303d Cavalry

New York City

A farewell dinner was given to Major Harold T. Applington, D. O. L. at the Hotel Breslin, New York City on April 23rd, on the occasion of his transfer to Fort Bliss, having completed a two year attachment to the 303rd Cavalry as Unit Instructor.

The dinner was presided over by Col. A. M. Wolff of the 303rd, with Captain Walter P. Myers acting as toastmaster. At the guests table were:

Major Harold T. Applington, D. O. L., Col. Arthur M. Wolff, C. O. 303rd Cav., Col. William M. Connell, C. of S. 61st Cav. Div., Col. Herbert M. Barry, Retired, Lt. Col. John K. Brown, D. O. L., Major Richard W. Cooksie, D. O. L., Major J. F. Coneybear, 304th Cav., Capt. J. V. McDowell, D. O. L.

There were approximately 60 members and guests present.

The 303rd Cavalry has been most fortunate in its Unit Instructors assigned to it since its inception. Col. G. H. Baird served four years in such a capacity, developing the morale of the regiment to a high degree; he was followed by Major H. T. Applington, who continued this good work.

The Officers had an opportunity to meet their new Unit Instructor, Lt. Col. John K. Brown, who is promised the same interest and cooperation as his predecessors.

305th Cavalry

Philadelphia, Pa

On Saturday April 16th, before a mixed gallery including members of the Regiment, distinguished guests, civil and military—a picked group of sixteen officers gave an exhibition ride and drill, including jumping, to open the annual celebration of our Regimental Day. Upon conclusion of the ride the gathering moved to the banquet hall of the First Troop, Phila., City Cavalry Armory, where ladies of the Regiment served refreshments. Among the distinguished military guests present were: Major General Wm. G. Price, Jr., Commanding General, 28th Division, Penna. National Guard, Colonel George T. Bowman, Cav., U. S. A., Chief of Staff, 62nd Cavalry Division, and Colonel Clarence R. Day, F. A., U. S. A., Chief of Staff, 79th Division.

Commencing on Wednesday evening, April 20th, members of the Regiment started intensive training in preparation for a period of active duty training with the 3rd Cavalry, Regular Army, at Fort Myer, Virginia, this coming summer.

306th Cavalry

Baltimore, Md.

Instruction in equitation for the Reserve personnel in the vicinity of Baltimore has been resumed, and the interest is so great that Fort Hoyle finds it impossible to furnish sufficient mounts for all officers who desire to ride. On some recent rides, rain soaked the officers but failed to dampen their enthusiasm.

Conferences are now held weekly for those officers who have applied for duty as Instructors at the Citizens' Military Training Camp to be held at Fort Myer, in July, 1932. In spite of the fact that it is difficult to carry on this instruction by class room methods, no other method is available for officers living in Baltimore, and the interest displayed by the officers gives promise of efficient preparation for this duty.

306th Cavalry, 2nd Squadron and Machine Gun Troop

Washington, D. C.

Conferences held at this headquarters during March and April have covered the subject of "Combat, Squad, Platoon, Troop and Squadron."

Extension School work has been highly satisfactory. A total of 231 subcourses have been completed to date April 25, 1932.

This Squadron will furnish its quota of officers for duty with the C. M. T. C. Camp at Fort Myer, July 17th to 30th.

At the conference held March 17th, a petition for a charter, with which to form a local "Cavalry" chapter, was forwarded to the Reserve Officers' Association of the United States—the sentiment of this group of officers being squarely behind that worthy organization and its activities.

Captain Wm. J. Yetton, Cav. Res., has extended to the Squadron an invitation to visit his summer place on Chesapeake Bay for an outing, which invitation was accepted with enthusiasm and a committee appointed to make the necessary arrangements.

Plans are being made for a Squadron dinner with

which to appropriately close an enjoyable and successful season.

It is with pleasure that the officers of this organization welcome Second Lieutenants Michael J. Kohut, Jr., and Howard H. Ruppart. who, having received their commissions in the Cavalry Reserve. have been assigned to the Squadron.

307th Cavalry

Richmond, Virginia

THE 307th Cavalry, (one field officer and seventeen troop officers) has been designated for active duty in connection with the training of the C. M. T. C. Applications received to date exceed the authorized quota.

First Lieutenant James F. Parkinson and 2nd Lieut. William G. Morrel have been transferred to the 462nd Armored Car Squadron.

The following officers have recently been assigned to the regiment:

2nd Lieut. Byrd S. Leavell. Jr., Culpeper, Va.
2nd Lieut. William T. Saunders, Hampton, Va.
2nd Lieut. James R. Adams, Lynchburg, Va.

The following officers have been promoted to the grade of First Lieutenant, Cav. Res:

2nd Lieut. Robert E. Glendy, Fort Defiance. Va.
2nd Lieut. William W. Smith. Lynchburg. Va.

Third Squadron and Machine Gun Troop, 307th Cavalry

Norfolk, Va.

LIEUT. Colonel Sloan Doak. G-3, 62nd Cavalry Division made an inspection of Squadron Headquarters on April 6.

A special group school meeting was held on April 6 with 64 Officers and their guests attending. Captain John V. Lowe. C. W. S., gave a very interesting talk on Chemical Warfare.

The Squadron has been called on to assist in the organization of the Memorial Day Parade to be held in Norfolk on May 30. The Unit Instructor. Major David H. Blakelock. Cavalry, (D. O. L.), has been selected as Grand Marshal and he will be assisted in his duties by the officers of the squadron who reside in the City.

Four Officers of the Squadron have applied for active duty for the period July 3 to 16. The regiment will train the C. M. T. C.. at Fort Myer. Va.. during that period. The officers who have applied are: 1st Lieutenants. Robert B. Batte. Walter L. Rouse, Jr. Southgate W. Taylor. 2nd Lieut. William T. Saunders.

Inactive duty training is progressing in a very satisfactory manner, particularly with respect to the Extension Courses. This is the most satisfactory method of instruction for this unit. due to the scattered residences of the officers. Only a small percentage of the assigned officers reside in or close to Norfolk.

308th Cavalry

Pittsburgh, Pennsylvania

ATTENDANCE at the riding classes at the Hill Armory. including both the Officers' classes and the Ladies' class has held up unusually well throughout the winter.

A considerable amount of work without stirrups has given good results.

During the National Convention of the Reserve Officers' Association. the Corps Area Commander was present. and a number of the officers of the 308th Cavalry had the pleasure of meeting him.

With the coming of Spring it is expected that many officers who have been riding all winter with the class at the Armory will take advantage of the good weather to ride outdoors. There are a number of places where horses may be obtained and where one may follow excellent bridle paths and ride across country.

Applications for active duty training next summer are coming in rapidly and. by May 10th, when all applications must be sent in. it is believed that the quota for the regiment will be more than filled.

Headquarters 862nd Field Artillery (Horse)

Baltimore, Md.

THE regiment is progressing steadily toward its goal of sending to camp this summer its quota of officers with training sufficient to get the maximum instruction out of this opportunity. The regular conferences and riding classes have been well attended and interest has been sustained. It is expected that pistol firing will be resumed next month upon the completion of the splendid new Post Office Building with its range in the basement.

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Organized November 9, 1885

DESIGN

1. The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and the solidarity of the Cavalry of the Army of the United States.—*Article III of the Constitution.*

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The Artisan of a Cavalry Corps, Alfred Pleasonton

By Major Joseph Mills Hanson, F.A. Reserve

An extraordinary strength of character is required in the man who can accept the situation with perfect serenity when, having finished a long upward struggle into which he has put the crowning effort of his life, he finds himself at the moment of success supplanted by another and himself relegated to a place of obscurity. Such men have been, and such there were among the leaders on both sides in the American Civil War. But they were rare, and of those who could not attain to such a degree of self-abnegation we need only reflect that most of us, in similar circumstances, would probably be no more resigned than they were.

It is, at least, quite certain that Alfred Pleasonton, chief of the Cavalry Corps of the Army of the Potomac, did not take such a dispensation with all possible philosophy when he found himself displaced in the spring of 1864, at the time of Grant's shake-up of corps and division commanders in the great army of the East. Nor can it be denied that, from his standpoint, he was justified in feeling abused. Let us review briefly the services which he had rendered up to this time, since the firing on Fort Sumter.

Within a week after the event which precipitated the Civil War he raised a regiment of volunteer cavalry at Wilmington, Delaware, and with it mounted guard over the railroad to Washington. Scarcely had he accomplished this duty when he hurried to Utah, and thence marched his own regiment, the 2nd Dragoons, across the continent to Washington. He was active throughout the Peninsula campaign, and his command covered the withdrawal of the Union army from Harrison's Landing to Yorktown. During the Maryland campaign he headed the advance cavalry division, fought with distinction at South Mountain and Antietam, and led the pursuit of Stuart when the latter made his raid to Chambersburg. As the Union army followed Lee back into Virginia, Pleasonton's division constantly scouted in its front, harassed the enemy, and finally covered the flanks during the Fredericksburg operations. For the Chancellorsville campaign an experimental cavalry corps was formed under General George Stoneman, Pleasonton commanding a division and performing brilliant services when Stonewall Jackson attacked the Union right flank.

He was now placed at the head of the Cavalry Corps and fought Stuart to a draw in the great combat at Brandy Station. On the march into Pennsylvania, skillfully screening Meade's army at the same time that he maintained close touch with that of the enemy, it was Pleasonton's dispositions of the mounted troops which determined the battlefield at Gettysburg, and northeast of that place on the third day of the struggle, three of his brigades defeated four of Stuart's and prevented the latter from attacking the rear of the Union center on Cemetery ridge at the critical moment of Pickett's assault. When Lee retreated he conducted the cavalry pursuit to the Potomac and thence back to the Rapidan and, though the divisions generally acted separately in the Bristoe and Mine Run operations of the fall of 1863, they were under his general direction. Through the following winter he made preparations for still more vigorous cavalry work in the spring, but on the 24th of March, 1864, General Sheridan superseded him in the command and he was transferred to the Department of the Missouri.

There is no intention here of criticizing General Grant for making the change, nor of belittling General Sheridan's subsequent superb handling of the Cavalry Corps, Army of the Potomac. Grant had been given the privilege of designating anyone whom he wanted for the command of that corps, and Sheridan was his choice. We are seeking only to examine the effects of

Signal Corps Photo
Major General Alfred Pleasanton

the change upon the soldier who was displaced and to discover the reasons which, we repeat, from his standpoint justified him in feeling wronged. Pleasonton had headed the Cavalry Corps through literally scores of fierce battles and had transformed it from a disjointed group of separate units into a cohesive offensive body which he now left, a formidable weapon, to the hand of Sheridan, just as truly as McClellan had created the Army of the Potomac itself and turned it over to his successors. At the very least, he must be credited with masterly conduct of the mounted arm in the campaign of Gettysburg and in the two battles, Brandy Station and Gettysburg, which were most vital to the cause of the Union of all cavalry engagements of the Civil War. Yet he was displaced, and in the somewhat melancholy course of his subsequent life can be traced the results of too much brooding upon what must, inevitably, have seemed to him injustice and neglect.

The first obvious reaction was his resignation from the Army in 1868, followed by an effort to interest himself in pursuits other than those which had engrossed his ambitions up to this time. For two years he held the position of Internal Revenue Collector in New York City and then, during 1870 and 1871, that of Commissioner of Internal Revenue. In September of the latter year he was elected president of the Terre Haute and Cincinnati railroad. But a business career, evidently, did not prove agreeable to him. In 1872 he resigned the railroad presidency and took up his abode at the old Greason House, in Washington, D. C., where he continued to reside for twenty years. During the last eight, he never left his room and seldom his bed, and declined to see anyone save a few intimate friends. Though suffering severely from chronic throat trouble and a fistula contracted in the Army, he would not be attended by a physician but dosed himself constantly with patent medicines from which he imagined that he might derive benefit. He was the last of a family of several children and after his death, which occurred on February 17, 1897, as a direct result of an attack of the grippe, his funeral arrangements were made by two nephews and another relative, Mrs. Anna Guest, widow of Commodore Guest, U. S. Navy. By his own request he was buried without military ceremony in the Old Congressional Cemetery, where his body lies today in an unmarked grave.

Here was a sad ending to the life of a man who appears to have deserved better than he received at the hands of his country and his generation. General Pleasonton left no autobiography to explain, defend, or enlarge upon his course in life, and no one else has ever done this service for him. But a study of his career seems to disclose that many of his adversities may have originated in his own peculiarities of disposition. There was the fact of his lifelong bachelorhood. Whatever temperamental causes lay behnd his choice of this estate are lost to us now, as so often happens with those secrets of the spirit which are apt to shape a man's life more potently than outward circumstances. Had the relations and responsibilities of domestic life been his to offset absorption in personal interests, it may well be that he would have escaped the gloomy introspections which seemingly, in the end, turned him into a recluse. The biographies of other men, not excepting soldiers, show the extent to which letters to wives or children may serve as safety valves for the expression of hopes and fears, secret ambitions or wounded vanities.

But this is mere speculation. Turning to considerations more tangible, it would seem that Pleasonton lacked, for one thing, such a gift for firing the imagination of others as was possessed by Kilpatrick, for example, golden-haired Custer, and "Little Phil"; by Jeb Stuart, and Forrest, and Joe Wheeler. His name, to be sure, is linked with the cavalry of the Army of the Potomac: inevitably, since he was its commander from June, 1863, to March, 1864. But it appears more as a mere label than as a talisman: no individual looms mightily above the hard battles of that cavalry until we come to 1864, and Sheridan.

Something more positive, however, than simply lack of a personal magnetism which few people possess must have operated in Alfred Pleasonton to dry up in the hearts of many of his contemporaries those sentiments of sympathy and kindliness which might have made them eager to testify to his merits. He had warm friends, as will presently be shown. But he also had an unhappy faculty of acquiring bitter enemies. It is only necessary to mention a few. General Meade, under whom he served with so much distinction throughout the Gettysburg campaign, later came to hate him cordially, characterizing as "the meanest and blackest ingratitude" Pleasonton's share in the notorious "Meade-Sickles controversy," which was of the aftermath of Gettysburg. In Missouri in the fall of 1864, while cooperating with General Samuel R. Curtis in the pursuit of Sterling Price's raiders, he incurred the displeasure of that senior by a marked reluctance to obey his orders. Meade himself accounted for another foe in attributing to Edwin M. Stanton, Secretary of War, a desire, cherished for a long time before it was gratified, to remove Pleasonton from his command in the Army of the Potomac.

A strong man, however, always has enemies. But the species of dislike which Pleasonton aroused in many people was another matter. Less virulent than hatred, it was still capable of injuring him while he lived and clouding his reputation after he died. Primarily inspired, no doubt, by the caustic personal manner with which he has been charged, it may have been perpetuated by a certain dogmatic self-complacency sometimes discernable in his writings, both official and private, though it must be said that these are generally frank, straightforward, and generous in their expressions toward others. But, whatever the cause, the effect has often announced itself in open sneers or significant silences.

Whittaker, first of the myriad biographers of Custer, deftly plaited a leaf in the chaplet for his hero's brow by citing Custer's success in holding the confidence of three men so different in character as were his three cavalry commanders: "McClellan, • • • kind-hearted to a fault, slow, methodical, and cautious: Pleasonton, acrid, sarcastic, exacting, an excellent

cavalry chief but generally failing to attract any affection from his subordinates, a martinet in discipline; Sheridan, fiery, impetuous, untiring • • •." Several subordinates later accused Pleasonton of falsehoods concerning his own activities at Chancellorsville, and to this day it is still questioned, however speciously, whether he or someone else ordered the renowned "Keenan's charge" of the 8th Pennsylvania Cavalry, and whether the concentration of guns at Hazel Grove was a decisive factor in saving Hooker's army from destruction or a pure fiction emanating from Pleasonton's brain. Various later day historians have gone out of their way to challenge his statements concerning this battle and the one at Brandy Station on June 9, 1863, and to fasten upon him the reputation of a Baron Munchausen, while Jeb Stuart, his antagonist on many hard-fought fields, who had known him well in the old army when both were chasing Indians over the Western prairies, is reported never to have liked him, "because of his foppish ways."

Yet all this is only one side of the picture. Pleasonton, as has been said before, had friends as well as enemies, eulogists to counter-balance detractors, and perhaps the former outweigh the latter. No less able a commentator than Colonel Matthew F. Steele, though criticizing certain features of his operations, declared that for the Union cavalry the battle of Brandy Station "marked the turning point in its relative efficiency and excellence as compared with its adversaries. It was the first true cavalry combat of the war." And further, touching the Gettysburg campaign, "from beginning to end, the Union cavalry generally performed excellent service." Obviously McClellan, Burnside, and Hooker, his army commanders previous to Meade, and the latter, too, before the quarrel with Sickles, must have thought well of Pleasonton to have retained him in a position whose responsibilities they constantly increased, while after he left the East, Rosecrans, his department commander in Missouri, supported him fully. Furthermore, whatever the motives behind the gesture, he had reason to be proud of the fact that during the winter of 1863-64, a committee of the 37th Congress recommended him for the command of the Army of the Potomac.

But it is noticeable that Pleasonton's friends, once supreme, to a man had passed out of power before the triumphant conclusion of the war, this decisive moment finding others in the key positions of the army and the nation. In the former, Grant and Sherman stood at the top, with Sheridan and Thomas but a step below. It would be idle to seek any devious connection, if such existed, between this situation and the fact that Pleasonton, although commissioned a major general of volunteers in June, 1863, on Hooker's recommendation, and thrice brevetted in the regular army, receiving the title of brevet *major* general in March, 1865, nevertheless reverted to his old Regular Army rank of major when he was mustered out of the volunteer service in January, 1866. Promotion to even the grade of lieutenant colonel was not tendered to him until the following July. As the acceptance of such a commission

From the Photographic History of the Civil War. The Review of Reviews Co.

General Alfred Pleasanton—Photograph taken three months before the Battle of Gettysburg, where he commanded the Federal Cavalry.

would have involved his serving under officers whom he had commanded in battle—a procedure often admissible in war time, but hardly so in peace—he declined and, in bitter mood, resigned in January, 1868. Though suffering such physical disabilities, incurred in service, as have been noted, his petition for a pension was refused and only in 1888 did Congress tardily, and penuriously, recognize his great services by restoring him to the rolls of the Army as a major on the retired list. This prop to his old age he felt obliged, reluctantly, to accept.

But despite the disappointments of his life, during the years in Washington preceding his final withdrawal into seclusion Alfred Pleasonton retained a keen interest in his comrades of the war. It is related of him that at the Greason House he habitually reversed the usual order of nature, sleeping by day so that he could sit up all night with old cronies, fighting over again the battles of the past. Cultured and agreeable, he was at such times a fascinating conversationalist when his chronic throat trouble did not prevent him from talking.

Such incidents and opinions as have been set down reveal in a measure the nature of the man, the reactions which he produced upon those around him and which they, in turn, produced upon him. Let us now examine more closely some of the conspicuous features of a life which held much colorful adventure of a flavor which has passed from the world today, and many moments of grandeur as well as of bitterness and disillusionment.

Alfred Pleasonton was born in Washington, D. C., on June 7, 1824, one of several children of Stephen and Mary Pleasonton. His father was a prominent citizen of Washington and for fifty years an auditor of the Federal government, being retained in that position by twelve successive presidential administrations and

dying in office in 1855. Ten years before Alfred's birth, in August, 1814, at the time of the burning of the capital by the British, Stephen Pleasonton performed a service to the nation for which it owes him an eternal debt of gratitude. To use his own words, penned in 1848, Mr. Pleasonton, then at his office in the State Department, upon hearing that the British were approaching the city, "proceeded to purchase coarse linen and caused it to be made into bags of convenient size, in which the gentlemen of the office assisted by me placed the books and their papers, after which I obtained carts and had them conveyed to a grist mill, then unoccupied, belonging to Mr. Edgar Patterson, situated a short distance on the Virginia side of the Potomac, beyond the Chain Bridge, so called, two miles above Georgetown.

"Whilst engaged in the passageway of the building with the papers, the State Department being on one side and the War Department on the other side of the passage, General Armstrong, then Secretary of War, on his way to his own room, stopped a short time and observed to me that he thought we were under unnecessary alarm, as he did not think the British were serious in their intentions of coming to Washington. I replied that we were under a different belief, and let their intentions be what they might, it was the part of prudence to preserve the valuable papers of the Revolutionary government, comprising the Declaration of Independence, the laws, the secret journals of Congress (then not published), the correspondence of General Washington."

The public buildings and their contents were burned by the British, and but for the forethought of the auditor these priceless documents would have been lost forever.

Mr. and Mrs. Pleasonton were particularly intimate friends of James Madison and his charming wife, "Dolly," at whose funeral in 1849 Mr. Pleasonton was one of the pall-bearers. Many were the gay functions attended by the Pleasontons during Mrs. Madison's long reign as the ruling spirit of Washington's social life and Alfred's boyhood there must have been an enjoyable one, lived in contact with some of the most distinguished people of the day.

Alfred Pleasonton entered the Military Academy in 1840. In choosing a military career he seems to have followed a family inclination, his elder brother, Augustus James, having already graduated at West Point in 1826. This brother, however, after four years in the Army had resigned in 1830 and entered the law, though during the Civil War as a brigadier general in the Pennsylvania militia he was in charge of the defense of Philadelphia through the Gettysburg campaign.

On July 1, 1844, Alfred Pleasonton graduated from the Military Academy, seventh in his class. He was commissioned a brevet second lieutenant in the 1st Dragoons and immediately ordered to duty at Fort Atkinson, Iowa.

Pleasonton, like many of his brother officers, now entered, to spend many years, with the brief interlude of the Mexican War, in service combining the adventures and wide wanderings, the hardships and rewards, of the Indian fighter, the explorer, and the hunter. Under the colonelcy of David E. Twiggs he served at Fort Atkinson until 1845, when he accompanied the expedition of Captain E. V. Sumner to the Devil's Lake region, a total march of 3,000 miles. The following year found him, in the 2nd Dragoons with General Taylor's little army on the Rio Grande and on the 8th and 9th of May he won his brevet as 1st lieutenant by gallant conduct amid the cactus and the chaparral on the fields of Palo Alto and Resaca de la Palma.

Frontier and garrison duty in the romantic atmosphere of the recently acquired but ancient Mexican towns of Santa Fe and Albuquerque, staff duty in California, and skirmishes with the Apaches in New Mexico occupied his time until 1852, when he enjoyed a brief period as recruiting officer in the East. He returned to his regiment as 1st lieutenant and adjutant in 1854, acting in this capacity at Austin and Fort Chadbourne, Texas, and Fort Leavenworth, Kansas, until 1855, when he was promoted captain and detailed acting assistant adjutant general to General William S. Harney, for the latter's expedition against the hostile Sioux between the Platte and Missouri rivers. After chastising a minor fraction of these Indians at Ash Hollow, Harney marched his forces to Fort Pierre, a dilapidated old fur trading post on the Missouri, where they spent the winter in misery.

By way of contrast, the far-off everglades, still haunted by hostile Seminoles, next claimed Pleasonton's services, as acting assistant adjutant general of the Department of Florida. In 1857-58 he served Harney in the same capacity in "bleeding Kansas," while the 2nd Dragoons stood successfully between warring policital factions, neither one of which dared oppose the Federal troops, nor could deny their impartiality. In the fall of 1858, General Harney was placed in command of the Department of Oregon. To that remote Northwestern coast, doubtless by saddle and stage coach, Pleasonton accompanied the doughty old cavalryman whose ideal of an army was a *corps d'élite* of hard-bitten dragoons accompanied by a minimum contingent of infantry and artillery.

But in the summer of 1860, Pleasonton again made the long journey East, and he was at St. Joseph, Missouri, on his way to rejoin the 2nd Dragoons in Utah when the news of Sumter reached him, in April, 1861. He immediately turned back, reported to General Robert Patterson in Pennsylvania, and was ordered to Delaware, where he recruited a volunteer cavalry regiment and protected the railroad to Washington, as already related. His men became so attached to him that they petitioned General Scott to appoint him colonel, but he was ordered to rejoin his regiment in Utah. Promptly negotiating the trans-continental journey, he reached the land of the Mormons in June, remained there until September and then, as senior officer present, marched the regiment all the way to Washington, where it arrived in October. His remarkable feat of con-

ducting a cavalry regiment through what was certainly one of the longest uninterrupted marches on record, earned for Pleasonton, in February, 1862, his commission as major in the 2nd Cavalry; the highest rank, by the way, that he was ever to hold in the regulars.

Thus came to the threshold of his great opportunities this breveted soldier of thirty-seven years, seventeen of them spent in the saddle. No American cavalryman could have asked to arrive better equipped at the days of his testing.

His superiors recognized the fact. At Wilmington in April, when he had met a sudden emergency with energetic decision, his arrival with his dusty dragoons from Utah gave something of a thrill to Washington, still downcast over Bull Run. General McClellan at once set him to work in connection with the defense of the capital and the reorganization of the army.

In all this the cavalry had, perhaps, the hardest time getting itself created. The fact need hardly be phrased that, at the beginning, the South, through the natural aptitudes of its rural population, was better prepared than the North to build and utilize an efficient cavalry. It may well be here emphasized that it was in stern conflict with this magnificent cavalry of Dixie at its best and strongest, physically and morally, that Alfred Pleasonton, handling larger and larger segments of the Northern horse, gradually raised the latter to a level of equality with its opponents.

In the beginning of that work around Washington through the winter of 1861-62, the prospect was discouraging. Though he projected twenty-eight regiments of cavalry, counting 25,500 men, in his main army of 273,000 men, General McClellan, in his final report, remarked upon the "continual and vexatious delays" suffered by his first chief of cavalry, General George Stoneman, "arising from the great deficiency of cavalry arms and equipments and the entire inefficiency of many of the regimental officers first appointed." In October, 1861, the returns showed, out of an army still only about half the size desired, a total of 4,265 cavalrymen completely unarmed, and 3,163 partially armed. Nor did those units which were pushed to the front to test their qualities make a very good showing when they came in contact with the gray horsemen of Stuart. On Sept. 11, in a reconnaissance to Lewinsville, Nov. 13 at Pohick Church, and Nov. 26 near Vienna, considerable forces of cavalry, or of cavalry combined with other arms, fled incontinently, hardly waiting to see what the enemy looked like.

Yet when they reached the Peninsula in April, and on through the campaign of May and June, the cavalry, though split up, except for a small reserve under Gen. P. St. George Cooke, into many small bodies attached to the different corps, behaved creditably within its very limited opportunities. To be sure, the squadrons under General Cooke which tried to oppose Jeb Stuart's ride around McClellan, were left somewhat dazed and breathless by that impudent performance. Pleasonton, at the beginning of this campaign, commanded merely the Headquarters guard of nine companies. But in July his commission as brigadier general of volunteers came through, he took one of the two brigades of Stoneman's division, and with it covered the withdrawal of the Union army from Harrison's Landing to Yorktown, in the middle of August.

The last organization which performed active operations on the Peninsula was the first to engage in them, beginning September 3, as the army entered upon the Maryland campaign. "The advance from Washington was covered by the cavalry, under General Pleasonton, which was pushed as far to the front as possible, and was soon in constant contact with the enemy's cavalry, with whom several well-conducted and successful affairs occurred."

The battle-worn horse soldiers, reinforced to the strength of a division of five brigades, counting possibly 5,000 effectives, collided with Munford's brigade of Stuart at Poolesville, just north of the Potomac, on Sept. 8, and drove it out of town and five miles up the Frederick road to Barnesville. Here the Confederates stood again to cover the high hill of Sugar Loaf, whence Lee's signal men were peering across the fields at McClellan's infantry columns to the east. But Pleasonton pushed on, always fiercely opposed, took both Barnesville and Sugar Loaf on the 11th, entered Frederick the afternoon of the 12th, and next day went over the Catoctin Mountain in the face of Wade Hampton and Fitzhugh Lee, right up to Turner's Gap, where the National Road crosses South Mountain. Here D. H. Hill's infantry division, strongly posted in the pass, stopped him. He had not found out where the Army of Northern Virginia was nor what it was doing; but neither had Stuart found out these things concerning the Army of the Potomac. Such information at this juncture was, to be sure, much more essential to McClellan than to Lee, who held the initiative. But, for its first independent campaign, the Union cavalry was doing pretty well.

After the battle of September 14 at South Mountain, where Pleasonton directed some skilful artillery dispositions based on knowledge he had gained of the ground in his reconnaissance of the previous afternoon, the armies concentrated before Sharpsburg and the sanguinary battle of the 17th ensued. For some reason hard to understand, the cavalry division was placed by McClellan in the center, walled in by infantry, where it could not possibly be used either for reconnaissance or to create a diversion on the enemy's flanks. Stuart, by contrast, was placed on the left of the Confederate line, between Jackson and the Potomac, and though he found no chance for aggressive action, he most effectively protected Jackson's flank.

The day after the battle Lee lay still, impressing his opponent with the idea that he was willing and able to fight again. So McClellan did nothing and, reasoning by his estimate of the situation, allowed Pleasonton to do nothing. That afternoon, however, Lee unleashed Stuart, and at dawn of the 19th, Hampton's advance was running the Union pickets out of Williamsport, fifteen miles up the Potomac. Then Pleasonton was turned loose after him. But Stuart, after drawing a good deal of Federal infantry off that way while Lee crossed his army back to Virginia, eluded pursuit and

rejoined his main body in the Shenandoah Valley, covering the approaches from the Potomac. McClellan concentrated about Sharpsburg and Harper's Ferry, and thus during more than a month of fine autumn weather the two armies lay, resting and reorganizing.

That was, perhaps, a promising time for a cavalry raid into Virginia, against Lee's communications. Judging, however, by the results of the Stoneman raid, seven months later, the Federal cavalry was not yet a body to be depended upon for such a formidable effort, especially since it was sure to be followed and attacked by Stuart's Cavalry, still in its ascendancy. At all events, McClellan, the commander, did not broach the subject of such an enterprise.

Pleasonton himself, however, was always keeping his command on its mettle. October 1, with three regiments and Pennington's horse battery, he broke through W. H. F. Lee's picket line along the Potomac at Shepherdstown and drove west ten miles, chasing part of Wade Hampton's brigade out of Martinsburg. He stayed there until 5:00 o'clock in the afternoon and then retired in good order across the Potomac. The victory was emphatically claimed by both Stuart and Pleasonton; but certainly the latter accomplished his mission, which was to find out whether Lee's main army was still in the northern valley, or whether it had marched toward the Rapidan. Next day he reported to McClellan that Lee was still there, stating his own achievements somewhat boastfully: "that the rebels might follow me if they felt so inclined, I left the bridges intact" ....."six or eight well-directed shells scattered his force in confusion over the hills" ....."my command cared so little for the enemy's attacks that they moved on at a walk."

Nine days later his opinions were probably somewhat chastened when Stuart, with 1,800 men, crossed the Potomac on his famous Chambersburg raid. For three days the daring Confederates rode through the heart of Maryland and Pennsylvania, covering 126 miles, creating widespread consternation, and requisitioning 1,200 horses with which they escaped across the Potomac, though throughout the ride thousands of Union troops on every side were endeavoring to overtake or intercept them. General McClellan was severely condemned in the North for permitting Stuart to escape, but his capture was a hard thing to accomplish. He had a single compact column of swift-moving horsemen, and he knew exactly where he was going and what he wanted to do, whereas his pursuers, scattered for seventy-five miles along the upper Potomac and northward into Pennsylvania, knew not where to look for him except as reports, always tardy, reached them after he had passed.

Twelve thousand infantry and three cavalry brigades, respectively under Averell, Stoneman, and Pleasonton, were out after him, but only Pleasonton was ever dangerous. Two or three times he was within an ace of intercepting Stuart, and in the last twenty-four hours of the chase he and his men did seventy-eight miles; even Lee's biographer, Col. A. L. Long, compliments him: "Pleasonton made the most rapid pursuit that was ever performed by the Federal cavalry; but he arrived just in time to see the prey safe beyond the Potomac." The worst injury suffered by the Federals was in the wholesale breakdown of horses used in the pursuit. Stuart, too, broke down horses, but his men were continually changing mounts with the captured stock, while his pursuers used up many times the number of animals in fruitless riding.

Toward the end of October, McClellan finally began passing his army southward once more across the Potomac, and Pleasonton's cavalry screen cantered out in front. From the 26th of that month until the 15th of November there was a continuous crackling of cavalry engagements down through sixty miles of the rolling uplands east of the Blue Ridge, rich in blooded horses and fine farms, while Pleasonton covered the Union infantry columns marching south toward Warrenton, and sought to penetrate the mountain gaps to discover how Lee's corps were progressing toward Culpeper. Almost uniformly Pleasonton was the aggressor, and at Mountsville, Aldie, Snicker's Gap, Union, Upperville, Markham, Barbee's Cross-roads, Corbin's Cross-roads, Hazel river, and a dozen other places remembered in cavalry annals, there were clashes of the blue and gray squadrons and the horse artillery of Pennington, and Tidball, and Pelham.

In sum, the honors were about even: Stuart prevented his adversary from getting much information about Lee's movements or intentions. Pleasonton saw to it that the Army of the Potomac pursued its appointed course without interruption.

At this period, criticism of the Union cavalry in the North was very severe and found expression, as the feelings of the people usually did, in a pungent remark of President Lincoln, addressed to General McClellan on Oct. 24: "Will you pardon me for asking what the horses of your army have done since the battle of Antietam that fatigues anything?" Such gibes were naturally hotly resented by the cavalry itself, and McClellan went out of his way to inform the President in detail of the services of the cavalry under Pleasonton during and after the Antietam campaign. "After this statement of facts," he concludes, "I feel confident you will concur with me that our cavalry is equally as efficient as that of the rebels."

Whether or not Mr. Lincoln concurred, General McClellan himself evidently believed thoroughly in his cavalry, and it was upon the dispositions made and the information furnished by Pleasonton that he formed the plan for attacking the Confederates and dividing Longstreet, at Culpeper, from Jackson, west of the Blue Ridge, and either beating them in detail or forcing them to concentrate as far back as Gordonsville. This plan, he says in his final report, he was on the point of executing when he was superseded on Nov. 7. Throughout the tenure of his command, the record shows that McClellan was steadily giving his cavalry more to do and leaning more heavily upon it in his operations. Had he remained at the head of the army, he would doubtless have increased its responsibilities as, under Pleasonton's firm hand, it grew better able to sustain them.

For a time after McClellan retired from the scene

a paralysis overtook the cavalry. In the sanguinary battle of Fredericksburg the Union cavalry, as cavalry, took no part. It was irregularly parcelled out into one division and two brigades, attached, one each, to the three grand divisions of Burnside's army. Pleasonton commanded the division, Averell one of the brigades and Bayard the other until he was killed, when Gregg succeeded him. Stuart, on the other hand, was posted in a place of importance, on Lee's right flank. After Fredericksburg nothing much happened in the Union cavalry except ineffectual pursuit of Stuart, (in which Pleasonton did not take part,) when he made his "Christmas raid" to Washington and got away, scot free.

On the 26th of January, 1863, Gen. Joseph Hooker was placed in command of the Army of the Potomac. Hooker wanted action, but he had first to reorganize his shaken army and put some hope and courage into the despondent ranks. He took energetic measures, among others abolishing the clumsy grand divisions of Burnside, and for the first time, integrating the cavalry at least on paper, into one corps. Probably he was disgusted with the nerveless cavalry movements of the winter, for which Pleasonton had been in no wise responsible. At all events, on Feb. 5 he put the Cavalry Corps under command of Major General George Stoneman, originally a cavalryman in the old army, then in the volunteers, then an infantry corps commander, and now again in the cavalry.

Hooker took the first step in his Chancellorsville campaign by sending Stoneman with the whole new Cavalry Corps, save one depleted brigade of Pleasonton's division, on a raid against Lee's communications. He did not get back till the 8th of May, after the Battle of Chancellorsville was over. Meantime Hooker had been left blind, like Lee himself two months later in Pennsylvania, for Pleasonton with one small brigade was able to do no more than scout in front of Hooker's wide array, while Stuart kept Lee informed of all the important movements of the enemy.

With Stoneman away, the three regiments of cavalry under Pleasonton were the only ones present with the army to perform duties of reconnaissance, which within their limitations they performed well. Shortly after the opening of Jackson's attack on the Union right late in the afternoon of May 2, Pleasonton returned from Catherine Furnace to the clearing in the woods known as Hazel Grove, about three-quarters of a mile south of the old Turnpike. Here, according to his official statements, he learned that an attack had begun on the Union right, which was falling back rapidly. Several batteries of artillery, containing a total of twenty-two pieces, were assembled at Hazel Grove. These batteries Pleasonton hastily formed in line across the clearing, supported by some cavalry, and when the Confederate line of battle approached in the dusk, the guns opened a vigorous fire with canister and in a few minutes repulsed the attack.

Since the war, certain historical commentators have denied that this incident, and some other minor ones connected with it, ever took place. But, at all events, Jackson's advance did stop short of the important position of Hazel Grove that night, and it was still in possession of the Union troops early on the morning of May 3.

Pleasonton, the cavalry leader still surviving with undimmed laurels, was placed in command of the Cavalry Corps on May 22, succeeding Stoneman, who was made Chief of the Cavalry Bureau in Washington. Eighteen days later he led that corps into the greatest battle of its history, indeed, the greatest cavalry battle of the war. It was the supreme test of the instrument of which he had already been the chief artisan, and it was perhaps, also, the supreme effort of the cavalry of the Army of Northern Virginia. This organization was far better than it had been when the campaign finished the autumn before, and it was also, if not stronger in numbers, at least far better in horse flesh and materiel than the corps of a year later which encountered Sheridan. It reached its peak in 1863, when Pleasonton was measuring swords with it.

From the Photographic History of the Civil War. The Review of Reviews Co.

2d Cavalry on the Way to the Battle of Gettysburg

In his hands for the performance of his mission, Pleasonton held a larger force than he had ever before commanded: 7,981 cavalry and 3,000 infantry.

Space is lacking for the details of the Battle of Brandy Station. Both sides claimed the victory, but honors were really very even. Although surprised, as they had hardly ever been before, the Confederate brigades had beaten off all attacks, prevented any interference with the northward marching columns of Lee's infantry, and had by no means been crippled, as their antagonists at first fondly imagined. But, over against all this, Pleasonton had, for the first time, boldly led the whole Union cavalry corps into full battle with the enemy, fording a deep river to do it, had discovered beyond doubt, not by rumors but by contact, that Lee's infantry was moving northwest from Fredericksburg, and had come away at leisure, when he got ready. In short, after two years he had finally raised his corps to a par with Stuart's. In this sense, irrespective of immediate tactical results, it is not too much to say that the battle of Brandy Station was not only a Union victory, but the most important cavalry victory of the war. Without it Gettysburg, Trevilian, Fisher's Hill, and Five Forks, would have been impossible.

Eight days after Brandy Station Pleasonton's horsemen, proud and confident, were dogging Stuart between

the Bull Run and the Blue Ridge mountains and dashing in on him at every opportunity. Through the third week of June the enemy could never throw them off, and at Middleburg and Aldie and, above all, at Upperville on the 21st, they gave him as good as they received, kept accurate tally of the northward progress of his infantry columns, and skilfully concealed those of the Army of the Potomac. When Stuart started on June 24 on his favorite maneuver of riding around the Union Army, Pleasonton stayed on the front and flanks of the latter and, though covering a wide range of the surrounding country by reconnaissances and patrols, always had the bulk of his forces in hand for the immediate service of the main army if they were needed.

June 22nd, Pleasonton received his commission as major general of volunteers, conferred at the earnest solicitation of General Hooker. As to his new brigadiers, commissioned on the 29th, it has been said that Pleasonton imperiled his own future by insisting on stars for Merritt, Custer, and Farnsworth, unknown line officers of the regulars, in preference to some men of already higher rank in volunteer organizations who had behind them the powerful influence of Congressional delegations from certain great states. But Merritt, Custer, and Farnsworth had performed better under acid test than the ones passed by, and Pleasonton was looking for men who would win victories for the Union, not for political favorites. Perhaps he did injure his future by securing their advancement; but the future also justified his faith in them.

June 28th saw courtly Joe Hooker bow himself out at Army Headquarters in Frederick, and Meade, the unexpected, step diffidently in. Somewhere down toward Washington, Stuart was riding at large, cutting wires, burning supplies. Somewhere northwest, beyond the Blue Ridge, Lee's supple, lean columns were swinging up the Cumberland Valley, their vanguards on the Susquehanna, while Pennsylvania trembled and sent frantic telegrams to Lincoln and Stanton and Halleck. That was all the Army of the Potomac knew, huddled along the watersheds of the Catoctins, pivoting on Frederick. Out in front scouted the cavalry, restlessly, from Boonsboro at the west clear around to Ridgeville, on the Baltimore pike.

Next day the corps marched north, a little hesitantly, holding hands as it were, up the roads across Pipe Creek. Reports had it that Stuart was at Cocksville, heading toward York, while up north Rodes and Early, of Ewell, were at Carlisle and near Hanover Junction. Over to the northwest things were even less clarified; it was only certain that there were lots of rebels somewhere in the general region of Chambersburg.

Nevertheless, toward night, June 29, there issued from Headquarters, Cavalry Corps, Special Orders No. 99; clear, specific, definite. "The First Cavalry Division (Buford) will move immediately on the receipt of this order as follows: Two brigades and a battery by the way of .....Chewsville, to Emmitsburg, and from thence to Gettysburg by tomorrow night." One brigade and battery by Frederick City and Catoctin Furnace, to Mechanicstown, to protect the rear. Division headquarters to Gettysburg, where the two brigades "will cover and protect the front, and communicate all information of the enemy rapidly and surely. There were other dispositions; Cavalry Corps headquarters at Middleburg the night of June 30; Third Division (Kilpatrick) at Littlestown; Second Division (Gregg) at Westminister. But Paragrapl. I, to Buford, was the crux of the matter; that was the order which brought on the battle of Gettysburg,—and it was signed, "by command of Major-General Pleasonton."

True to the forecast of this order, the troops of the opposing armies marched on the following day; Buford, thanks to the information gathered by the Union cavalry in all quarters, quite accurately informed as to what was in front of him and what he was expected to do; the Confederates, in the absence of Stuart's squadrons, totally ignorant of the forces or disposition of the enemy. On the evening of the 30th, Buford's arrival at Gettysburg caused Pettigrew's brigade, leading A. P. Hill's corps, to fall back from the place toward Cashtown, in the direction of Chambersburg. Buford notified Pleasonton, and the leading infantry corps held themselves ready to march to his support if ordered.

Next morning, July 1, in the faint blue haze following sunrise, the battle of Gettysburg began.

Colonel Matthew F. Steele has said: "This was the most valuable day's work done by cavalry in the Civil War." There is no need here to trace the course of the bloody three-day conflict which followed it; the turning point in the war between the states. Sufficient to say that throughout the last two days of the battle the Union cavalry was busy on the flanks and rear of the army, baffling the movements of the opposing horse in several hot engagements northeast of Gettysburg, its movements constantly coordinated and directed by its commanding general from his headquarters on the Baltimore Pike, in immediate proximity to the main army. Under his order of July 2, reiterated and amplified by the one of 6:00 o'clock a. m., July 3, Gregg's 2nd Division took position beyond the right flank of the army and was there to receive and repulse the determined attack of Stuart on the afternoon of the 3rd, aimed at the rear of the Union army, which, if it had reached its objective at the climax of Pickett's attack on Cemetery ridge, would almost certainly have precipitated a disastrous Union defeat. Pleasonton also ordered the concentration of Kilpatrick's 3rd Division and Merritt's Reserve Brigade on the Confederate right and rear during that same afternoon, culminating in a mounted charge, which produced great confusion in the ranks of Longstreet's infantry west of the Round Tops.

General Lee's army began its retreat from Gettysburg and from Pennsylvania on the night of July 4. But during that day, even before his troops had begun to move, the Union cavalry had sensed the situation and was in motion, Buford's division marching toward Frederick, and Gregg's and Kilpatrick's toward Emmitsburg, to harass his retreat and prevent or delay his crossing of the Potomac. Large numbers of prisoners and wagons were captured and many small engagements fought with the enemy before he reached the river at Williamsport, where, owing to the loss of his pontoon bridge, he had to halt, entrench, and wait until the 14th before he could cross. Then Buford and Kilpatrick hung on his heels and attacked his rear guard so vigorously that they took over 1,000 prisoners.

The operations of Pleasonton's corps after Gettysburg were far more aggressive than those of any of the infantry corps, none of which left Gettysburg until July nor arrived before Williamsport until the 12th. When they reached there they made no serious effort to attack the enemy, standing at bay with a river at his back. The cavalry alone, however vigorously it tried, could not prevent Lee's army from escaping to Virginia. But, in view of all that it did do, and had done since the beginning of the campaign, we are forced to wonder why, when Meade asked Halleck on July 11 to assign General Pleasonton definitely to the command of the Cavalry Corps, "in consequence of the very efficient services and the material aid rendered to me by the cavalry during my recent operations," the general-in-chief felt constrained to reply that Meade's telegram had been shown to the Secretary of War, and while "there is no intention to supersede him in command of the cavalry .....there is an objection to any formal order at present."

What was the basis of such an objection was one of the many riddles of army politics to which only Edwin M. Stanton could have furnished the solution. Neither he nor his chief biographers ever saw fit to do so. Mr. Stanton seldom stooped to deal with personages less exalted than commanders of armies and those of comparable prominence. A mere corps chief was perhaps too small to merit comment. Yet it is conceivable that Pleasonton's bad standing may have traced back to his friendship with McClellan and Hooker, both of whom the Secretary of War, notoriously, detested.

There was no diminution of cavalry activity during the next two weeks, while the Union army followed Lee back to the Rappahannock. When that stream was crossed on August 1, again at the old fighting ground in front of Brandy Station, it was Buford's division which pushed on to within a mile and a half of Culpeper and had to be stopped and driven back by Confederate infantry. Little glory accrued to either army during the ensuing four months of fall and early winter in that long series of comparatively bloodless marches and counter marches over central Virginia, which has been likened to some of the campaigns of "strategem and maneuver" popular in the times of Turenne and Montecuculi. But cavalry never worked harder nor more effectively in protecting the infantry of the rival armies.

Pleasonton's troopers in mid-September led the advance which drove the Confederates south of the Rapidan. When Lee flanked Meade out of Culpeper on October 10, it was the cavalry which covered the withdrawal of the army once more across the Rappahannock in an all-day rear guard action from Culpeper to Brandy, and afterward protected its flanks throughout the retirement by Bristoe to the heights above Bull Run. Subsequently, as Lee, disappointed in his intentions, fell back again to the old positions on the Rapidan, the cavalry executed a long succession of wearing marches, enlivened by the spirited combat at Buckland Mills.—the "Buckland races."—of October 19.

Back on the familiar grazing grounds of Culpeper

From Battles and Leaders of the Civil War. The Century Co.

The Union Cavalry under Gregg in action against Confederate Cavalry under Stuart, at Gettysburg. From sketch made at that time.

and Orange counties, Meade near the end of November made his experiment against the Confederate right flank and the road to Richmond, as Lee had experimented against his right seven weeks before. The wintry Mine Run campaign, as profitless, if also as bloodless, as the one which had preceded it, was almost wholly an infantry enterprise, the mounted troops having little to do beyond securing the flanks. When the Union army finally filed back north of the Rapidan to settle into winter quarters, the cavalry was set the dreary task of guarding the front on a line sixty miles long, besides patrolling the adjacent country to distances much greater.

The only major mounted activity of the winter was the raid of Kilpatrick and Dahlgren against Richmond, in late February, 1864. This spectacular enterprise, conceived in the manner of Stuart, was hatched wholly at Washington, neither Meade nor Pleasonton being consulted and neither of them looking upon it with favor, though both lent it all the assistance possible once it had been decided upon.

Lieutenant General Ulysses S. Grant was assigned to the command of the Armies of the United States on March 12, 1864, and on the 25th of that month General Alfred Pleasonton, by Special Order No. 27, War Department, was relieved from duty with the Army of the Potomac and ordered to report to Major General Rosecrans, commanding the Department of the Missouri, at St. Louis. The order came at this time as the direct result of a telegram from General Grant to Mr. Stanton, suggesting that it be made at once, the Cavalry Corps to be temporarily turned over to the senior officer present, to await the arrival of General Sheridan. On the same day that he received his order of relief, Pleasonton issued a brief, but touching and dignified, message of farewell to those whom he had commanded for so long, expressing the feeling that "the regret of separation from the many personal associations established in the Cavalry Corps becomes more impressive by the devotion, generosity, and noble bearing that have been exhibited throughout one of the most eventful periods in the history of the war." He left the army the next morning and immediately departed for St. Louis.

Not a great deal need be said of General Pleasonton's services in Missouri, though in time they lasted nearly as long as those he had performed in the East. They were satisfactory and, in the region where they were rendered, important, but dwarfed by comparison with his services in Virginia, the "Western front" of the Civil War. Placed in command of the District of Central Missouri, his headquarters were at Warrensburg, the end of the railroad then extending farthest westward in the State. Here he dealt with such weighty operations as the one detailed in the following report, submitted to General Rosecrans on July 30, 1864:

"A corporal and four men of Company G, Seventh Cavalry Missouri State Militia, while hunting a stray horse on Blackwater on the 28th were attacked by Dick Yeager, with about twenty men; a running fight ensued in which two guerrillas were killed, and Yeager severely wounded. No casualties on our side.

A. PLEASONTON,
Major General, Comma[illegible]ding."

Willing to serve in any capacity so long as h[illegible] could be of some use to his country, Pleasonton end[illegible]ed the petty round of duties for six months. At the [illegible]nd of that time he experienced the only brief int[illegible]val of service commensurate with his capacity which [illegible]ell to his lot in Missouri. Early in October, when S[illegible]erling Price came raiding up through the State, R[illegible]osecrans put Pleasonton in command of the forces in t[illegible]e field, hastily gathered to resist the invaders.

He organized the defense of Jefferson City, th[illegible]e capital, and when the enemy veered off from its [illegible]rmidable appearing earthworks, pursued them vig[illegible]orously westward toward Kansas City with a Prov[illegible]isional Cavalry Division numbering between 3,500 and 5,000 men, composed for the most part of Missouri State Militia. With even such a scratch force, his operations were markedly successful. But it was to be regretted that, with his opportunities, he did not make them even *more* decisive.

Late in October he had driven Price's force nearly to Kansas City, where General Curtis, with a large force of volunteer troops and Kansas militia, gave him such a warm reception that Price seemed likely to be squeezed to death between the upper and the nether millstones. His only avenue of escape was down the State Line road between Missouri and Kansas, leading south toward Arkansas, and while most of his army was engaged in holding back Pleasonton's and Curtis' troops at the Big Blue river and Westport, he passed his immense wagon train around into this road and headed it south. At Hickman's Mills, some twelve miles south of Westport, an intersecting road came into the State Line road from the northeast. Over this road, on October 21, General Rosecrans ordered General A. J. Smith, with a division of 9,000 veteran infantry, to march against Price, strike and destroy his wagon train and cut off his army from its line of retreat.

The result could have been accomplished. But General Pleasonton, fighting Price's rear guards, was convinced that the whole Confederate army was in front of him and could be best destroyed by bringing Smith's division to his own position. Rosecrans yielded to his representations and Price and his army slipped safely past Hickman's Mills. In making this decision Pleasonton committed the most serious error of judgment in his career. But that is easy to say today. He acted upon the information he had been able to gather and, as General Emory Upton has remarked, "seeking information at the point of the bayonet is one thing and looking for it on the shelves of a library is another."

A few days after this, Pleasonton failed to carry his pursuit of Price as far toward Arkansas as General Curtis thought he should have done. Nevertheless, he had in the meantime routed the Confederate army at the Marais des Cygnes, destroyed much of its train and wrecked the morale of all its troops except those of Jo Shelby's Missouri division, and the victory was sufficiently complete to discount defects. Pleasonton's part had been so conspicuous and had impressed Rosecrans so forcibly that on November 15 the latter wrote to President Lincoln, warmly recommending his cavalry chief's promotion "to the vacant brigadiership in the Regular Army." But it is doubtful if this helped Pleasonton much. Rosecrans' own conduct of the campaign against Price had not pleased General Grant, who a year before had rescued Rosecrans' army from starvation at Chattanooga. He was removed from command of the Department of the Missouri on December 9.

As for Pleasonton, he did not receive the promotion to the grade of brigadier general, regular army, but after returning from the pursuit of Price, was placed in the innocuous position of second in command of the Department of the Missouri, under General Grenville M. Dodge. This post he continued to occupy until the close of the war. Under date of March 13, 1865, he was granted empty brevets to the grades of brigadier general and major general, U. S. Army, for meritorious services in the campaign against Price, and for gallant and meritorious services in the field during the Rebellion. Mustered out of the volunteers in January, 1866, he stayed in the regular service until January, 1868, in the vain hope of receiving an appropriate promotion. Then, having been offered and having declined, a commission as lieutenant colonel, he resigned. Of his subsequent life we already know the salient features.

The removal of Pleasonton as head of the Cavalry Corps, Army of the Potomac, "was not a reflection on that officer," so Grant himself wrote later, "for as far as I knew he had been as efficient as any other cavalry commander." He was removed, then, so far as Grant was concerned, not as a punishment but as a convenience. It is conceivable, however, that a man who had held Pleasonton's position as long as he had held it might have made himself indispensable. Why he failed to do so, and in what particulars his failure lay, are matters not easy to determine.

He had suffered no glaring defeats; he had gained many solid successes. True, there was in his career less of the spectacular than in those of many of his contemporaries. He never indulged, as personal leader, in raids, those most dramatic activities of cavalrymen. Probably, from the standpoint of publicity, it was unfortunate for him that he did not. In the Civil War the glamour of raids excited great admiration, and roused in the people at large a conviction, which has endured into history, of the value of such enterprises. That they always, or even usually, repaid what they cost, is very questionable. But to the allegation, sometimes made, that Pleasonton himself was incapable of carrying through an undertaking of the kind, it need only be replied that he never had an opportunity to try. This was not altogether his fault. On several occasions he suggested wide enterprises for his corps which did not receive the sanction of higher authority.

But in the main, raiding was eschewed in the Army of the Potomac from Antietam to Mine Run because the keynote of its campaigns was caution. McClellan, Burnside, Hooker, Meade,—none of these cared to take chances with the disconcerting mobility of Lee. They wanted their cavalry close to the army, where its sensitive tentacles could keep constant touch with the foe. And, in the long run, that was where it belonged.

When the time came, and the commander who demanded cavalry raids on a great scale as an essential part of his program for beating the enemy into total submission, the general military situation had reached a stage analogous to that in the tactical course of a battle which was favored by Alexander, Hannibal, and Napoleon for throwing in their mounted troops, not to begin but to complete the destruction of the enemy. The great raids of 1864, alike in the East and in the West, while they accomplished great destruction of property, were conducted against an enemy rapidly approaching exhaustion, who was unable to gather forces sufficient for effectual resistance.

During Pleasonton's regime this was not yet so. He built up the corps which could be used for such purposes by persistently keeping it busy in the untheatrical but highly important work of gathering information for the army and guarding the latter against surprise, and seldom did it fail in these duties under his command. In the Gettysburg campaign he served Meade far more usefully than the accomplished Stuart served Lee, and though he did it by staying close to the army, his operations by no means lacked brilliance. At the same time, in such work the Cavalry Corps could seldom act as a whole under its proper commander. Generally it had to operate by divisions, brigades, or smaller units, the inevitable consequence being that the unit commanders got much credit for results achieved and the coordinating head little or none.

From this circumstance, too, perhaps arose the notion that Pleasonton was not an enterprising commander, but, in fact, merely a sort of staff officer, executing, without option to do otherwise, the behests of his army chief. Except in the sense that every subordinate is subject to the general direction of his superiors, nothing could be further from the truth. Pleasonton, as has been said, left no autobiography to explain his actions, to define the extent to which they were governed by others, or to answer the allegations of his critics. But it is certain that he would not brook unwarranted interference with his authority, and it needs only a perusal of the current orders, reports, and correspondence contained in the Official Records, War of the Rebellion, to establish the fact that every one of the multitudinous activities of the Cavalry Corps from Brandy Station to the spring of 1864, with the possible exception of Kilpatrick's raid, were firmly guided throughout by the head and the hand of its commanding general.

To what, then, must be attributed the undeniable fact that his name is less regarded today in cavalry annals than are the names of many others who accomplished less? Probably it comes to this: in four years of uniformly creditable campaigning and the course of one hundred and five well-fought battles, he did not achieve a single dazzling triumph. Quebec made Wolfe immortal. Brandy Station merely burst the chrysalis of a cavalry corps. Pleasonton, the successful, was not quite successful enough.

A Brigade Command Car

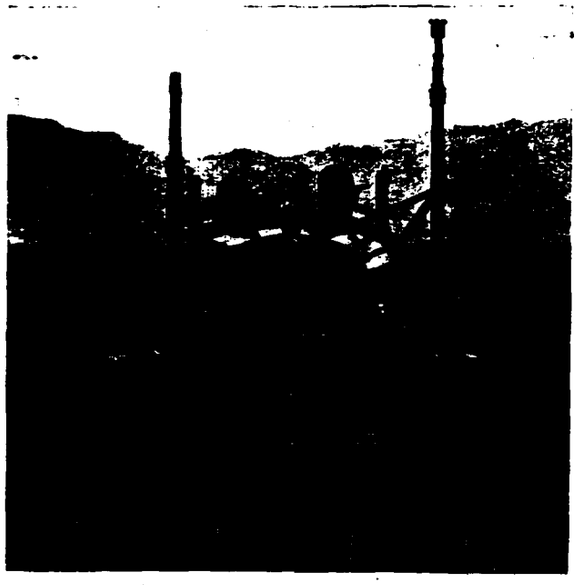
EXPERIENCE has shown that in the majority of tactical situations the Cavalry Brigade Commander with his working staff and communications requires motor transportation of medium speed and good cross-country ability. Reliability, comfort, and emergency fire power are additional requirements.

A vehicle has been developed in the 2d Cavalry Brigade by Lieut. Donald H. Nelson, Cavalry, Brigade Signal Officer, which is a solution to the problem, and a description of the car should be of interest.

A Cadillac Model 63 chassis was selected to start with. The wheels were cut down from 23" to 20" and 7.50 ballon tires substituted for the original 5" high pressure. This gives better traction and flotation without fender interefference and, it is believed, without serious increase in axle strain. An all-steel body, extending well back over the rear axle with low sides, shallow cowl, and a small one-piece windshield was built up by electric welding. Exposed edges of sides and cowling were protected with iron conduit split and tacked down with welder. The well-padded and sprung 42" seats are an interesting deviation from the familiar bucket-seats of cross-country vehicles. Five passengers are comfortably accommodated.

The spare tire is carried on right forward running-board; smoke and gas candles and 500 rounds of machine gun ammunition are in a chest convenient to the right front seat.

The right side of the cowl supports a machine gun mount capable of 360° traverse and practically 90° elevation. This mount was developed by Major Woodberry, Division Ordnance Officer, and is quite stable. It desirable in antiaircraft fire it may be elevated 18" in less than a second. The gun is locked in the



raised position by a quarter-turn of the knurled locking ring.

The telescoping mast on the left of the car is composed of four five-foot sections of steel tubing. The sections are extended by hand, one at a time, and locked with a pin. With this mast one man can erect 20′ umbrella antennae without assistance. A two or three man crew can erect the antennae in two to three minutes.

The transmission was originally equipped with a small tire pump, thrown in or out of gear by a lever on the floor in front of the driver's seat. Using the same power take-off and operating mechanism, a 12-volt generator is driven at 3 times engine speed thru a silent chain. This generator is used to charge the radio batteries.

The radio equipment of this car includes: (1) A dynamotor operated SCR 163, capable of working in Division, Brigade, Artillery or Armored Car nets; (2) An SCR 109 transmitter for working airplanes, 152 sets in regiments or on special missions, and the SCR 136 set at Division and (3) a commercial broadcast receiver with dynamic loud speaker installed behind dash to cover airplanes and Division.

In operation, the Brigade Commander, two staff officers and two operators ride the car. Reports from armored cars, airplanes and Division are received over the loud speaker by voice directly by the Brigade Commander, who dictates his replies and orders directly to the operator. Record copy of incoming and outgoing messages is made in short-hand by the log operator.

Maneuvers and exercises have shown this car and equipment to greatly expedite brigade movements and to treble information coming in to Brigade Headquarters and that sent to Division Headquarters.

The chassis is not ideal but is the best we can hope for at the present time. The radio equipment also leaves much to be desired; however, improvements in this feature are being developed and may be described after further test.

The Army Museum in Munich:

With Pertinent Thoughts on our O. R. C.

*By Major Jerome W. Howe, United States Army Retired**

The Army Museum in Munich

THE temple of military history erected in Munich a decade before the outbreak of the World War has an effective setting. The royal palace or Residenz overlooks the spacious Hofgarten, laid out with lawns and gardens and gravelled walks and surrounded by frescoed arcades in which some of Bavaria's glorious past is depicted. And at the far end of the Hofgarten was in former days a low-lying lake for pleasure boats and stately swans. This lake has been filled in, but we still descend from the upper level of the Hofgarten to where the crudely impressive War Monument renders inscribed honor to the memory of the 13,000 men of Munich who fell during the war. And beyond, a magnificent background for the brave, bronze equestrian statue of the mediaeval warrior who was the first of the Wittelsbachs, rises the splendid pile that is the Army Museum.

The visitor should go directly to the second floor, where he will find himself at once under the lofty dome, surrounded by stone pillars and galleries and a few score of battle-flags. This Hall of Glory is a noble and impressive chamber, and one lingers a while to feel its architectural charm. Then one mounts to the gallery to see the toy soldiers. Mere toy soldiers, playthings, but marshalled in significant array!

In one case perhaps forty feet long a whole review is presented. First come the long lines of infantry, goose-stepping and rendering salute as they pass the reviewing stand where are marshalled a double rank of royalty, general officers and staff. Then follow the squadrons of horse, and behind them some thirty or forty pièces of artillery, each with its full harness, caisson, and complement of cannoneers. Finally come the ambulances, the transport and bridge train. At intervals are bands,—with the cavalry a mounted band; and so realistically is it all set up that one can almost hear them play the stirring strains of martial music. Yet they are nothing but tin soldiers!

In another cabinet is presented the repulse of the French cavalry at Sedan. Reinforcements are marching up, a field hospital is in full operation, the ground is strewn with casualties. Shrapnel bursts are visible among the guns unlimbered on the heights back of the German infantry who are attempting to repulse the charge. It is vividly portrayed.

Then, with this preparation of one's martial imagination, one may return to the ground floor and do the rounds of the various collections of arms and accouterments. Taste will have to dictate where to linger; all are fascinating. If historical sequence is followed, one will first visit the collection pertaining to mediaeval warfare and antiquity. Here is armor for man and horse, and weapons wielded by the Roman legionary and the cross-bowman of the middle ages. Here one may see a Roman horseshoe, of plate-iron, contrived to be secured to the foot by thongs. Battle-clubs and pikes and great, two-handed swords, bits and spurs from the earliest times, the panoply and pride of feudalism.—all are here well displayed.

In the section devoted to modern war, one may trace the development of arms, uniforms and equipment from the wars of Frederick and Napoleon down to the Boxer Rebellion. Glorious was the attire in which military pride paraded; not so colorful, but quite as interesting is the development of arms and equipment through the eighteenth and nineteenth centuries. Beautifully made models as well as many actual pieces illustrate the evolution of the field piece, which becomes larger and larger as the horse-pistols of the cavalryman become smaller and smaller. The exhibits from the Franco-Prussian war have been shorn of some of their former glory, because many captured French trophies had to be given up after Versailles. But this collection is still a place where fond German parents point out with pride to the rising breed of warriors the splendid achievements of German arms against their eternal enemy.

The World War is well represented, despite the handicap imposed by the peace treaty, which required the surrender or effective destruction of artillery pieces. The exhibits are largely of actual paraphernalia, arms, uniforms, equipment of all services. But also models are used to advantage to illustrate the trench systems, pontoon bridges, machine-gun emplacements, hospital trains, airdromes. And all about the walls are paintings, great and small, and drawings, of battle scenes and episodes, and heroes.

On the occasion of one of a number of visits made to this great museum, it occurred to the writer that here is an example of a kind of instruction that may be profitably applicable to our Officers Reserve Corps and the Reserve Officers Training Corps. The mind is usually more vividly impressed by things seen than by

*Editor of the CAVALRY JOURNAL 1921-24

things read or talked or harangued about. The exhibition of equipment and the paraphernalia of war,—materiel.—might, particularly if full use be made of relatively inexpensive and easily transported models, be employed to a far greater extent than is at present the custom, and such display would serve both to stimulate interest and instruct.

This method of instruction has a brilliant and extensive application in this Bavarian capital, where the famous Deutsches Museum of Technical Culture exhibits to thousands daily the development of science and technology in all the departments that contribute to industrial and social life as it is lived on this planet today. And here again, a very large and important portion of the exhibits are small-scale models.—complete, accurate, and in many instances to some extent practical. Again, in the large engineering college in the same city, the equipment includes a comprehensive array of small-scale models, often sectioned, or so arranged as to reveal their construction and operation, of every variety of engineering works.

Why not use the small-scale model in military instruction,—particularly to supplement the present inadequate instructional facilities in the O.R.C. and R.O.T.C.? Small-scale models save time, space and expense, and often serve as well as full-sized originals, and much better than pictures, diagrams and descriptions.

In the schools and colleges where military instruction is given, there is perhaps in the main a fair supply of instructional material, but even here a pontoon bridge or a trench system, that would be impracticable to reproduce in actuality, could be effectively exhibited in small scale. This idea would obviously, however, have its greatest application in the schools for reserve officers. These are, so far as the writer has observed, carried on under conditions where, except for the occasional brief tour in camp, the reserve officer is entirely removed from military paraphernalia of whatever kind.

Would it not be valuable, in the instruction devoted to hippology, for example, to exhibit for examination a sectioned model of the horse's foot, with shoe and nails, both to teach the foot structure and proper shoeing principles? Why not decorate the meeting room of a cavalry reserve regiment with a full-packed saddle? Model field pieces, model fuses, model dissor might be used to advantage in the training of reserve artillery officers, while model bridge equipment, roghitches, fortifications, would go far to make more realistic the engineer officer's study of his special branch.

Map study and map problems are requisite in all branches, and yet the average young reserve officer is probably quite unprepared for the intelligent and complete interpretation of topographical maps. An excellent help in this direction is the simultaneous use of a colored model of the terrain which the map represents. And it is safe to add that an outpost problem worked out or demonstrated on such a model will make a far more vivid and lasting impression than one gives on the map.

It is even quite possible that toy soldiers themselves can be profitably employed to explain with greater definiteness and vividness certain formations and maneuvers.

In conclusion, it may be urged that in addition to certain definite advantages which can be pointed out in detail, the receipt, in rotation perhaps, or for permanent retention, of such simulated equipment and paraphernalia by reserve regiments and groups would operate as one more attraction and appeal to this component of our National Army.

Powers and Limitations of the Light Machine Gun

By Captain Thomas J. Heavey, 2d Cavalry

THE correct tactical and technical, or mechanical, employment of a military weapon should be based on its powers and limitations. This statement is really axiomatic, but there are incidents in military history that prove that it has been ignored. The cavalry has a new weapon under the name of "light machine gun," that has, for practical purposes, all the features of the "machine rifle" and, in addition to these, many characteristics of the heavy water-cooled machine gun. Many questions will arise and, for that matter have already arisen as to the correct tactical employment of this weapon. It is not the purpose of this article to suggest any rigid rules for such employment, but to acquaint the reader with specific instances of what the gun has done and obviously may do in similar circumstances, in combat. Having general knowledge of its powers and limitation, common sense should dictate reasonable tactical employment.

It has recently fallen my lot to fire, and witness the firing of, many thousands of rounds of ammunition with this weapon. This firing, conducted by direction of the Cavalry Board, was for test purposes of determining exactly what type tripod was preferable, to determine what accuracy the weapon had at normal combat ranges, and to determine "accuracy life" of the air-cooled barrel. The recording of the different tests fired are incorporated in the proper report, but with the permission of the Director, The Cavalry Board, excerpts from this report are included herein. Some additional firing, not included in the Cavalry Board tests, will also be referred to.

Comparatively few Cavalry Officers will have the opportunity to actually do such firing as listed herein; hence, the author deems it wise to acquaint as many officers as are interested with the knowledge gained by personal experience. All firing listed herein was done by myself, or Sgt. Jens Jensen, Cav. Sch. Detachment, and as both firers happen to be "distinguished riflemen", it is possible that the results are slightly better than might normally be expected. However, since the gun was fired from a very stable tripod, the actual personal equation of the firer is about eliminated, and it is quite possible that after some experience with the gun, even better results would follow.

What was of greatest interest to me in this firing was the tests of accuracy. Obviously, being an enthusiastic "peep-eye" shot, this is most natural, but as to whether or not this is of as much importance as ability to sustain fire for a great length of time, I leave to you. The accuracy tests consisted of firing at ranges of 1000", 200 yards, 500 yards, and 1000 yards I will discuss them in that order.

At 1000", all firing was in bursts of five. A series of at least ten bursts was fired, the center of impact computed, and mean radius of the series recorded. An additional measurement of extreme horizontal and vertical dispersion was also recorded. This firing, on latest model tripods tested, gave a mean radius of .6161". One particular series gave a mean radius of .530". In 32 groups, five rounds each, fired from the final model tripods, but two shot holes were of more than two inches in vertical dispersion, one being out 2.25", the other 2.15". Were these groups centered on the usual machine gun scoring space, all would have been perfect scores, the two "strays" referred to just breaking the line. This particular 1000" target photographed, however, is not all automatic fire. The particular student firing it, NCO Class, Cav. Sch., was given free rein, either single shot fire, or full automatic. The "searching" scoring space is all full automatic, and the other scoring spaces about half each type. For those readers who have had experience firing the water-cooled machine gun on this target, a comparison is invited. This particular soldier who fired was not an experienced machine gunner and had received about one hour's actual instruction on the weapon.

1000" Target

At 200 yards, the test firing was in bursts of ten rounds, the mean radius, extreme horizontal and vertical dispersion being recorded. No photographs of this firing were taken. However, it was apparent that most of the groups would have easily been "possibles" on the "D" rifle target. Some of them might have been as high as 48 or 49 on the "A" rifle target. The computed mean radius resulted in the figure 4.7", and, though I have not submitted a photograph to prove it, this is a very small mean radius.

At 500 yards, the same procedure was followed. The

computed mean radius varied in different series of bursts, from 10.6" to 12.67". Photographs of targets No. 8, 9 and 14 give a good idea of the patterns obtained. It is noted that, as in the water-cooled machine gun patterns, there usually are one or two "strays" in the bursts. The targets fired at were the "B" rifle target. If the reader will imagine the "D" target superimposed over these groups shown in the photographs, a comparison with the usual 500 yard rapid fire rifle score is interesting.

"B" Target, single bursts of ten rounds, 500 yards.

At 1000 yards, three different types of fire were tested. First, single shot fire at a very rapid rate; second, full automatic fire in bursts of five; third, full automatic fire, one burst of fifty rounds. All types were in fifty-shot strings, and, as the pattern was slightly larger than the target, only the number of hits was recorded, it being impractical to compute mean radius. The average time for fifty shots, single shot fire, was about forty-two seconds. The average time for firing fifty shots in bursts of five was nearly the same as in single shot fire. Firing one burst of fifty rounds, the average time was seven and one-fifth seconds. Targets No. 4 and 10 are with single shot fire. No. 4 has 47 hits and 2 ricochets. No. 10 has 43 hits and 4 ricochets. Targets 5 and 9 are with firing bursts of five. No. 5 has 37 hits and 5 ricochets. No. 9 has 35 hits and 0 ricochets. Targets No. 20 and 26 are with one burst of fifty rounds. No. 20 has 40 hits and 1 ricochet. No. 26 has 47 hits and 1 ricochet. As to which method of fire is preferable at this range, many factors must be considered. Do not draw any conclusions until later.

The tests of "accuracy life" of the air-cooled barrels most lucidly indicate the advisability of remembering the first sentence in this article. This firing involved a long irksome period for the firers and, probably on account of this, at the time, did not greatly impress me one way or the other. Since studying the results over, however, it daily looms up of greater importance. Student classes at the Cavalry School have fired this weapon, and witnessing this firing has again pounded it home to me that knowledge of the *capabilities* of the weapon is not complete until we give due emphasis to its *physical limitations*. It is well known that "accuracy life" of barrels is dependent primarily on rate of fire, whether an air-cooled or water-cooled machine gun is used. Hence the tests dealt primarily with rates of fire.

Being anxious to find out the worst to begin with, the first test was to discover, by experiment, how much continuous full automatic fire could be delivered with the barrel. The results were verified by repeating the test, *they were, accuracy up to and including 550 rounds.* The gun continued to fire satisfactorily until over 800 rounds, and just how "effective" such fire would be is left up to your own decision. A final defensive line where 80 or 90 percent of the bullets are tumbling and keyholing, would be a terrible menace to get through. But what occurs five hundred yards from the muzzle when the bullet is tumbling is a different matter.

Firing at 200 rounds per minute, bursts of five, the accuracy lasted to over 800 rounds. However, the metal fouling of the 1906 ammunition after this is almost beyond the imagination. Lands and grooves are not distinguishable for the last six inches of the bore.

Firing at 120 rounds per minute, in bursts of five, accuracy lasted until 1200 rounds.

At 100 rounds per minute, the first keyholed round showed up at 1300 rounds.

At 70 rounds per minute, we were still going strong at round No. 1400 but dispersion very great, and the gun was pretty hot.

At 60 rounds per minute, which is about as a good gunner will fire if he is observing and adjusting his fire properly, still reaching out a little further to round No. 1600.

Ordnance Dept. figures for similar test, give a record of 4500 rounds at 25 rounds per minute.

So far, the reader will probably see a large question mark looming on the horizon. However, we are not done yet. All firing listed above on this test was without any time out for cooling. The belts were cut at the number of rounds per minute to be fired, and every minute, by a stop watch, we put through the prescribed number of rounds. Hardly a *combat* situation, as I cannot imagine an enemy so obliging as to furnish us with a suitable target for such a stretch of time, same target being under the fire of a weapon that has the accuracy this gun has. So we assumed that the enemy would be delayed somewhat, and the gunner and assistant could change to another barrel at intervals.

This test showed that the loss of accuracy was in a great measure due to excessive heating, and secondarily to erosion. When a rate of 60 rounds was maintained, and barrels changed every 17 minutes (1020 rounds), the gun with its normal quota of two barrels, was still delivering excellent fire after 90 minutes (5440 rounds actually fired).

Going back to the barrels fired until accuracy was lost in the sustained fire tests at different rates, it was very gratifying to discover that they still were good for some appreciable firing after cooling. Even the barrels that fired at the maximum cyclic rate for 550 rounds grouped well for a couple of hundred additional rounds after cooling. And those that went out at around 1300 to 1600 rounds at slower rates, 60 to 80 rounds per minute, put out about 1000 rounds satisfactorily after cooling. Again cooled, they functioned satisfactorily for from 400 to 800 rounds. However, the rates of fire of over 120 rounds per minute

resulted in such extreme fouling, apparently due to excessive heat, that the cupro-nickel jacket melted and fused into the barrel lands and grooves. Although grouping was good after cooling, I seriously doubt that accuracy at anything but very short ranges was possible. There seems to be a wide discrepancy between the Ordnance Dept. figures, viz. 4500 rounds at 25 rounds per minute, and the best figures obtained locally. This is probably due to interpretation of what "accuracy life" is. The Cavalry Board recorded the first actual keyhole, or bullet entering the target broadside, as the end of accuracy. However, it was noted that fairly good groups with no keyholed rounds were obtained after this first bad round. It is possible that a different interpretation was made in the proving ground tests. Certainly the local interpretation gave no advantage to the gun.

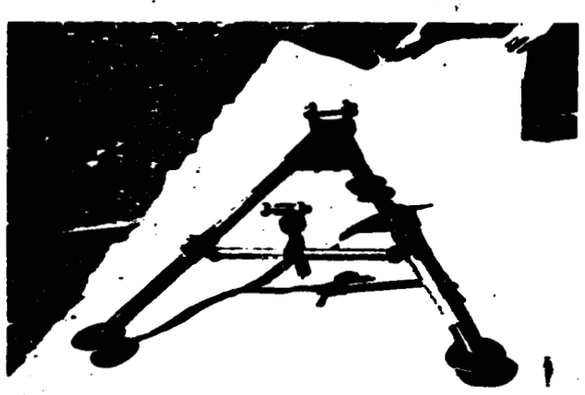
The above mentioned firing is not a thorough and conclusive presentation of all characteristics of this weapon. However, it gives a fairly accurate idea of the actual limitations and capabilities of the present gun, under the particular set of conditions. All

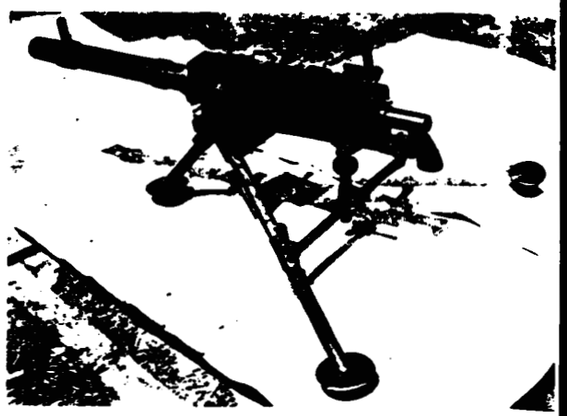
Upper row: "C" Target; single shot fire, 1,000 Yds., 50 Rds., in 42"; Middle row: "C" Target; automatic fire, bursts of 5, 1,000 Yds., 50 Rds., in 40"; Lower row: "C" Target; automatic fire, one burst, 50 Rds., in 7 1 5".

firing was from the ground as found.—no T-base sand bags or special preparation of the ground was permitted. The 1000″ firing was from good solid turf. The 200 yard firing was also from ideal ground. However, the 500-yard and 1000-yard firing was from poor ground. The 500-yard firing point was made ground. and very soft. The 1000-yard firing point was sandy loam, also soft, and with but sparse grass roots to hold it together.

I was so impressed with the accuracy tests that I took the pains to fire the water-cooled machine gun mounted on the 1917 tripod under the same conditions at 1000″. No T-base, no sand bags, but the gun as sturdily mounted as possible otherwise. The mean radius turned out to be 1.82″, or approximately three times the size of the same size burst with the light machine gun. Using single shot fire, the gun is in my opinion far more deadly than the service rifle with the average expert rifleman firing. And, further, due to the fixed mount, it will be just as good with a very ordinary marksman handling it. Whether such extreme accuracy is essential is open to argument, but it should not be lost sight of, and full advantage should be taken of this particular characteristic in the actual employment of the gun in combat. This characteristic must also be given due consideration in any record qualification course prescribed. My reaction to this problem is that it will be quite a problem to design or prescribe a target course that will be *difficult enough* to require skillful manipulation and technical use of the gun and mount. During the firing at longer ranges, some of the later model machine gun tracer ammunition was used, in conjunction with M-I ammunition. The results obtained were uniformly excellent, and our light machine gunners should, by all means, gain familiarity with the combination of tracer and ball ammunition to obtain a rapid and accurate adjustment on any target.

The accuracy life of the barrel precludes the use of the gun in firing long bursts, or in maintaining an extremely rapid rate of fire for any great period of time. Of course, some emergencies will require this, and, when this situation arises, the light machine gunner must do the best he can. Spare barrels in combat hence should be arranged for. Our present equip-





ment of one spare barrel could most advantageously be augmented by *two more* in any combat situation where long sustained fire is to be a probable requirement. However, the barrels we now have will handle all the ammunition we can carry in pack without any difficulty. This question of ammunition supply more or less dictates the actual type fire normally used. Small bursts, three to five rounds each, or to me single shot fire, at a rate no faster than necessary will economize ammunition and get the best results from that available, in addition to saving wear of barrels. Also every means should be taken to keep the gun as cool as possible. Short cessations of fire are to be expected, and welcomed. If a situation arises where large expenditure of ammunition occurs, barrels should be changed at every 1000 rounds, advantage being taken of these short cessations of fire to do this. In such a case, due care by the personnel is necessary to prevent accidents. The gun will fire single shots of its own accord, after getting very hot. However the cartridge will not explode from the heat of the chamber for at least fifteen seconds. When a hot barrel is to be changed, the safest method is to pull a round from the belt, just outside the feedway, then fire the remaining rounds up to this empty loop. If this is not done, the gun must be promptly unloaded immediately after the trigger is pulled.

Concurrently with the firing mentioned above, records were kept of the mechanical functioning of the gun. They were very brief. In the twenty thousand odd rounds fired, (some "boat tail," some tracer, and the majority the old '06), one single malfunction occurred, this due to defective round. Split necks, blown primers and the usual ills of '06 ammunition were in evidence from examination of the empties, but no actual stoppage occurred other than one misfire. Four different guns were used, and conditions as to care and cleaning, loading and inspection of ammunition were as near correct as possible.

If the guns we get in all the regiments produce results in service that compare equally with this firing, and there is no reason why they will not, it means that we have stepped up from the lightweight class in hitting power, to at least the light heavyweight class.

Forts and Fortresses

By Colonel Samuel G. Shartle, Coast Artillery Corps

"A single archer from a wall
A hundred foes forfends:
And so the military art
A fortress recommends."
THE PANCHATANTRA.

THIS is more than a mere jingle from ancient Sanskrit folk-lore. Rooted in the cradle of our thought-forms, it expresses succinctly a truth universally recognized since time "whence the memory of man runneth not to the contrary."—an idea born of instinct, elaborated by ingenuity, and perfected by science. Thus the infantryman of old practiced "economy of forces" and added to his ultimate offensive power, just as the infantryman of to-day pauses in his trenches and field-works for the same purposes, be it through necessity or design as part of a plan to increase his mobility elsewhere. Of course only by movement can one go from where he is, but one may not wish to be compelled to go from where he is,—especially if that place be a key position and the retention of it is important in the execution of the general plan. So "A single archer from a wall," etc.,—for the temporary important tactical position field works, for the permanently important strategic position, the fortress. While fortifications pertain primarily to the art of defense, this fact does not exclude aggressiveness per se, nor should it in any manner detract from the general "principle of the offensive," essential to successful victory. On the contrary, history shows that forts have had vital influence both strategically and tactically, as well on the formulation of campaign plans as on their execution.

From the Chinese Wall to Verdun and the Vosges chain of forts, from the walls of Romulus too readily scorned by Remus to the great Fortress of Paris, from the Cliff Dwellers' abodes to Gibraltar,—in myth and history, the idea of utilizing earth and masonry grew from one of mere protection for the indwellers, as in walled towns and castles, to one of systematic strategic works that not only play a role in the passive defense but give law to active campaigns. Fortifications have become an important branch of the military art. Their influence in war is no longer limited by the range of their guns. They are no longer mere strongholds of the "archer on the wall," against whom his kind was powerless,—of local significance only. With the increase of population, the multiplication of towns, the growth of armies in the field and the necessity of destroying these to win a war, that is, with an understanding of the *true objectives*, the hostile forces rather than places, fortifications have to be fitted into a general scheme of defense and offense. "Accordingly the number of forts must be necessarily very much decreased, and this again must lead away from the idea of protecting directly people and property of towns by fortifications to that other idea of considering forts an indirect protection of the country, which they furnish through their strategic importance, as knots that hold together the strategic net." *Clausewitz, Book VI, 10th Chapter.* So this military philosopher, who died 100 years ago, wrote in the books first published by his widow in 1832. History has confirmed his observation. Forts then must be considered in relation to their strategic function, not as mere isolated piles of masonry. Forts that have no such relation waste men and money and may be an encumbrance in war. This is the criterion as to obsoleteness, not the mere fact that they are vulnerable by reason of inadequate armament or personnel. The conclusion after the comparatively easy fall of the Belgian forts in the late war that fortifications in general had little value was found to be a hasty one, as will be shown. We shall find that in actuality the forts that played a part in the World War justified their existence, in proportion to their strategic importance and power of resistance. Strategic forts have some or all of the following characteristics:—

1 They protect the homeland by denying to the

Archery

enemy use of direct and naturally advantageous lines of approach to vital areas.

2. They protect areas of mobilization.

3. They determine the initial deployment and operations.

4. They are advantageous points of departure for maneuver or attack.

5. They impede important lines of communications, either directly or on a flank.

6. They delay an enemy advance by necessitating time-consuming attack.

7. They use up the attacker's man-power, holding a portion of his forces from the main objective.

8. They furnish strong points in a line of defense, defend bridge-heads and harbors.

9. They facilitate surprises by concealing movements.

10. They give support to retreating forces.

11. They are convenient and safe bases of supply.

12. They are secure stations for organization and reorganization of forces.

By way of illustrating these points, a brief sketch of the influence of forts in the World War follows:

Let us first inquire why the Germans chose to make that grand swing through Belgium, a neutral country at the beginning, involving as it did serious international political consequences. The answer is forts. strong forts, 1st class forts,—Belfort, Epinal, Toul, Nancy, Verdun. In the von Schlieffen Operations Project, on which the von Moltke plan was built, we find the following: "All France must be considered a great fortress. Of the outer ring, the stretch Belfort-Verdun is almost impregnable, the stretch Mezieres-Maubeuge-Lille-Dunkirch, however, vulnerable. Here we must try to drive into the fortress." Thus France's eastern forts dictated the German initial plan. They had another vital influence, for they screened the French mobilization and offered favorable points of departure for the initial French offensive. To these circumstances must be attributed von Moltke's fatal modification of the von Schlieffen plan, a violation of the Principal of Mass, in that he strengthened the German left wing to counter the French offensive at the expense of the right wing upon which the decision depended. Von Schlieffen's grand conception, based on Hannibal's double envelopment and destruction of the Roman forces at Cannae, necessitated a great mass on the right, a comparatively weak holding force on the left and included the investment of Paris. Von Moltke's fatal modification eliminated the investment of Paris, thus exposing his right wing, weakened to strengthen the left. This modification spelled failure. If the right wing had had one of the left wing armies (6th and 7th), even the delays occasioned, as will be noted, by the Belgian and North France forts would not have turned the scales on the Marne, and success here would have dissipated the menace of the French initial thrust in Alsace.

In addition to the influence of the Belfort-Verdun line on the initial German plan and its execution, this line was a bulwark for France throughout the war, notwithstanding the powerful field guns of the Germans. We need only to recall the part Verdun played in 1916. Recognizing the importance to France of this salient, Falkenhayn planned to wipe it out. The Germans made desperate and repeated attacks on Verdun from February 21, 1916, to June 23d. July 15th, the French started an offensive and maintained the initiative until the end of the war. The lines of February 21, 1916, were partially restored in October, 1916, but not finally until August, 1917.

Verdun saved France! Here French heroism stood out in a clear light and achieved undying fame. While the successful defense must be ascribed primarily to the bravery, tenacity and heroic sacrifices of the defenders, yet these without the brilliant leadership which organized the defense as well as maintained morale could not have made good the famous resolution, "On ne passe pas." The part the forts played is clearly set forth by Marshal Petain. "The forts of the Verdun stronghold were of great assistance to our troops during the battle and contributed largely to our success. This fact is little known and must be emphasized in order to correct erroneous opinions that have become widespread concerning the value of permanent fortifications." (From "Verdun" by Marshal Petain, page 219.) The Marshal then relates how in 1915 fortifications having fallen into disrepute, due to the short resistance of Maubeuge, Liege, Namur, etc.—2nd class forts, the northeastern forts of Verdun, including Douamont, Vaux, Thiaumont were practically dismantled by the decree of August 5, 1915. "As a result of that decree, the works of Verdun were stripped of most of their means of defense. The flanking casemates and the counterscarp trenches were dismantled the disappearing guns taken out of their turrets; the munitions and supplies put to use outside the forts and the garrisons withdrawn." (Id., page 226 And again, "Thus the permanent fortifications played their part. They were always there ready to make themselves felt, when everything else had been swept away That is their peculiar nature, and at Verdun they demonstrated it in startling fashion. Their outer shells lasted in spite of the incredible amount of high explosive used up in the attempt to destroy them. • • • At the lowest estimate, 120,000 shells fell on Douaumont. At least 2000 of these were of 270 caliber or larger • • • The subterranean portions received no damage whatever." (Id. p. 227, 228) I saw these after the armistice and they were quite intact. "If the Fort of Douaumont had been occupied as it should have been it would not have been captured." Id. p. 231) After the capture of Douaumont, "the only completely organized set of fortifications presenting a solid line of defense was from that time on situated farther back. • • • Froideterre, Souville, and La Laufee —three fortified hillocks never captured throughout the course of those desperate struggles, stood out on that chaotic battlefield as immovable obstacles to which the defense could cling." (Id., p. 225, 227)

Had Falkenhayn had the prescience of von Schlieffen, had he not been led to false conclusions by the comparatively easy victory of big guns over little guns had he properly evaluated the conditions in Belgium

at the beginning of the war. Verdun would not have been attacked and masses of troops wasted in vain. Excepting the attack on Verdun, the great forts on the eastern border of France were never seriously threatened. They fulfilled their mission. They protected the French mobilization; furnished opportunity for the French initial offensive, which drew forces from the enemy's right flank; held him at bay to the end of the war, and shielded the American preparation for the final and victorious drive.

Here then we have a classic example of strategic forts in war. So convinced are the French of their value that they are spending milliards of francs in modernization, supporting redoubts, machine gun positions and the necessary installations that go to make the modern wall against an enemy. They are constructing an even more impregnable line of fixed defenses from Switzerland to north of Verdun than that which withstood a determined and powerful hostile force during the war.

Sufficient has been said to make clear the influence of these 1st class forts on the strategy and tactics, and on the final outcome of the struggle. Let us now turn to the part played by the lesser forts of France and Belgium.

In February, 1915, I inspected the emplacements of two 42 cm. mortars, which the Germans brought up during the siege of Antwerp to fire on the outer forts. It was stated by a German officer that 8 shots were fired at 5 minute intervals at Fort Waelhem, 15 kilometers distant, and that the map-ranging was so accurate that the fort was destroyed as a fighting unit by these shots in the brief time it took to fire them, about 40 minutes. The destructive effect of the fire on this and other forts at Antwerp, at Liege and at other places in Belgium, France and Poland was noted. There is no question that powerful portable siege weapons can quickly place hors de combat a fort of inferior construction when either through weaker armament or faulty conduct of the defense, or both, fire superiority is gained by a determined attacking force. This fact was demonstrated many times during the World War. The significance of it, however, does not go farther than an illustration of the Principle of Mass as applied to limited and local objectives. To the extent in time and numbers that a fort causes diversion of hostile forces from the main objective, it justifies its existence and even the ultimate sacrifice, if necessary, of its garrison. The influence of a fort's resistance on the main operations is the criterion by which to judge its value.—*not*, as is done so superficially very often by the fact that second class forts are vulnerable to the attacks of modern field weapons.

Cited in the argument that forts belong to the past is the fact that the Germans disposed of, in short order, Belgian defenses at *Liege, Namur* and *Antwerp,* and the French forts (2nd and 3rd class) on the Belgian border.—such as the works at Montmedy (2nd), *Les Ayvelles* (2nd), D'Hirson (3rd), Flines (3rd), Maulde (3rd), Lille (2nd and 3rd), and others that may be put in a 4th class, as *Givet* and *Longwy,* as well as those (3rd class) in a secondary line,—La Fere, Laon,

Fort Boussois bei Maubeuge

Malmaison, Condé Sur Aisne. But of these only those in italics contested the German advance. The rest were timely evacuated. Were these contests justified and what are the facts with respect to their influence on the grand operations? Just why the Germans planned to go through Belgium, I have already discussed. At this point let us deal with the fact that they did and remember that with an Eastern enemy pressing them, time was an important element.

NOTE. French forts by the law of 1899 were of three classes.
1st Class to be maintained with modern technique and sufficient material and personnel for long resistance.
2nd Class maintenance limited, dependent on circumstances.
3rd Class maintained but not included in the project for modern armament

The Liege and Antwerp fortifications were of the ring type, the design (about 1890) of the celebrated Belgian Engineer Brailmont. *Liege* was surrounded by 12 forts with cupola guns and concrete shelters on a radius of 7000 to 10,000 yards. The intervals were thus 3000 to 5000 yards, which were not, as originally planned for war, covered from fort to fort by infantry trenches. The Germans attacked August 4th, and August 6th, penetrated with infantry to the city, but took until August 16th to reduce all the forts.—an operation requiring the use of 12" mortars (Austrian). Thus forts built to withstand siege pieces of less than 8 inches and without infantry support.—more than a division left August 6th and joined the main Belgian Army, held up the enemy's advance at a critical point for 13 days.

Namur, also on the main line of advance, held two Army Corps reinforced with siege formations from Liege, from August 19th to 28th, another 10 days.

Antwerp with a double circle of Brailmont forts afforded protection for the retreating Belgian Army and, by reason of its situation behind the Scheld, Rupel, Nethe and Dyle, a line of escape for this army and the English and French reinforcements. Antwerp was on the right flank of the German advance and line of communications. The 1st German Army had to leave behind two corps as a covering force until the organization of the Beseler siege group of 60,000

which included one of the corps of the 1st Army (III A. C.). The importance of eliminating Antwerp as quickly as possible was recognized and General Beseler conducted an aggressive attack from September 27th to October 10th. when the defense was abandoned, the garrison escaping to the coast. But the Germans were short more than a corps in the field at a critical time.

Les Ayvelles after the Battle of Neufchateau (Aug. 22d and 23d) was abandoned by its garrison Aug. 25th. the commandant committing suicide. The Germans buried him with special honors and took pride in pointing out to me his grave preserved by them. The little obsolete fort at Givet held up a division. not available for field duty, until August 31st, when it fell to heavy artillery brought from Namur, and Longwy contained attack forces. amounting to another division (2 brigades of infantry, 1 mortar regiment. 2 heavy howitzer battalions. pioneer regiment) from August 22d to August 28th.

Maubeuge, with a garrison of 45.000. of which 20.000 were field. troops that had taken refuge in the fort after the Battle of the Sambre. was besieged from August 25th to September 9th. when it fell. Here two more Corps of the German Army with the heaviest artillery (42 cm.. 30.5 cm. and 21 cm. mortars) were contained and thus were absent from the main Army at a most critical time. Maubeuge also served to support the English Army on its retreat.

The above outline has so far been confined to the forts in the way of the German right flank movement before and during the decisive Marne action.

Let us now evaluate the influence of these forts on the German operations. It has been stated that Liege and Namur held up the German Army about 3 weeks (or 13 days plus 10 days), which would bring the halt to August 27th. That is not correct, for parts of the German Army continued the advance around these forts. for example, the Battle of Neufchateau was fought August 22d-23d, only 6 days *after* Liege fell and 5 days *before* Namur fell; the Battle of the Sambre had been fought and the siege of Maubeuge begun 3 days *before* Namur fell; Longwy fell the same day as Namur and Givet. 3 days later. But what these forts did do was to make unavailable to the Germans for open warfare considerable forces. numerically greater than the garrisons eventually captured, during the period noted. Further, they crippled their lines of communications as well as held the investing forces immobile and thus delayed the advance.

The extent of the delay may be only estimated. Besides the influence of the forts themselves on the German operations, there should be considered also the aid rendered by them to the allied mobile army.—as points of departure or cover for escape. Thus one and one-half divisions left Liege untouched, August 6th, and joined the main Belgian Army. One division escaped in part from Namur, and Maubeuge supported the English Army in its retreat. If we envisage an unfortified Belgium and Northern France, we shall have these conditions:—

1. Additional German forces, considerably more than the garrisons of the invested forts, made available for maneuver.

2. Free maneuvering and communication facilities for the numerically and offensively superior German Army. With a clear field. the Germans would have more nearly realized the goal of their carefully made plans; they would probably have entirely eliminated the Belgian Army from the war; and they would have undoubtedly completed their enveloping movement before the pressure on their Eastern Front became so strong that two more Corps had to be transferred from the Western Front and this on the eve of the Marne Battle.

3. It is estimated that without the Belgian and North French forts to contend with. the Germans would have had the equivalent of 5 or 6 Army Corps. or two armies. available for use in the Battle of the Marne.—a force sufficient to invest Paris according to von Schlieffen's original plan[1]. thus protecting von Kluck's enveloping movement. There would have been no climb to the North Sea and 4 years of trench warfare. for the French Army would have been rolled back on their eastern strongholds.

The great central fortress of France. Paris. was not invested as originally planned: hence afforded not only shelter for the organization of. but also a favorable point of departure for Gallieni's forces against the German right wing. The influence of this fortress in the Marne operations was decisive.

I have briefly related the part these second class forts of Belgium and Northern France had in frustrating the initial and critically decisive movement of the German Army, on the success of which depended a quick victory in the West and ultimately the winning of the war. And I have pointed out how the great first class forts facing Germany on the eastern border of France dictated the German plan of operations and held them to long lines of communication. In short the advantages gained by the country on the defense through its forts. Now let us inquire into the value of the German forts. and the service rendered by them to the attacker.

Outstanding among them is *Metz,* a larger fortress of the first class with an inner ring of old forts and an outer circle of modern fort groups with advanced foreground works. This fortress was the center. the pivot of the right wing that swept over Belgium into France. the support of the left wing facing France's impregnable forts, the base for the attack on Verdun, a secure depot throughout the war. a key position for the possessor. Had the initial French offensive developed as foreseen and designed by von Schlieffen. Metz and Strassburg would have drawn large French forces from their left wing and facilitated the enveloping maneuver of the German right. With the exception of Fort Istein on the upper Rhein which covered the retreat of the German forces before the French. in the

[1] NOTE.—"In the more distant course of this swing, (thru Belgium with Metz as the left pivot point), lies Paris. We must go around Paris west and south and dispose ourselves for an investment. The forts will contain a very strong German force for this Ersatz Corps (for Paris alone six for the investment on the west and south front), Landwehr and Landstrum formations for the organization of which timely care is to be taken." From von Schlieffen's Operations Project.

first days of the war. the German forts on the West Front played a passive role.

On the East Front. Konigsberg and the Masurian Lake forts covered the retreat of the German forces and played their part in the game that resulted in the destruction of the Russian Army of Samsonow at Tannenberg.—a modern Cannae. linked immemorially with Hindenburg's fame. "Fort Boyen (Lotsen), the surrender of which was vainly demanded. as well as the fortified Narrows of Rudezanny, Rhein and Nikolaiken remained in German hands" (von Schroeter) impeding the Russian forces.

Passing to the Russian front, we may mention the great Fortress Kowno on the Nemen line. Ossowicz on the Bobr—Narew Line. in central Poland. Warsaw and Nowo Georgiewsk, and Brest Litowsk on the Bug. These with a number of supporting forts and bridge-heads served the Russians well for assembly. deployment. retreat. reorganization. and as bases and depots. That they were eventually captured must be ascribed to superior leadership. quality of troops and equipment of the Germans.

The fortress of the greatest interest on the Eastern Front is that one with the unpronounceable name. Przemysl. It had active service. On the first advance of the Russians through Galicia in September. 1914. this fortress was besieged by them from September 9th to October 10th. Although the main Russian Army was not stopped. it must detour and leave *nine* divisions with heavy siege guns to sit-down before the fortress. which held out until relieved by an Austrian advance. Again in November. the Russians made a forward movement and Przemysl was isolated. The fortress was besieged by a whole Russian *Army* from November 11. 1914. to March 22. 1915. when it fell from lack of food and munitions. The Russian forces contained by Przemysl during these sieges might have rendered decisive service in the field.—for example. at Lodz and Lowitz where defeat of the Russian right wing caused the withdrawal of the whole line facing Germany. Przemysl was a stronghold in the lines of the Austrians and Russians successively. a breakwater against the Russian tide that largely expended itself against this obstacle. The fortress again came into Austro-German possession 3 months after it fell as a result of von Mackensen's brilliant Galician campaign.

If space permitted. we might study with profit the influence of the forts of the Italian front.—as points of departure and retreat: of the Rumanian forts on the campaign for its conquest.—an operation that without the forts would have been executed in less time and with less loss.

Sufficient has been said to clear away some of the misapprehensions about fortifications.—false conclusions based on the fate of 2nd class forts against 1st class guns. It should be noted that even the lesser forts. where properly placed and defended. had considerable influence on the outcome of operations. just as mere sacrifices. While the 1st class forts entirely justified their existence. General Descourtis, in command of the Engineers of the Eleventh French Army. says: "Our permanent fortifications. much discussed in times of peace and utterly condemned at the beginning of the war. have amply demonstrated their value throughout the most violent attacks that any war has seen." (Petain's "Verdun," p. 231)

Thus far we have considered only land forts. which afford more examples of the part played by forts in war. Their essential strategic characteristics. however. apply equally to coast forts.—in fact they here stand out more clearly. To such an extent have coast forts dictated the operations of the over-sea enemy. that they largely fulfill their mission as mere deterrents. This is due to the reluctance of naval commanders to risk costly ships against comparatively inexpensive land works.—the possible mutual losses are too disparate. Further. the advantage is with the fixed defenses in a conflict of equal arms.—by reason of facilities for concealment. dispersion of sites. protection. steady platforms. etc. The navy's part in joint maneuvers is one of accommodation. Able admirals have said to me as an observer. "I wouldn't nose into this place in war." So it may be repeated. *efficient* harbor defenses accomplish their mission by deterring attack.—naval attack. They are vulnerable only from the land side.

In the war. Heligoland. Cuxhaven. Kiel. and nearly all of the other coast forts of the belligerents denied

Ft. Loncin, Siege, Effect of Bombardment, 1919

the enemy effectively without action. The attacks on the temporary fortifications below Ostend were abortive. I recall but one successful attack on coast forts. —that of the Baltic Islands by a combined German land and sea force. which may be explained by superior leadership and higher morale of the troops.

In contrast to this and of infinitely more far reaching effect was the successful defense of the Dardanelles by the Turks and this with partially obsolete forts against overwhelming odds in armament. The details of the attack on the forts and the subsequent Gallipoli campaign are familiar to students of military history. I shall merely recall the bare fact that in December. 1914. the old forts of Kum Kale and Sid ul Baehr at the mouth of the Dardanelles were taken. but had to be abandoned later. The attempt to force the Dardanelles March 18. 1915. with a fleet of 58 English and French ships of the line and cruisers. carrying 315 guns of 30.5 cm. caliber. ended with heavy losses to the fleet and complete victory for the coast fortifications.

I cannot forego the temptation to let my imagination picture the course of events. if those Turkish forts had not been in the Dardanelles. First. Constantinople would have fallen and Turkey would have been eliminated from the war.—perhaps also Bulgaria on the

side of Germany. All those 600,000 men at the siege of Gallipoli and a large portion of the English forces in Arabia and Egypt would have been available for use against Germany. Second, direct communication with Russia having been established, the problems of supply and reinforcement would have been infinitely easier of solution. Russia's immense man-power could have been more efficaciously used, and the opportunities for cooperation with Russia vastly enhaneed. The war would have been shortened and we probably would not now have the menace of Bolshevism.

But in evaluating the influence of fortifications in war, we need only consider the facts. A detailed study of the part fortifications played in the World War would lead to a better balanced conception of our own defense problems. France discovered at Verdun the errors of her ill-considered decree of 1915, based on hasty conclusions as to the value of fixed defenses. We are just now slowly recovering from similar conclusions that had sway in our policies after the war. General Gulick, in a recent hearing before a subcommittee of the Appropriations Committee of the House, said: "Immediately after the war there was a certain element which believed that mobile types of artillery, including railway guns, would supersede fixed guns and we embarked upon a railway gun project. I never concurred in that theory or doctrine, and I think that developments since the war have substantiated my views on the matter. • • • I believe that nothing has occurred during the last 20 years, including the war, which has adversely affected the inherent advantages of fixed guns." In which opinion he is supported by the experiences of the war itself as outlined in this article, by the judgment of the French authorities as shown by their present activities in elaborating their fixed defenses, and by the evidence of such an eminent soldier as Marshal Petain.

The conclusion is inevitable that our policy in respect to coast forts is correct. There are of course here and there, forts of no great strategic value. Those, however, that protect areas vital in war must be kept at the highest state of efficiency.—and it might be the part of wisdom to support them by permanent outlying works on the land side. These serve the double purpose of supporting the fleet and protecting vital areas, hence are of prime strategic importance.

We can reduce our first class strategic fortresses to a comparatively small number. Of local importance because of the harbors and installations that are protected, are a number of other defenses, but in general the places are too far removed from areas that must be held for war purposes at all hazards to rank them with those mentioned.

Forts have been considered as a means to an end as implements of the military art. In addition to the functions listed, they have a desirable collateral effect. They not only add to the morale of "the archer on the wall," but to that also of the people of his nation.

In a world of uncertainty, here one finds a measure of that security all peoples seek, and withal free of any threat of aggression.

"And so the military art
A fortress recommends."

NOTE.—Acknowledgement with thanks is here made to Mr. Lincoln Mac Veagh, of the Dial Press, Inc., 152 West 13th Street, New York City, Publishers of Petain's "Verdun," for permission to quote from this most enticing book.

To General J. Schroeter (Retired) German Army, author of "Die Bedentung der Landesbefestigungen in Weltkriege," I owe some of the data used.

Wide World Photo

Lieutenant J. W. Wofford, Army Olympic Equestrian Team on "Babe Wartham"

Frederick William von Steuben

By Colonel Samuel C. Vestal, Coast Artillery Corps

Of all the distinguished foreigners who aided us during our Revolutionary War, none performed more valuable services than Baron Frederick William von Steuben; and he left indelible marks upon our institutions. He laid the foundations of our military establishment: he drew up plans for our Military Academy, and he introduced amongst us the spirit of our military discipline which has been passed on from generation to generation and has remained practically unchanged to the present day.

Before the arrival of Baron von Steuben, the Army under Washington, in the disastrous year, 1776, had been driven from New York through New Jersey and across the Delaware. At the end of the year, it had rallied and had gained signal victories at Trenton and Princeton. In a second year of disaster, Philadelphia fell into the hands of the enemy and our main army met defeats at Brandywine and Germantown.

The cause of the reverses had been the lack of discipline and training. The American officers were not capable of imparting discipline and drill to their men. Washington was thoroughly alive as to the real cause of our humiliating defeats and he was on the lookout for competent military instructors, but he had been unable to find any either amongst his own officers or amongst the foreigners who had come to our shores.

The French Government was secretly aiding the Americans with money and military supplies, but the ministry had become convinced that without a reform in the organization of our army, the money and stores of France would be given in vain. The French Minister of War, Count St. Germain, cast about for a competent military instructor who would be capable of imparting discipline to the American army and who would be personally acceptable to the American Congress and to the American Commander-in-Chief. His choice fell upon Baron von Steuben, whom he had known by reputation for a great many years and whom he had recently met at a country estate in Alsace in the winter of 1776-7.

The military record and antecedents of the founder of discipline in our army is of deep interest to all true Americans. Von Steuben, then in his forty-seventh year, had served many years in the Prussian army. He belonged to an old, aristocratic, military family. At the von Steuben home the principal topic of conversation was the martial deeds of their ancestors and their immediate relatives. As a mere child he had accompanied his father upon a campaign in the Crimea. At the age of fourteen he had served as a volunteer with the Prussians at the siege of Prague and had been wounded.

Three years later, in 1747, he entered the service of Frederick the Great, as a cadet. He had reached the grade of first lieutenant when the Seven Years' War broke out. In 1757 he was wounded at the Battle of Prague and took part in the Battle of Rossbach, Frederick's most striking victory. He served a year as adjutant general in the "free corps" of General von Mayr. This corps was employed in making incursions into the enemy's country; and it attracted the bravest and most ardent spirits of the army. We had a somewhat similar corps in our Revolutionary Army, Lee's Legion, commanded by Lieutenant Colonel Henry Lee, better known as Light Horse Harry Lee, the father of General Robert E. Lee of the Confederate Army. In von Mayr's corps, von Steuben learned self-reliance and promptness of decision in the face of danger and difficulty. He learned how to use and manage light infantry and he learned the art of skirmishing.

Von Mayr died early in 1759; his corps was broken up and von Steuben joined the command of General von Hulsen, one of Frederick's best lieutenants. Fighting against the French, the Russians, and the Austrians, and twice wounded, he took part in many battles in the Seven Years' War. In 1761 he was captured by the Russians and taken to St. Petersburg; but was soon released. He became a member of the personal staff of Frederick the Great in 1762 and was admitted into a small and select body of officers whom Frederick personally instructed in the art of war.

In 1763, at the close of the Seven Years' War, he left the Prussian service. The King conferred upon him a lay benefice, which gave him an income for life. There were few living men that had seen more hard fighting than Baron von Steuben. He subsequently was grand-marshal for ten years to the Prince of Hohenzollern-Hechingen; and, at the beginning of our Revolution, held a military appointment at the court of the Margrave of Baden.

He wrote and spoke German and French correctly and he was intimately acquainted with ancient and modern history. Whilst other young officers led careless and idle lives, he exerted himself not only to learn his profession but to enlarge his knowledge of literature and the practical sciences. He was a studious, hard-working officer, who was considered an authority on military affairs. While on the Staff of Frederick II he had very carefully studied the operation of the supply departments. He had become a master of the art of supplying armies in the field and of keeping them in an efficient state of health. He had learned how to handle large bodies of troops. He had become a worthy and distinguished soldier. His experience of war was large and his thought and study of war bore a large and happy proportion to his experience.

In April, 1777, von Steuben went to Paris on his way to visit friends in England. In Paris he met Count St. Germain who proposed that he should volunteer to go to America to teach Americans how to fight against the regular troops of Europe.

St. Germain began negotiations with him almost a

year before France made a formal alliance with the United States. His desire to secure von Steuben's services and his persistence when von Steuben at first declined the mission and returned homeward, showed a high appreciation of the fitness of the man. The mission was a most delicate affair. France was not in alliance with America, and the hand of the French government must be concealed. St. Germain talked with von Steuben, not in his capacity of War Minister but as a private citizen. When von Steuben was at last persuaded to come to America to aid the patriot cause, he came as an enthusiastic volunteer like Lafayette. St. Germain had chosen well. Von Steuben sailed from Marseilles on September 26, 1777, on the "Flamand," a twenty-four gun ship which carried munitions for the Americans. The "Flamand" bore the most precious cargo that France ever sent to the aid of the Americans. It bore the leaven that was to transform the American forces from a heterogeneous mass of men into a disciplined and efficient army. Von Steuben was not in the pay of the French Government, and he never received any reward from it. Having persuaded him to go to America, St. Germain washed his hands of the whole affair and never held any further communication with him.

Von Steuben arrived at Portsmouth, New Hampshire, on December 1, 1777. From Portsmouth he addressed a letter to Congress. He stated that the only motive which brought him to this hemisphere was a desire to serve a people who were making a noble fight for their rights and freedom. He did not crave titles or money.

At Boston, the wealthy John Hancock furnished sleighs and saddlehorses for the party to proceed to York the capital of the United States, more than four hundred miles away. Enroute, von Steuben's heart was gladdened at almost every inn by the familiar features of Frederick II on the signboards. To us today, the name of Frederick is merely an historical memory, but the men of the American Revolution remembered him as a valiant ally during the Seven Years' War. Congress received von Steuben with distinguished honors. After his interview, he went to Valley Forge, where he joined the American Army on February 23, 1778. He was welcomed most heartily by Washington, who rode out several miles with his staff to meet him.

The condition of the American Army when von Steuben joined it was deplorable. The number of men in companies and regiments was fixed by Congress; but the ceaseless ebb and flow of men engaged for three, six, and nine months, who went and came daily, made it impossible to have complete organizations; and the words Company, Regiment and Brigade were wellnigh meaningless. Sometimes a regiment was stronger than a brigade. Von Steuben saw a regiment of thirty men and a company which consisted of a corporal. He saw companies that were larger than regiments and regiments that were larger than brigades. Records were poorly kept; reports were unreliable; and funds were carelessly disbursed. The so-called regiments had three, five, seven, or nine platoons; and the Canadian regiment had twenty-one. The formation of regiments was as varied as their mode of drill, which consisted only of manual exercises. Inspectors who had preceded von Steuben had never got beyond that state in military instruction before dissatisfaction caused them to be dismissed. Some colonels used the English, some the French, and others the Prussian Regulations. There were no regular formations. Military discipline was unknown.

It was almost impossible to get a correct return of any company, regiment, or corps. A man once on the roll of a company was there everlastingly as forming part of the strength of the company, except in case of death or destruction under the very eyes of the captain. Any general would have thought himself fortunate to find ready for action a third of the men whom he found on the rolls. The soldiers were scattered about in every direction. Most of the captains had no company rolls and did not know how many men they were supposed to have. When von Steuben asked colonels the strength of their regiments, the usual reply was, "Something between two and three hundred." The colonels and often the captains granted leaves of absence and discharges as they thought proper. The officers were not accustomed to stay with the troops when the army was in camp; they lived in houses often several miles away. Officers employed one, two, and even three soldiers as servants. Several thousand were employed in this way. According to von Steuben, there were more quartermasters and commissaries than in all the armies of Europe. The most modest had one servant, but others had two or three. In winter quarters, nearly all officers went home, and there were often only four officers to a regiment. Von Steuben found a regiment commanded by a lieutenant. Officers thought that their duty consisted in mounting guard and putting themselves at the head of their commands when going into action.

If captains and colonels could give no account of their men, they could give still less account of the arms, accoutrements, clothing, ammunition, and camp equipage. No one kept an account. Not only the clothing but the arms were carried off by those who had completed their term of service. Before every campaign, from 5,000 to 8,000 muskets had to be furnished to replace those that had disappeared. The loss of bayonets was still greater. The American soldier had never used this arm and had no confidence in it. He employed it as a spit to roast his beefsteak, if he had not left it at home.

The arms at Valley Forge were in a sad condition, covered with rust, half of them without bayonets and there were many from which a single shot could not be fired. The pouches were as bad as the arms. A great many men had tin boxes instead of pouches; others had cowhorns. Muskets, carbines, fowling pieces, and rifles were to be seen in every company. The men were literally naked, some of them in the fullest extent of the word. The officers' coats were of every color and make. Von Steuben saw officers at Valley Forge mounting guard in dressing gowns made of old blankets or woolen bed covers.

There was no internal administration of regiments and companies. The quartermaster received arms, ammunition, clothing, provisions, and camp equipage for brigades. Captains did not know the number of their own men or the rations which they should receive. Each colonel encamped his regiment according to his fancy. Guards and pickets were in excess, and officers did not know their duty and in many instances the objects of their guard. The strength of the army was weakened by an infinity of guards for commissaries and quartermasters, who controlled their own guards, granted leaves and used the men for personal service. These guards were never relieved but remained from

Von Steuben.

one year to another. By custom, each quartermaster had a commission on all money expended. Expense was not spared, and useless articles were ordered in order to increase the commission.

Washington requested von Steuben to make plans to correct the manifold abuses in the Army and to establish a strict inspection so that uniformity might be introduced into the service. It was exceedingly difficult to form a plan which would not excite so much opposition amongst the officers and men as to frustrate it before its merits were made manifest to all. In preparing his plans, von Steuben had the aid and cooperation of three officers of the greatest merit and ability, General Nathaniel Greene, Colonel Henry Laurens and Lieutenant Colonel Alexander Hamilton. Von Steuben submitted his plans to these three officers and, after they had gone over them and had come to an agreement, he submitted them to Washington. He proposed that there should be appointed an inspector general at once, who should establish uniform formations, uniform maneuvers and exercises, a regular system of accounting for all money and property, and uniform records for all units. The inspector general should define and point out the duty of every officer.

Washington approved the plans and requested von Steuben to assume the duties of Inspector General and carry the reforms into effect. After two months of voluntary service without rank or pay, Congress made von Steuben Inspector General with the rank and pay of Major General. He began operations by drafting 120 men from the line, forming into a guard for the general-in-chief. He made this guard his military school. He drilled it twice a day and, to remove the English and American prejudice that to drill recruits was a sergeant's duty beneath the station of an officer, he took a musket and showed the men the manual exercises.

The Baron did not spare himself. He rose early, and while his servant dressed his hair, he smoked his pipe and drank a cup of coffee. He was on horseback at daylight and galloped to the parade.

His example was contagious, and Valley Forge became a great training camp, where the American officers, for the first time in history, became the instructors of their men. He appointed inspectors for each division, and all of his inspectors were present at each drill. In two weeks, his company knew how to bear arms, had a military air, knew how to march, to form column, deploy and execute small maneuvers and exercises.

Von Steuben had a free hand in regard to the men in his company. They were well dressed, their arms were clean and in good order, and their general appearance was quite respectable. He paraded them in the presence of all the officers of the Army and gave them an opportunity to exhibit what they knew. They formed in column, deployed, attacked with the bayonet, changed front, etc. The company formed a new and agreeable sight for the young officers and soldiers. Having demonstrated his method of drill, von Steuben dispersed his apostles, the inspectors, and his new doctrines were largely embraced. He lost no time in extending his operations upon a large scale. He applied his system to battalions, to brigades, and in a short time, he maneuvered an entire division in the presence of the commander-in-chief.

He introduced a definite plan for the organization of the Army, which Congress adopted; he devised a system of accountability for public property; he taught the troops to take care of their arms and equipment; he taught the officers and men how to drill and maneuver; and above all he instilled the spirit of military discipline into the army.

All, however, was not plain sailing. Many of the officers looked askance upon his work. The brigadiers threatened to quit the service. But in time von Steu-

ben triumphed. The dissatisfied brigadiers became his best friends; and no man was more popular in the army than von Steuben. The officers grasped the importance of his work and realized that their earlier defeats had been due to their inability to match themselves with the well trained British. A remarkable change came over the army. A generous but spirited rivalry set in between organizations to make the best appearance and exhibit the greatest efficiency. By April the general officers were writing to their friends in the other armies recounting the wonderful transformation wrought by von Steuben.

It was truly a great accomplishment. Von Steuben had arrived at Headquarters at the end of February, knowing almost no English. Acting at first largely through interpreters, and then speaking a jargon of English, German, and French, which greatly amused the officers and men, he had introduced a very strict form of discipline amongst men who had extreme ideas of freedom and personal liberty. While the soldiers almost expired over the funny incidents, they all did their best to obey orders.

All opposition died away before the perfect demonstration of his success. Officers ceased to shrink from labor with the example of industry like that of von Steuben before them or to consider any part of their duty as beneath them. "Do you see there, sir, your colonel instructing that recruit?" said he one day to one of his assistants; "I thank God for that."

It was a valiant and well drilled and highly disciplined army that issued from Valley Forge when good weather made campaigning practicable. In June, when the Americans broke up their camp and pursued the British, who had evacuated Philadelphia and were retreating across New Jersey, they for the first time had a real army. It had increased to fifteen thousand men, all drilled by von Steuben and all anxious to show their efficiency. Washington attacked the British on June 28th at Monmouth; but in the midst of the battle, General Charles Lee gave orders which confused the Americans and caused them to retreat. The story is well known. Washington rebuked Lee and sent him to the rear, and ordered von Steuben to rally the fleeing troops. This maneuver was well done; the British were driven back, and the Americans remained in possession of the field. Alexander Hamilton, an eye witness to these events, declared that for the first time he appreciated the overwhelming importance of military training and discipline.

As a result of von Steuben's drilling, reviews, reports, and inspections, the American Army was, man for man, a match for the best British troops. At Stony Point, an American column stormed the works, with unloaded muskets, and took them at the point of the bayonet. At Guilford Court House, a single regiment of Continentals smashed two enemy regiments, each larger than itself. At Eutaw Springs the Continentals swept the field with the bayonet; and at Yorktown, Alexander Hamilton's column of assault took the enemy redoubt with unloaded muskets and fixed bayonets.

the following winter von Steuben wrote his "Regulations for the Order and Discipline of the Troops of the United States," based upon his experience but adapted to the peculiar needs of America. His mind was not closed against new knowledge and information. The Americans had developed a light open order of fighting, suited for contests with the Indians in the forest. Light infantry, thus trained, had, under Benedict Arnold and John Morgan, won the day at Saratoga which led to the surrender of Burgoyne. Von Steuben reduced the practice to scientific shape and embodied it in his regulations. These regulations, known as the Blue Book, held their place long after the death of their illustrious author.

The book was composed in good German by von Steuben; then translated into bad French; then put into good French by Captain Fleury; then translated into poor English by Captain Duponceau; and finally put into good English by Captain Walker. It covered everything neeessary in connection with the troops, their weapons, exercises, marches, camps, manœuvers, signal service, inspections, and sick and wounded.

Von Steuben's Regulations were not in any sense a copy of the Prussian drill regulations. They formed an original book and contained the practical ideas of a man that had met a most difficult problem and had solved it. He established a new arm in the service, the light infantry. The regulations were the crystallization of ideas that he had gained as adjutant general of irregular troops during the Seven Years' War, and his more recent experience with American troops fighting under the special conditions of the terrain in America. Frederick the Great, who carefully studied the American war, introduced light infantry into his own service, from which the idea was adopted by the other European armies. Von Steuben's sanitary regulations are excellent in many respects for use today. Three thousand copies were printed and distributed to the Army. Most of the states reprinted the regulations in 1793 and 1794, in order to carry out the Militia Act of 1792. They were reprinted in 1809 and were used in the War of 1812. Although our drill regulations have been revised many times, the marks of Baron von Steuben are evident on every page, and the spirit remains unchanged.

When Gates was defeated at Camden in 1780, Washington asked von Steuben's advice. He replied that the only assistance that could be given to the southern states was to send two able officers to take charge of the situation. Washington selected Greene and von Steuben. Whilst the two generals journeyed southward, it was decided that von Steuben should remain in Virginia to collect men and means and send them to Greene, who was to assume command in the Carolinas.

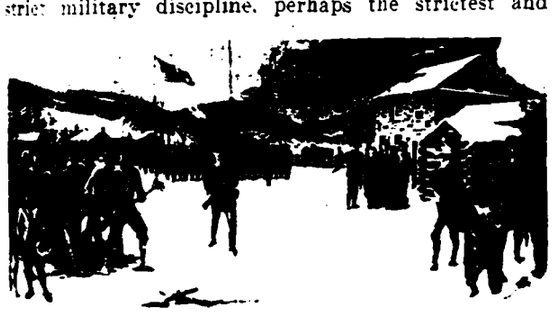
Although von Steuben never joined Greene in his wonderful campaign in the south, the marks of his hand were there. Greene relied almost entirely on the troops that von Steuben sent him.

Von Steuben's services were especially valuable at Yorktown, in view of the fact that he had taken part in the great siege of Schweidnitz. He was given a regular command as a major general and held the right center of the American lines. His troops were the first to enter Yorktown on October 19, 1781, and unfurl the American flag.

The day before official news arrived that a treaty of peace had been signed with England, he submitted, at the request of General Benjamin Lincoln, Secretary of War, a carefully worked out plan for a military academy. It is substantially the plan upon which West Point is operated today. He proposed that one hundred and twenty volunteer cadets should be educated every three years for the purpose of supplying officers for all branches of the service. They should be instructed in natural and experimental philosophy, eloquence and literature, civil law and the law of nations, history and geography, mathematics, civil architecture, drawing, the French language, horsemanship, fencing, dancing, and music. Congress should appoint each year a board of visitors who should make a report to it.

The influence of von Steuben pervades the Army today through the Military Academy at West Point, which was founded in 1802, eight years after his death. Most of the first instructors at West Point had known von Steuben personally; his methods and ideals, as demonstrated in the training camp at Valley Forge and on the battlefield, were preserved by traditions that have become far more powerful than written regulations.

There can be no doubt that the discipline of von Steuben, which has been transmitted by tradition to the army through the Military Academy, is a very strict military discipline, perhaps the strictest and



Von Steuben at Valley Forge, 1777.

most effective in the world. Its quality lies not in the severity of the penalties which it imposes; but in the unquestioning obedience to command which it requires.

Washington called upon von Steuben to prepare a plan for disbanding the Revolutionary Army. Steuben suggested that the troops should be dismissed with the greatest dignity possible. Each officer should receive a certificate on parchment signed by the commander-in-chief and sealed with his arms, expressing the value of his services. Every enlisted man should receive his discharge in regular form, and all certificates and discharges should be made of record. Unfortunately, there was no money to carry out this wise plan.

The last act of Washington, on December 23, 1783, a few moments before he laid down his command, was to write a letter to von Steuben, acknowledging his great zeal, attention, and abilities and expressing the sense of obligation of the public for his faithful and meritorious services.

In the "Creed" of the American officers adopted at Verplanck's Point in 1782 we read:

"We believe that Baron von Steuben has made us soldiers, and that he is capable of forming the whole world into a solid column and deploying it from the center. We believe in his Blue Book. We believe in General Knox and his artillery. And we believe in our bayonets."

Von Steuben suggested the founding of the Society of the Cincinnati.

Von Steuben remained in the United States after the war. Congress granted him a life pension of two thousand five hundred dollars a year and presented him with a gold hilted sword. New York gave him 16,000 acres of land; Pennsylvania, 2000; Virginia, 15,000; and New Jersey conveyed to him in fee simple the confiscated estate of a Tory. Von Steuben, however, restored the estate to the original owner, when he learned that he had been made a pauper by the confiscation. He was President of the New York chapter of the Society of the Cincinnati, President of the German Society of New York and Regent of the state university of New York. He was a citizen of Pennsylvania, by special act of the Legislature of that state. He enjoyed the close personal friendship of the President of the United States. When war with England appeared to be imminent in 1794, New York placed him at the head of its commission appointed to fortify the city. He lived on his estate in Oneida County, New York, during the summer months from 1790 to 1794; but he returned to New York City for the winters, where his days were occupied with many functions of a social and public character.

He was a past master in the science of organization, tactics, and strategy. His position at headquarters was that of Inspector General and Chief of Staff for active field operations. Perhaps it would be more accurate to compare it to that of G3 in our staff organization today, or chief of the bureau of operations. Before each great campaign, Washington requested von Steuben to prepare a general review of the situation and to suggest plans for the future. These reviews were very ably written estimates of the situation such as a chief of staff would prepare today.

Von Steuben died one of the most honored and best beloved citizens of the Republic. His statue occupies one of the corners of Lafayette Square, opposite the White House in Washington, together with the statues of Lafayette, Rochambeau, and Kosciusko; but a more enduring monument is the living corps of cadets at West Point. He stood at the cradle of American Independence. The American army now travels along the course he established and perfected. He made the long road of military efficiency clear and definite, and he placed the permanent foundations of our military establishment. He rendered the inestimable benefit of introducing among us the great principle that the officer is the instructor of his men. This idea has passed into our regulations and has become a part of the life of our Army.

The life of von Steuben is a good reminder to us that no people, however patriotic and intelligent they may be, can be made overnight into an efficient military force by clothing them in uniforms and placing arms in their hands.

Platitudes and Infantry Organization

By Sawdust

IT has been a platitude that has been mouthed by everyone for years that good infantry has to have:

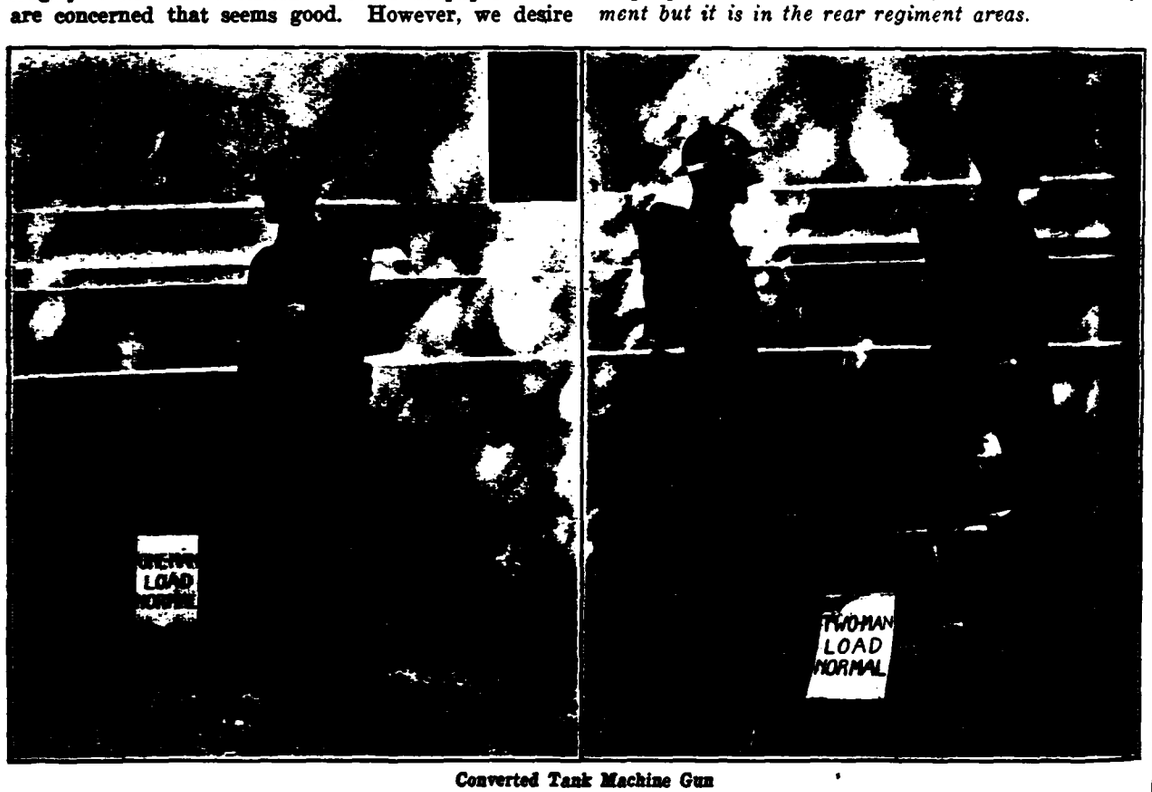
***a.* Fire power.**

***b.* Movement.**

As a theoretical platitude it is accepted. As a practical problem it is not so clear in its application.

Fire Power

In the reorganization of the Infantry regiment as in T. O. approved Nov. 19, 1930, and now exemplified in the 29th Infantry, anyone can look at that Table of Organization and see much more FIRE POWER in the regiment than in the older organization. The Table per se shows considerably more automatic rifles, machine guns, one pounders and mortars. At first glance and without further thinking it seems that the item of FIRE POWER is pretty well taken care of. It is true that it shows "within the regiment" a large increase. BUT look a little further into where within the regiment this added fire power is and where we really desire to have it applied. The Tables show it largely within the battalion. So far as paper tables are concerned that seems good. However, we desire to have it *applied* right with our foremost infantry small combat units. Only the automatics within the squad are able to keep up at present with the rifleman. It should not be necessary to look for anything more convincing to prove this than the experience in the World War when the most crying need of the Infantry was for our foremost infantry combat units to have *immediately* available, when needed, a rapid burst of fire from a light machine gun, which could be man-carried with the foremost groups and kept up with them. The automatic rifle did not fulfill this necessity even though it could keep up, nor were the mule-drawn Browning machine guns able to be kept up with our foremost combat groups. No peace-time experiment or test can be so conclusive as this war experience. We should accept it and work from it. Our added fire power in the new tables is supposed to be provided by the addition of those weapons which could not keep up with our combat squads in the war. So while we appear to have added fire power, it is not where we want it—from its lack of necessary mobility (movement) it is not able to keep up with the rifleman. *Yes, it is within the regiment but it is in the rear regiment areas.*



Converted Tank Machine Gun

Converted Tank Machine Gun

The above is based on thoughts of the offensive where the second element (movement) comes in. It is admitted for the defensive that the added fire power provided in the new T. O. is valuable and can be applied where wanted to good advantage. But our training regulations are specific in stating our main stress on the offensive.

Movement

This element in the offensive does not take second place to fire power. Both fire power and maneuver help to make movement in the larger sense possible. Both should be employed. Fire power when needed should be immediately available. As above stated the present Browning machine gun does not answer the demand. Maneuver by the small forward combat units is powerfully assisted by an *immediate* development of heavy fire at close range from weapons right with them. And this maneuver by such small forward units is what makes possible movement in the larger sense for the larger units. The weapons to do this must be within the smallest fire unit. They must be light enough to be man-carried with it. Organization should start here as a base on which to build.

The above does not intend to convey the idea that there is no use for the present Browning mule-drawn .30 cal. machine gun. While the *close range* fire power should be available as previously pictured, it will be necessary, at times, for forward combat groups to have the supporting fire at longer ranges from heavy machine guns, 37 mm. gun and mortars. This could come from the regimental echelon. Being heavy and mule-drawn weapons they could not be kept up with the forward groups and would be an encumbrance on a battalion to handle. The battalion must be light and mobile and to be so should have only man-carried weapons.

Organization

All this inevitably leads to considerations of organization and points to the following basic principles upon which to organize:

1. Regimental organization should be built up from the smallest combat fire unit.
2. The smallest combat fire unit should have only man-carried weapons for close range work.
3. The battalion should have only these basic combat fire units.
4. The basic combat fire units should be supported from the regimental echelon by the fire of heavier weapons for the longer ranges.

In thinking of organization one also has to consider such practical matters as the weapons to make these ideas possible, and whether the weapons are available in quantity, or can be quickly made so.

It is believed that suitable small arms weapons are available from which to organize such basic fire units in our army. The basic fire unit could be built around only two weapons, both man-carried, viz; the rifle and the present standard Tank machine gun. There is no question about the availability of the rifle. It is not so well known that the Tank machine gun is also on hand in sufficient quantities, or that the present Browning .30 caliber now on hand in large quantity can with slight alteration declared feasible by the Ordnance Department, be made a light man-carried machine gun closely resembling the Tank machine gun. The Tank machine gun is air cooled and weighs with tripod 32 pounds—a one-man or two-man load. The Browning machine gun, .30 cal. by slight alteration to make it air-cooled would be a comparable weapon. The manufacturing plans, jigs, dies, gauges for these weapons are already on hand to place them into quantity production quickly. The Browning automatic rifle is not considered. It did not stand the battlefield test in the war. For one thing, it cannot be maintained in full automatic action long enough without over-heating. For another, in actual battle field use it cannot be accurate as a shoulder fired weapon, certainly not as accurate as a tripod-mounted light machine gun.

It is not contended that either the Tank machine gun or the Browning cal. .30 machine gun modified as indicated above provides the ideal weapon. It is contended, however, that they are the best we have that are available in quantity, and which can be quickly

Converted Tank Machine Gun

placed on a production basis. They answer the two requirements of the foremost combat units:

(1) Fire Power.
(2) Movement made possible from the mobility inherent in man-carried weapons.

These weapons, therefore, can be used in peace time to develop an organization with its tactics based on FIRE POWER and MOVEMENT. When better weapons are made and produced in quantity, these can be substituted in the organization without changing it, or having to go through the long process of building up new tactics. It is not believed the same can be said for a battalion loaded down with our heavier weapons such as the mule-drawn cart machine guns, mortars and 37 mm's.—not even with the Matthews mount. The reason is that such fire power while in the battalion, still is not where it is needed and cannot be put and kept there. It is not and cannot be kept up with the foremost combat units.

Going back to the 4 principles for infantry regimental organization stated above, it is conceived that the broad organization of the infantry regiment should be:

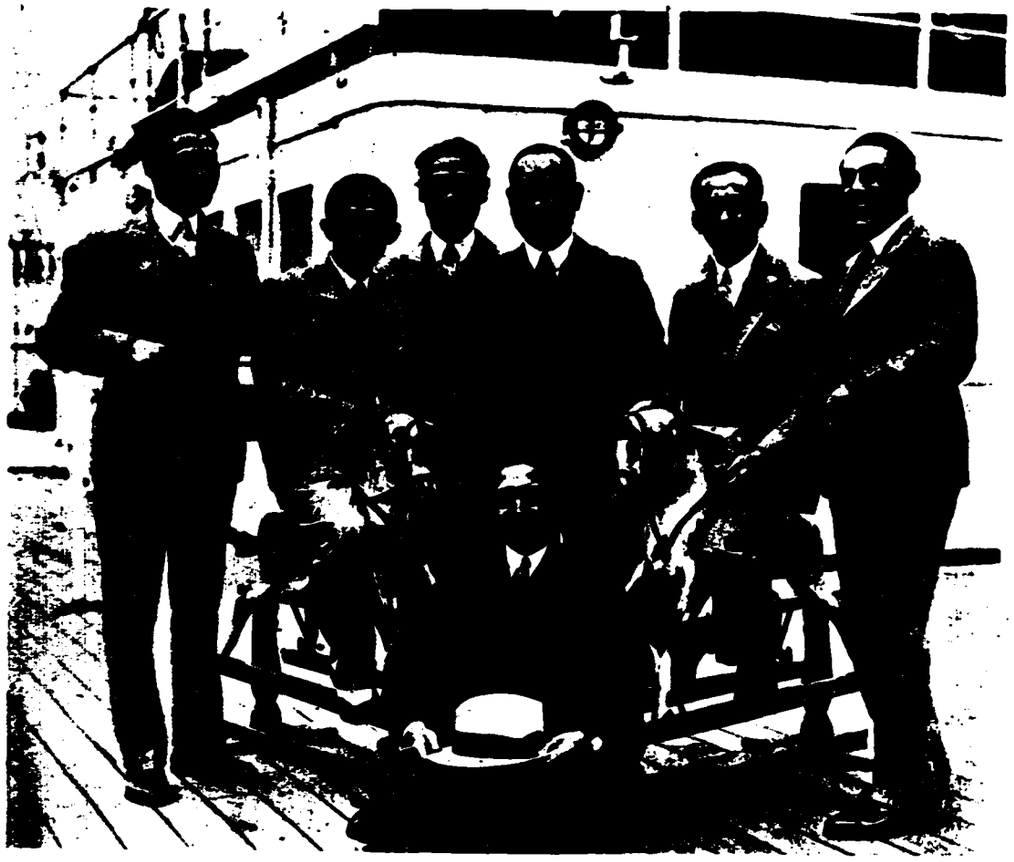
(1) The basic combat fire unit consisting of one light machine gun man-carried by two men and as many riflemen as desired. (The Pedersen, Garand, White and other automatic shoulder weapons are not considered, there being no prospect of quantity production in sight).

(2) As many of these fire units as desired in sections; as many sections and platoons in the company as desired.

(3) As many such constituted companies in the battalion as desired. No mule-drawn weapons in the battalion. Only man-carried weapons.

(4) As many such battalions in the regiment as desired.

(5) The heavier weapons (mule-drawn machine guns, mortars, 37 mm's) in the regimental cannon and regimental machine gun companies in the quantities desired.

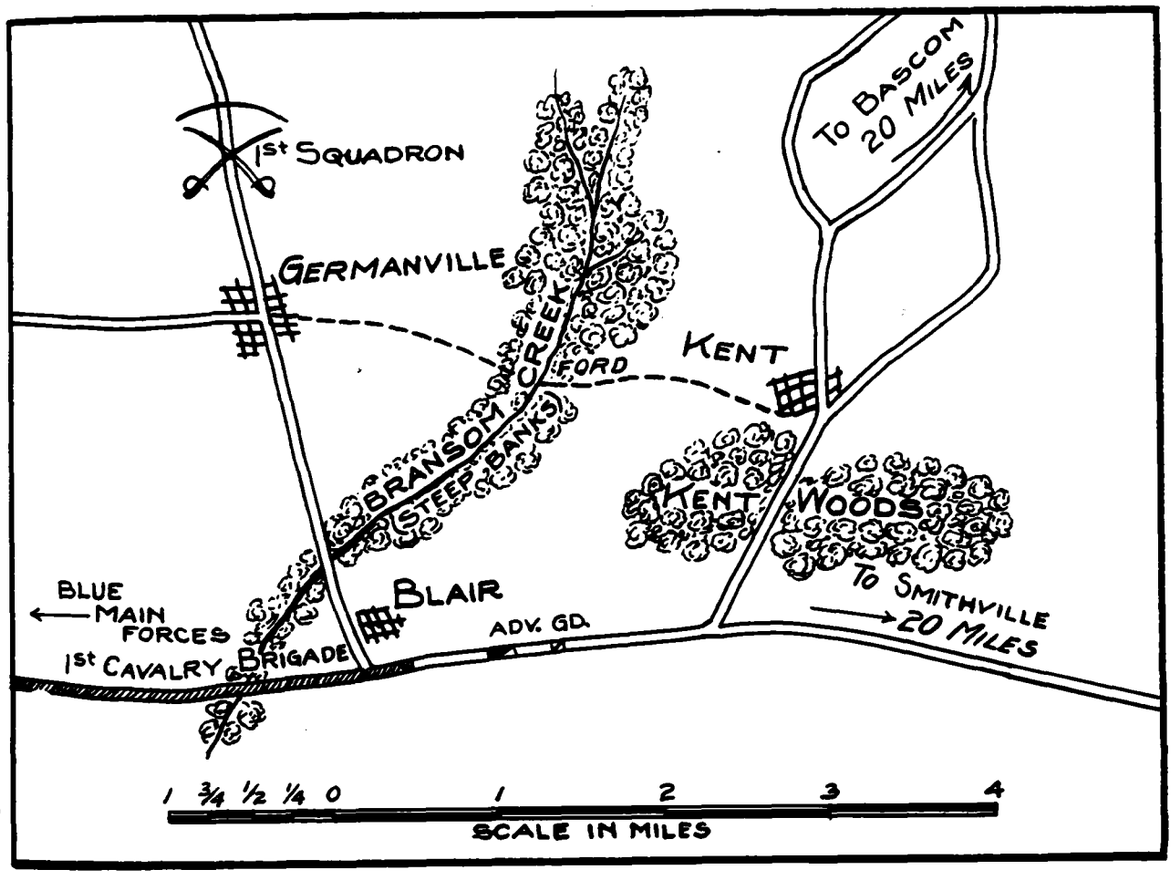


Wide World Photo

Major Shigetōmo Yoshida, Captain Taro Nara, Major Yasushi Inamura, Colonel Kohei Yusa, Lieutenant Baron Takeichi Nishi, Captain Morishige Yamamoto and Major Shungo Kido, the First Foreign Olympic Horsemen to arrive at Los Angeles for the Tenth Olympiad. All are graduates of the Japanese Imperial Cavalry School.

NOTES FROM THE CHIEF OF CAVALRY

What Would You Do in a Situation Like This?



The First Cavalry Brigade with an armored car troop and a horse battery attached had been marching east on Smithville, away from the Blue main force since 4:30 A. M. Due to new developments, political and military, it was of the utmost importance that Smithville be reached without undue delay. The armored car troop, less one platoon, was reconnoitering the advance.

Major St. Clair's squadron with a reenforcement of machine guns, and an armored car platoon, had been detailed to protect the exposed left flank of the brigade enroute.

At 5:40 A. M., he had encountered an aggressive force of Red cavalry marching south a mile north of Germanville. St. Claire was not yet sure of the strength of this Red force, but he believed it was nearly twice that of his flank guard. However, his delaying action was progressing reasonably well and he felt he could effect sufficient delay to prevent the Reds with whom he was engaged from reaching Blair until the main body had cleared, but it would be a close thing at best. The squadron was fighting well as he had always felt it would. The armored car platoon, a section on each flank, had been rendering invaluable work in reconnaissance.

At 6:00 A. M. an aerial report was received. It reported the main body and advance guard as shown on the sketch and said that what appeared to be a Red mechanized regiment moving on Kent at about 25 miles per hour was entering Bascom at 5:50 A. M. Here was a new and very serious threat to the flank of the main body which St. Claire was charged with protecting. What to do? . . .

(For Solution, Turn to Next Page)

Major St. Claire's Solution

Major St. Claire sent the following message to the brigade commander:

"Am engaged with all my command delaying the Red cavalry (about two squadrons) one mile north GERMANTOWN. Aviation reports Red mechanized regiment marching 25 miles per hour on KENT, entered BASCOM at 5:50 A. M. Will continue present action with all my force. Cannot spare any troops to delay mechanized Reds.

"St. Claire
"Maj."

Major St. Claire's reasons for his solution were:

His flank guard was doing all it could in delaying the Red horse cavalry. To attempt to delay or block the Red mechanized regiment would undoubtedly involve letting the Red horse cavalry through. One or the other of the Red forces must be left to the main body. His present action promised success, whereas an attempt to delay the Red mechanized force on the Bascom-Kent road would be a more doubtful enterprise.

To divide his force would probably mean the ruin of each fraction.

Finally, even though he might wish to delay the mechanized force instead of the Red horse cavalry, the problem of completely disengaging from the latter so that it could be accomplished at all, would require more time than the situation would permit.

The mechanized regiment then, must be a problem for the main body to solve, either by a new flank guard, a general action of the entire brigade, or a change in direction of march. Department of Tactics, The Cavalry School.

The Cavalry Leadership Test

FOR a number of years past the Cavalry has been holding an annual test for rifle platoons known throughout the service as the "Cavalry Leadership Test." The latter consists of a series of requirements designed to "demonstrate the courage, physical development and training of individuals and their mounts; the leadership ability of the platoon leader, and the general efficiency of the platoon as a whole under simulated war conditions."

The idea of such a test was conceived by a very good friend of the Cavalry who modestly prefers to be known by no other title. In order to perpetuate his idea and at the same time stimulate enthusiasm and promote competition this good friend established a trust fund which provides annually a thousand dollars to be awarded to the platoon whose score in the test is the highest.

Heretofore conducted at localities where two or more regiments could be assembled, the Leadership Test has not only resulted in the keenest competition among the competing units, but it has also been a factor promoting general platoon efficiency in those regiments whose fortunate location has enabled them to enter the contest. Border regiments and those stationed at or near Fort Riley, Kansas, so far have been the only units able to compete.

The Chief of Cavalry, this year, decided to afford regiments stationed alone the opportunity of entering this competition and of sharing in its benefits. To this end the 11th Cavalry at the Presidio of Monterey, California, and the 6th Cavalry at Fort Oglethorpe, Georgia, were designated to conduct separate tests during 1932 at their respective stations, with representative rifle platoons, one from each lettered troop, to furnish the competition at the two posts. The $1.000.00 in prize money was to be equally divided, so that the winning platoon at each station would receive $500.00.

In the past enlisted members of the winning platoon received a cash award, and the platoon lieutenant a piece of plate selected by the regimental commander. Naturally the silver trophy for the lieutenant varied in each instance according to the individual taste of the colonel selecting it. This year, however, and each succeeding year the winning platoon leaders will be presented with a handsome silver platter suitably inscribed, upon whose face will be engraved a replica of that fine old Frederick Remington cavalryman on the plains which has adorned the cover of the CAVALRY JOURNAL for so many years. No change is contemplated in the method of money distribution to the enlisted men.

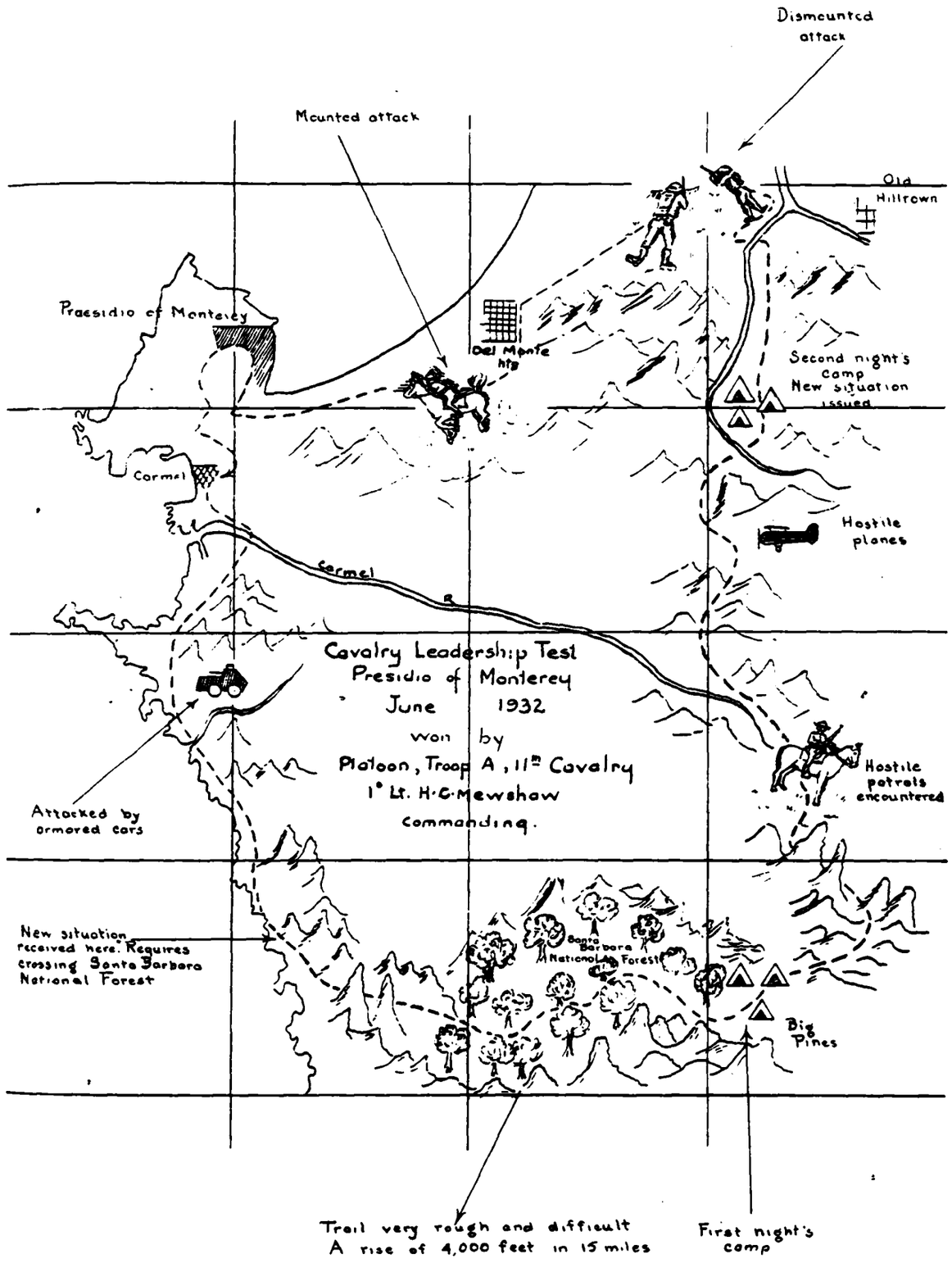
The 1932 Test at the Presidio of Monterey

The Cavalry Leadership Test held at the Presidio of Monterey in June, 1932, consisted of the following phases:

a. Individual Phase.
b. Leadership Phase

Individual Phase. The individual phase consisted of a five and one-half mile cross country ride through the wooded area of the Presidio and the Del Monte forest. The course lay over broken country and tested the skill and endurance of both the rider and his mount. Slides, jumps, stream crossings, and steep up and down slopes had to be negotiated. Pistol and saber targets suddenly encountered en route had to be attacked. It is doubted if a more beautiful, scenic and interesting course could be found on or near any other military reservation in the country.

In addition to the above mounted requirement each individual competitor was obliged to undergo certain dismounted tests designed to try out his strength, endurance and agility. The events in this test and the standards to be attained for qualification were as modification of Cavalry Memorandum No. 3, War Department, 1921. Specifically these were:



Strength tests.
"Chin up"—8 times.
"Push up" from ground—12 times.
Raise legs to horizontal while hanging by hands from bars.

Running tests.
50 yards in 7 seconds.
100 yards in 14 seconds.
220 yards in 35 seconds.
1-2 mile in 4 minutes.
100 yards (complete field equipment, including ammunition)—20 seconds.

Jumping tests.
Standing broad jump—7 feet.
Running broad jump—12 feet.
Running high jump—3½ feet.
No coat or equipment required.

Leadership Phase. Each competing platoon was given a mission of reconnaissance which led it to the south of Carmel on the new road. This route lies along the slopes between the ocean and the steep rising foothills of the Santa Lucia Mountains; the terrain being ideally suited to the development of the several unexpected problems which were injected in the situation. Ample facilities for observation, concealment and for watering animals were at hand on this route for the alert platoon commander.

A short distance south of Carmel in the vicinity of Malpaso Creek, an armored car was met by each platoon. The encounter was staged where the terrain afforded opportunity for several possible courses of action. Each platoon was successful in discovering and evading the car before it could bring the platoon under destructive fire.

Sixteen miles or so down the coast road each platoon was given a new mission which required it to cross the Santa Lucia Mountain Range and the Santa Barbara Natural Forest by the narrow and tortuous trails which traverse them. After fifteen miles of rough climbing (difficult even for the horsemen), in which a rise of 4,000 feet was made, the several platoons reached Big Pines where all camped for the night. Each was rated for the method of camping, for the care of men and animals and for the protection each provided for the night.

The second day of the test found the platoons making another hard march from Big Pines to Cor[illegible]'s Ranch on El Taro Creek. Hostile patrols were encountered during this march, prisoners were cap[illegible] and precautions had to be taken to avoid observ[illegible] and attack by enemy airplanes which were unusually active during the day. Camp was pitched for the night near the Salinas-Monterey Highway. Pl[illegible] were again rated upon their camping procedure, upon the measures taken by each for its own security.

On the third day each platoon operated as the advance guard of an imaginary squadron. Hostile position required the advance guard to engage in a dismounted attack with ball cartridges. After this enemy threat had been checked (and the phase properly scored by the ever present judges), the march was continued. The unexpected appearance of a small enemy mounted group some time later required a mounted attack by the advance guard platoon to drive it off. This was the last requirement.

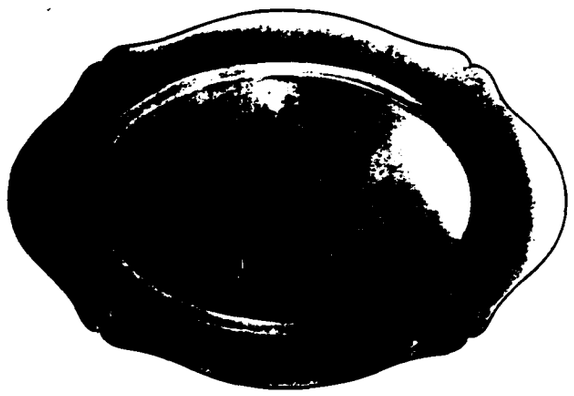
Platoons marched to the pumping station on Gigling Reservation where they watered and fed and were then released to proceed to the Presidio of Monterey.

The Board which conducted this test was of the opinion "That the entire test resulted in keen and instructive competition and was of such a nature as to place the maximum demand on professional ability and morale of each member of the small cavalry units which competed." This opinion was shared in by Colonel Ben Lear, commanding the 11th Cavalry, who stated that he believed the "test to be of considerable value to the regiment. The greatest interest was shown by all officers and troopers engaged in the test, and the work of all platoons should be classed as most efficient. Training and morale were improved."

The final ratings given the competing platoons were:

Platoon	Troop	A	92.6040%
"	"	B	90.6747%
"	"	F	89.7660%
"	"	E	86.8240%

Members of the winning platoon of Troop A will receive cash awards, while to 1st Lieutenant Harry C. Mewshaw will be presented the silver leadership trophy



Graduation, The Cavalry School

List of Graduates

ADVANCED CLASS

Major Clinton A. Pierce, Cavalry
1st Lieutenant Vicente Gallinal, Cav., Cuban Army

Captains of Cavalry:

Chase, Charles R.	Hettinger, John A.
Everett, Edward A., Jr.	Higgins, Stanton
Forsyth, Andrew E.	Irving, John H.
Gaglia, James V.	Jacobs, Fenton S.
Garity, Rossiter H.	Kilburn, Charles S.
Gibney, Louis G.	Rieman, Gilbert
Graham, Benjamin H.	Stafford, Curtis L.
Hayes, Percy S.	Sullivan, Mortimer F.

ADVANCED EQUITATION CLASS

Captain Erskine A. Franklin, Cavalry
Captain Hugh B. Hester, Field Artillery
1st Lieutenant John M. Willems, F. A.

1st Lieutenants of Cavalry:

Babcock, C. Stanton	Meehan, Charles C.
Ballantyne, John L.	Palmer, Raymond D.
Barnes, Wallace H.	Reardon, William J.
Christensen, Clarence C.	Reed, Charles H.
Donaldson, Thos. Q., Jr.	Thayer, Basil G.
Kimelson, Henry L., Jr.	Wenzlaff, Theodore C.
Matheson, Mile H.	Winn, Norman M.

TROOP OFFICERS' CLASS

Armes, Gordon S., 1st Lieut., Cavalry
Bertz, Wesley W., 2nd Lieut., V. C.
Bixel, Charles P., 2nd Lieut., Cavalry
Burgess, Woodbury M., Do.
Disney, Paul A., Do.
Drake, Royce A., Do.
Ferrer, Esteban, 1st Lieut., Cav., Cuban Army
Gardner, Rogers A., 2nd Lieut., Cav.
Gill, Charles C., Captain, U.S.M.C.
Halloran, Michael E., Captain, Infantry
Hunter, William M., 2nd Lieut., Cavalry
Kaufman, George M., 2nd Lieut., Cavalry Reserve
Lowe, Robert G., 2nd Lieut., Cavalry
Luebbermann, Henri A., Do.
Miller, Alexander M., 3d., Do.
Pegg, Loren D., Do.
Rhodes, Edward L., 1st Lieut., Cavalry
Ridge, Paul A., 2nd Lieut., Cavalry
Roberts, Thomas D., 1st Lieut., Cavalry
Trapnell, Thomas J. H., 2nd Lieut., Cavalry
Yeomans, Prentice E., 1st Lieut., Cavalry
Zeller, Henry M., Jr., 2nd Lieut., Cavalry

NATIONAL GUARD AND RESERVE ADVANCED CLASS

Whitfield, Henry D., Lt. Colonel, Cav.-Res.
Livingston, Max, Jr., Major, Cav.-Res.

NATIONAL GUARD AND RESERVE TROOP OFFICERS' CLASS

Armstrong, Hamilton, Capt. 121st Cav., N. Y. N. G.
Bickham, Hunter L., 2nd Lieutenant, Cavalry-Reserve
Buehler, Lloyd G., 1st Lieutenant, Cavalry-Reserve
Burke, Paul L., 2nd Lieut., 102d Cav., N. J. N. G.
Carmichael, E. L., 1st Lt., 105th Cav., Wisc. N. G.
Denny, George M., Major, 121st Cav., N. Y. N. G.
Donaldson, Harry J., 2nd Lieut., 113th Cav., Iowa N. G.
Franklin, Sam H. Jr., 1st Lieutenant, Cavalry-Reserve
Goebel, Herman P., Jr., 1st Lieut., 107th Cav., Ohio N. G.
Goodwin, C. W., Capt., 24th Cav. Div., Wash. N. G.
Gunning, Joseph F., 1st Lieut., 121st Cav., N. Y. N. G.
Gwynn, Edward O., 2nd Lieut., 115th Cav., Wyo. N. G.
Johnson, Stewart G., 2nd Lieut., Cavalry-Reserve
Johnson, William W., Captain, 107th Cav., Ohio N. G.
Lackey, Vaden M., 1st Lieut., 109th Cav., Tenn. N. G.
McCollum, Virgil O., 2nd Lieut., 111th Cav., N. M. N. G.
McNeill, Ford N., Jr., 1st Lt., 109th Cav., Tenn. N. G.
Moore, Robert L., 1st Lieutenant, Cavalry-Reserve
Sherer, John D., 1st Lieutenant, Cavalry-Reserve
Tracy, Louis S., Captain, 122d Cav., Conn. N. G.
Turner, Hiram L., Captain, 121st Cav., N. Y. N. G.
Walker, Leland H., Captain, 103d Cav., Penn. N. G.
Williams, Howard, 2nd Lieutenant, Cavalry-Reserve

NONCOMMISSIONED OFFICERS' CLASS

Regular Army

Crismon, William, R-131971, Sgt., Tr. A, 2d Cavalry
Dennison, Veachel A., 6758352, Sgt., Tr. A, 14th Cav.
Goodreau, Arthur J., 6107796, Sgt., Tr. E, 8th Cav.
Greene, Walter P., 6242366, Sgt., Hq. Tr., 1st Cav.
Herbison, Robert, 6645207, Corp., Tr. F, 13th Cav.
Hutcherson, Abner C., 6790876, Corp., Tr. A, 4th Cav.
Johnson, William L., 6237268, Corp., Tr. C, 9th Cav.
Kapral, Joseph, 6775339, Corp., Tr. F, 3d Cav.
Kramer, John, 6680329, Sgt., Tr. E, 12th Cav.
Massie, Junior R., 6643518, Corp., Tr. B, 2d Cav.
Mehalko, Andrew, 6792772, Sgt., Tr. E, 14th Cav.
Michaels, Louis F., 6540739, Corp., M.G. Tr., 11th Cav.
Miles, Ernest L., 6494737, Sgt., Hq. Tr., 2d Cav.
Morgan, Cecil D., R-1456527, Sgt., M.G. Tr., 13th Cav.
Murray, Walter S., 672767, Sgt., Tr. B, 5th Cav.
McCaslin, Thomas F., R-209078, Sgt., Tr. B, 6th Cav.
Onkes, William R., 6647599, Corp., Tr. F, 2d Cav.
Reese, Chester N., 6793051, Corp., Tr. A, 13th Cav.
Sandlin, Troy K., 6357383, Corp., Tr. B, 12th Cav.
Schnelle, Ernest H., 6631654, Sgt., M.G. Tr., 13th Cav.
Schwab, Roy C., 6132108, Corp., Tr. A, 3d Cav.
Stank, Albert F., 6790663, Corp., Tr. E, 13th Cav.
Thorpe, Columbus, 6426520, Sgt., M.G. Tr., 7th Cav.

National Guard

Culbertson, R. D., Sgt., Tr. E, 107th Cav., Ohio N. G.
Dudley, Oren R., Staff Sgt., Hq. Tr., 111th Cav., N. M. N. G.
Hamilton, W. C., Corp., Tr. E, 101st Cav., N. Y. N. G.
Hard, Richard G., Sgt., M.G. Tr., 106th Cav., Ill. N. G.
Morse, Matthew H., Jr., Mr. Sgt., Hq. Tr., 108th Cav., La. N. G.
McClelland, S. F., Sgt., Tr. B, 121st Cav. N. Y. N. G.
McGinnis, Lloyd H., Sgt., M.G. Tr., 116th Cav., Idaho N. G.
McKnight, Andrew G., 1st Sgt., Tr. A, 110th Cav., Mass. N. G.
Shope, F. L., 1st Sgt., Tr. L, 103d Cav., Pa. N. G.

Professional Notes and Discussion

Modified Shelter Tent

By 1st Lieutenant John Hughes Stodter, Cavalry

ON practice marches, maneuvers, and field service in general, one is frequently struck with the excessive time and labor expended in making camp. The men's tents go up quickly and the commands, "Tie on the Line," "Unsaddle," and "Commence Grooming," follow in rapid succession. But, with the men about half through grooming, there comes the inevitable call for details to pitch headquarters tents, and four or five march-weary troopers are taken from their half-groomed horses, equipped with tools, and reported to the regimental sergeant-major to pitch the cumbersome wall tents of the regimental headquarters and staff. If squadron and troop headquarters are similarly equipped, the harassed first sergeants soon find most of their men dispersed on tent pitching details, leaving a small minority available for the necessary troop details to unload wagons, get water and wood, handle supplies, dig latrines, etc. Next morning the same details are required in breaking camp. The results are haste, confusion, fatigue, and delays, and most of it may be laid, I believe, to that white elephant, the wall tent.

On the other hand, there is much to be said in favor of the wall tent. The duties of officers in the field are of such a continuous and active nature that such rest as they may obtain should be as comfortable as possible. More important, however, is the fact that the field shelter is often, especially in darkness and inclement weather, an office. As such, it should be roomy enough to allow the officer to spread his maps and study his orders therein under a light, with sufficient physical freedom to allow maximum mental concentration. There he draws up plans, sketches maps, holds conferences, and issues orders to groups of subordinates. For these purposes the present shelter tent is inadequate. On a stormy night, and full of bed rolls, saddles and equipment, it resembles the ancient torture chambers, so constructed that the occupants can neither stand, sit, nor lie down. Hence the wall tent.

As we have seen, however, the small wall tent as issued, while excellent for semipermanent encampment, is definitely unsuitable for field service. With its mass of heavy canvas and long clumsy poles and pins, it is a bulky, unwieldy article to transport. It requires too large a detail of march-weary soldiers and takes too much time to pitch and strike. Its height and color make it impossible to successfully conceal.

Experience in field service in different climates and countries, living in wall tents, shelter tents, and without either, has convinced me that a modified shelter tent would be a valuable addition to our field equipment. Accordingly, experiments were conducted with salvaged shelter halves during the fall and winter of 1930, at Fort Brown, Texas, with the approval of the commanding officer, and, in March, 1931, when the 12th Cavalry marched out on maneuvers, all troop officers were equipped with the modified shelter tent.

The original design was built up with four salvaged shelter halves, as follows. Starting with two halves buttoned together to form the roof, the triangular flap was cut from another half, and the remaining pieces split lengthwise for the two walls, which were sewn with double seams one and one-half inches from the lower edges of the roof pieces. Another half was cut and split in a similar manner, and the pieces sewn likewise to form walls for the triangular rear flaps of the original shelter tent. Sufficient overlap was allowed to button the ends of the walls together at the rear corners and back.

Guy ropes taken from salvaged wall tents were run through the original eyelets at corners, sides, and back, as well as the front and rear loops of the ridge. The regular shelter tent pins were used.

The poles were six feet long, an inch in diameter at the base, and were jointed at the middle. A headless nail was set to protrude from the top of each to be inserted through the proper eyelets in the canvas at the ends of the ridge.

To reduce weight, no ridge pole was used, the ridge being drawn taut by the front and rear guys with sliding brass keepers.

Light tie ropes or shoe laces should be provided at the junction of the wall and top, three on each side, one at the middle of each back wall and one at the back, for the purpose of tying up the walls in hot weather.

Though not absolutely necessary, a fly was improvised from two more shelter halves with rear triangles cut off and guy ropes attached. This added greatly to the shelter afforded by the tent.

Due to the increased height it was found advisable to permit the front to be closed. This was done by cutting and sewing two more shelter halves to the front edges of the tent, and arranging for them to button or tie together down the front and at the front corners to the walls.

This tent, complete with poles and pins, may be rolled into a compact roll three feet long and less than one foot in diameter which will weigh approximately 25 pounds. Waterproofing the canvas increases the weight and usually more than offsets the saving made by elimination of the fly, while in hot weather the fly is far superior to a single thickness of waterproof canvas.

This tent may be comfortably occupied by two officers with or without cots, giving far more shelter to both than either might obtain in separate issue shelter tents, and with little increase of weight. Each officer carries half the tent in his bedding roll or separately. By making a long roll of the half tent on the extended pole it may be bent at the joint and carried over the cantle of a saddle.

Two orderlies can pitch the tent very quickly without assistance or tools other than a hand axe or weighty object to drive pins. One man can pitch it in less time than it takes the average detail to pitch the small wall tent, as issued. Accordingly, with this modified shelter tent all details may be eliminated, and the onus of erecting shelter for officers placed where it belongs, on the orderlies who are detailed and paid for such duties.

In addition to its labor saving value, the darker color and smaller size of the modified shelter tent make it easier to conceal from air observation in country where there is little cover but brush and low timber such as is found along the stream courses and arroyos of our southwest.

During the maneuvers in which the modified shelter tent was tried out, it was found generally satisfactory by the troop officers who used it, and its features of concealment, portability, and ease of pitching and striking, were favorably commented upon by umpires, staff officers, and observers from higher units.

For further experiment a special tent was constructed of new canvas, illustrations of which accompany this article. The principal feature of the special tent was a cut at the center of the ridge with a flap buttoned across for the purpose of providing an arrangement which would permit any two halves so arranged to be buttoned together to form a tent without the chance of one of them being inside out. However, since in this tent the rear triangular flaps were left off so that both ends are alike, the same result may be best achieved by providing double buttons (one inside and one outside) along the ridge.

Certain other changes in the special tent are recommended, such as one guy at the center of each wall instead of the two shown, and ties for rolling the side

walls should be put through just under the eaves to permit walls to be rolled as high as possible.

The special tent arrived in time to be partially tried out during the latter part of maneuvers. During the return march there was some wet weather which demonstrated the complete shelter and comfort afforded by this tent.

Its suitability was further demonstrated in its later use by officers on a hunting and fishing trip in Mexico. Transportation was by motor car but due to road conditions and the necessity of carrying considerable supplies, shelter had to be reduced to a minimum consistent with reasonable comfort. The tent received much praise from the officers who used it, its portability and ease of packing, together with the comfort afforded in the rainy weather encountered, being especially remarked.

A Course of Application For Cavalry*

Translated by First Lieutenant C. C. Clendenen, Cavalry

In view of recent events in South America, the following extract from an article written in *La Revista Militar*, of Bolivia, by Captain Oscar Moscoso, will prove of undoubted interest to officers of the United States Cavalry.

THE General Staff has recently decided upon the creation of Courses of Application for the various arms of the service, during the next year. The Course of Application for Cavalry will be organized at Guaqui, embracing the garrison regiment of that place.

Our Cavalry officers realize that this General Staff project will contribute in very decisive form to the professional and technical progress of their arm. For a long time we have felt the necessity of increasing standards of perfection in the theoretical and practical instruction of the subaltern officer, making him apt in

* *La Revista Militar*, La Paz, Bolivia, September, 1930.

the performance of his delicate functions as an instructor and as a leader of small units of Cavalry. Moreover, from the studies and the practical experiments of the Course of Application, will be evolved the new tactical regulations for the arm, giving our Cavalry a common doctrine and practice. And, finally, the student officers will be aided greatly, in the Course of Application, in preparing themselves advantageously for their entrance into the Superior School of War.

Such are the objectives which the General Staff has in mind in ordering the establishment of a Course of Application.

The famous cavalry schools of Hanover and Saumur have served as models for the organization of the schools of many other countries; we too, should avail ourselves of the experience of those famous institutions.

Let us consider some of the various subjects which should be presented to the students of a Course of Application for Cavalry.

We must bear in mind, from the first, that theoretical instruction should march parallel to practical instruction—it must be so conducted that every officer may be a practical field soldier and at the same time acquire a certain methodology in instruction. With this objective in mind, practical instruction, to be completely effective in all its branches, should start with the training of the recruit, ascending thence to the squad, the section and the squadron.

Equitation

Instruction in equitation is fundamental in the Cavalry and has lost not one bit of its importance; the authorized statement of the former chief of the Reichswehr, General von Seeckt, stresses sharply the value of training in equitation for modern Cavalry. If Cavalry is to be employed efficiently, and for reasons of moral character, the arm requires officers who are true and enthusiastic horsemen, who can transmit to their soldiers the courage and decision which are acquired in the practice of vigorous horsemanship—the better the horsemanship, the better the Cavalry.

No one should suppose for an instant that the student officer can be a consummate horseman on the termination of his course of instruction nor that he can perform all the airs of the high school. No Course of Application can be prescribed which will make the student an accomplished horseman in a year's time; nevertheless, each officer will finish the course capacitated to follow the practice of higher equitation on his own account. The fruits of a course in equitation are not to be gathered during the course only but will be the greater as is the dedication of the officer to horsemanship upon his return to his regiment.

For instruction in equitation during the Course of Application there should be, at the least, three horses for each officer; a remount, a horse for schooling and high school work, and another for fast work across country. Each horse should be trained for the particular object for which it is destined.

Our regulations on equitation should be applied without variation from the principles set forth therein. We can be sure that the results which will be gained from instruction in horsemanship will surpass anything which is hoped for at present, because of the enthusiasm which animates our corps of officers and because of the undoubted aptitude for horsemanship which exists in all our people.

With the object of making our Course of Application a true school, it may be convenient that certain outstanding officers should continue in the course a year or two longer, in order to form a corps of instructors.

Tactics

This subject orients and coordinates all other branches of a cavalryman's professional knowledge. Theoretical instruction in tactics, amply given, has as it's object to enable the officer to write of the employment of his arm as a part of the military machine in the theater of operations and on the field of battle.

Cavalry covers, reconnoiters and fights in union with the other arms. It is necessary, then, for the Cavalry officer to understand the peculiarities and characteristics of the other arms. In order to accomplish this, he must study joint operations within the frame of a large unit. In this way he learns, also, to understand clearly what the other arms demand from the Cavalry and he will be able to render them true service.

It is clear, then, that discourses on Cavalry and its various modes of operation must be studied with care. The resulting analysis should be translated into orders within the different echelons and in all situations. The tactics of Cavalry must be studied with the division as a basis, so that it will be possible to consider everything relative to organization, our own as well as foreign, the functioning of the various services, the cooperation of the arms, etc.

The study of tactics should be effected by means of frequent conferences on historical examples and by map maneuvers and war games.

Instruction In Combat

This is effected with the squadron as a basis, but commencing always with the smaller units (squad, section, the patrol, etc.). The employment of the squadron on all missions which it will encounter in campaign must be studied carefully (reconnoitering squadron, advance guard squadron, outposts, offensive and defensive combat, the divisional squadron). Such a study, which most officers find extremely interesting, should include conferences, exercises on the sand table, map maneuvers, exercises on the panorama, and, finally, work on the ground with war strength units. Setting aside an afternoon each week for terrain exercises, the actual solution on the terrain of small problems will serve, by the end of the course, to clarify everything relating to the conduct of the squadron in campaign. Each exercise must result in an issue of orders. From a discussion of the experiences obtained in such exercises will come the principles which will be embodied in our future regulations for Cavalry in campaign.

SPORTS

Horse Shows and the West Point Horse Show

THE article, "Today's Conclusions," by Captain Bradford which appeared in the last number of the CAVALRY JOURNAL is not only exceedingly interesting and instructive but it opens a very important field for discussion. In the light of his article it might be of interest to describe the West Point Horse Show both from the point of view of running it and from that of the results obtained.

In the East during the spring, summer, and early fall there are shows, more shows, and then even more. Every community with any horse interest takes occasion to run a horse show which may last from one half day to five days. County fairs usually run shows in conjunction with their other activities. A stable with the time and the shipping facilities might, during the course of four months, attend about fifty shows without traveling a greater distance than one hundred miles in any direction at one time from, say, West Point as a base. All fifty shows will be very much the same, as Captain Bradford says. The events are inflexible and, fortunately or unfortunately, as you look at it, the saddle class and hunter winners have become more or less standardized. Yet in the light of the single show, for the group for which it is staged, it is an original source of interest, an addition to the fund for the charity or other purpose for which the show is given, and it adds tremendously to the prestige of the show to get those best horses, the "standardized winners" to exhibit.

West Point has held its Annual Horse Show for fourteen years. The purpose is, basically, to run a top-notch horse show for the education and enlightenment of both officers and cadets; to show types and classifications of horses; to encourage horse activity; and to raise money for charity, the Army Relief and the West Point Local Relief.

The West Point Show rates, I should say, as one of the leading secondary shows in the east. For years we have had exhibited the best horses in this vicinity. Winners at our show usually are in the ribbons at anybody's show. In order to get these exhibitors (civilians) we have to conform to the standards of the *Regular* Show. We had an inside course of the selfsame "four post and rails" the height of which were varied from three six for local novice classes to four six for open classes. We had one figure of eight course. We had a typical "outside" course for hunters which involved a gallop of six hundred yards over the usual 8 jumps, brush, stone wall, chicken coop, in and out; a jump out of the ring and a finish in the ring. In all such classes we conformed to the time-honored custom of allotting 60% for performance and 40% for conformation.

One must not make any mistake in supposing that the "standardized" winners are not the best. They are beautiful thoroughbred horses which cost up to ten thousand dollars. They usually perform in wonderful fashion over the accepted courses and are extremely hard to fault in conformation. With ten such horses in a class of twenty-five, with faultless performances and excellent manners and way of going it becomes difficult to select the winner. The winner will, however be one of those ten. Judging is no easy matter, and judges are always in line for the most scathing criticism both from people who don't know what they are talking about and from some who do. Accepting the fact that it is of best interest to get those horses entered in your show, the problem arises as to how to get them. This must be solved by knowing the owners, by persuasion, by having a well-run program, by having good judges, naturally announced ahead, by having satisfactory events and sufficiently attractive money prizes, by treating exhibitors with every courtesy and in every other way possible to think of. In most parts of the country it is necessary to sacrifice about ten classes to saddle horse people. This is merely a bow to those people, because for years in our experience here saddle classes have been a financial loss. Certainly, since the West Point show has for one of its purposes the exhibition of "types", it is becoming that we have the recognized classes for saddle horses and saddle mares over and under the accepted heights. To most Army Horsemen these horses are of little interest with their artificial manners, their abortive tail sets, their exaggerated and "stylish" manners, and the manner in which they must be ridden.

West Point had twelve saddle classes. We were fortunate in having the Oldtown Hill Stable at our show. The famous "Flowing Gold," a champion of champions won the larger division and the saddle horse championship, while "Desert Rose" of the same stable won the smaller division. Among the hunters we had Mrs. Bernard Gimbel's famous hunt team consisting of "His Elegance," "Trolly," and "Weary River," an excellently matched chestnut trio, hard to beat collectively or individually. Mrs. Harry Frank was very successful with "Alhaja" and "Upperland," as was Mr. Edward V. Quinn with his "Lord Erin," "Your Way," and "Flying High." The single entry of the Warfield Farm, "Prince Charming II" eclipsed the field to win the Hunter Championship. Mrs. R. L. Benson of Princeton had three splendid hunters and two outstanding grey jumpers, "Sir John," and "Heather," which won several stakes and, the former, the Jumper Championship. The military classes were largely contested among the officers on duty at West

Point with several entries by the Essex Troop of Newark and one by Lieut. Huyler. Captain Carr's "Mithridate" won the charger class and Major Boye's "King of Hearts" the other. The cadet jumping classes were closely contested and were of great interest to the graduation crowd. In all there were four local classes, two polo classes, twelve saddle classes, four military classes, and fifteen hunter and jumper classes; thirty-nine in all, which very comfortably filled the two days of the show.

From the point of view of a standardized horse show it was very much of a success. Financially, we were hit for about fifteen hundred dollars by the decision prohibiting the publication of advertising in our catalogue. In spite of this we paid out over three thousand dollars in prize money and in trophies and made a little money for our deserving charities. We were fortunate in our judges and again extend thanks to Mr. Alfred Maclay, President of the Association of American Horse Shows, who, with Colonel Sloan Doak judged hunters, to Mr. Herbert L. Camp, of Middletown, Conn., who very ably handled the saddle classes, and to Colonel Joyce of Governor's Island, who judged military and polo classes.

Now for more discussion. I wonder whether or not a show could make radical changes in its events and still keep the interest of the civilian exhibitors we are trying to attract. Regardless of the monotony of the standard show, exhibitors do continue showing, and, to the spectators, it is an interest factor to see those horses. Were we dependent on Army horses, where would they come from capable of competing in the classes which Bradford suggests? At West Point we have only about four horses capable of jumping over four three with any degree of success. Our horses are not as good as the civilian horses and as long as we are going to run horse shows for the edification of the spectator group we must stick to those events which suit and please the civilians. The cavalry officers on duty here greatly favor Captain Bradford's suggestion in regard to circuit shows among a military group if expenses can be guaranteed and if we can secure a parity of horses "up to" the classes suggested.

For the benefit of those familiar with West Point, it will be of interest to know that the ring proper was located on the field in front of the camp parade. The boxes were located under the trees along old Sentry Post No. 2, and the outside course ran east to the camp hedge, along the hedge to a point opposite the old hotel and thence back into the ring.

Results, Equestrian Events, Cavalry School Graduation, 1932

EVENT I. NONCOMMISSIONED OFFICERS' CLASS, JUMPING
1st. *Green Boulder*, Sgt. Kramer, E, 12th Cav.
2nd. *Backslider*, Sgt. Dudley, Hq. Tr., 111th Cav.
3rd. *Big Boy*, Sgt. Reynolds, M. G. Tr., 2nd Cav.
4th. *Mars*, Sgt. Goodreau, E, 8th Cav.

EVENT II. N. G. AND R. O. TROOP OFFICERS' CLASS, JUMPING
Triangle, Lt. Moore, Cav. Res.
Fayette, Capt. Walker, 103rd Cav., Pa. N. G.
Senator, Lt. MacMurraugh, Cav. Res.
Alamo, Lt. McCollum, 111th Cav., N. M. N. G.

EVENT III. TROOP OFFICERS' CLASS, JUMPING
The Snake, Lt. Hunter, Cav.
Mr. Green, Lt. Miller, Cav.
Maher, Lt. Kaufman, Cav. Res.
Blaze, Lt. Pegg, Cav.

EVENT IV. NONCOMMISSIONED OFFICERS' CLASS, JUMPING
King Philip, Corp. W. L. Johnson, 9th Cav.
Gray Dawn, Sgt. Thorpe, M. G. Tr., 7th Cav.
Backslider, Sgt. McCaslin, B, 6th Cav.
Calvin Mason, Sgt. Dennison, T. A., 14th Cav.

EVENT V. N. G. AND R. O. TROOP OFFICERS' CLASS, JUMPING
Fayette, Lt. Carmichael, 105th Cav., Wis. N. G.
Senator, Capt. Goodwin, 24th Cav. Div., Wash. N. G.
Gracious, Capt. Tracy, 122nd Cav., Conn. N. G.
Triangle, Capt. Armstrong, 121st Cav., N. Y. N. G.

EVENT VI. ADVANCED CLASS, JUMPING
Brat, Maj. Pierce, Cav.
Riley K., Capt. Forsyth, Cav.
Slim Holmes, Capt. Jacobs, Cav.
Renzo, Capt. Haydon, Cav.

EVENT VII. TROOP OFFICERS' CLASS, JUMPING
Mr. Green, Lt. Lowe, Cav.
Lame Deer, Lt. Roberts, Cav.
Blaze, Lt. Armes, Cav.
Snake, Lt. Ferrer, Cuban Army

EVENT VIII. ADVANCED EQUITATION CLASS, GREEN JUMPER
Skipper Symmonds, Lt. Meehan, Cav.
Metallic, Lt. Matteson, Cav.
Thistle, Lt. Clendenen, Cav.
Hank Holes, Lt. Barnes, Cav.

EVENT IX. HUNT TEAMS
1st. 1st Lt. W. J. Reardon
2nd Lt. W. H. Barnes
2nd Lt. N. M. Winn
2nd. 2nd Lt. H. A. Luebbermann
2nd Lt. T. J. H. Trapnell
1st Lt. P. E. Yeomans
3rd. Maj. C. A. Pierce
Capt. C. S. Kilburn
Capt. A. E. Forsyth
4th. 2nd Lt. R. A. Drake
2nd Lt. E. L. Rhodes
2nd Lt. C. P. Bixel

EVENT X. NONCOMMISSIONED OFFICERS' CLASS NIGHT RIDE
Corp. C. N. Rees, A. 13th Cav.
Sgt. W. Crismon, A. 2nd Cav.
Corp. A. F. Stank, E, 13th Cav.
1st Sgt. A. G. McKnight, A, 110th Cav., Mass. N. G.

EVENT XI. TROOP OFFICERS' CLASS, REMOUNT COMPETITION (EVENT COMPLETE)
2nd Lt. R. A. Drake, Cav.
Capt. M. E. Halloran, Inf.
2nd Lt. W. W. Bertz, V. C.
2nd Lt. A. M. Miller, Jr. Cav.

EVENT XII. NONCOMMISSIONED OFFICERS' CLASS, REMOUNT COMPETITION
Corp. J. R. Massie, B, 2nd Cav.
Corp. A. F. Stank, E, 13th Cav.
Sgt. V. A. Dennison, A. 14th Cav.
Sgt. T. F. McCaslin, B, 6th Cav.

EVENT XIII. ADVANCED EQUITATION CLASS, OLYMPIC PROSPECT COMPETITION
1st Lt. C. S. Babcock
1st Lt. J. M. Willems
1st Lt. T. C. Wenzlaff
1st Lt. C. G. Meehan

EVENT XIV. ADVANCED CLASS, REMOUNT COMPETITION
Capt. A. E. Forsyth
Capt. C. S. Kilburn
Capt. C. L. Stafford
1st Lt. Vicente Gallinal, Cuban Army

EVENT XV. NONCOMMISSIONED OFFICERS' STANDARD STAKES
Sgt. R. C. Hard, M.G. Tr., 106th Cav., Ill. N. G.
Sgt. V. A. Dennison, A. 14th Cav.
Corp. L. F. Michaels, M. G. Tr., 11th Cav.
Sgt. W. P. Greene, Hq. Tr. 1st Cav.

EVENT XVI. THE PATTON CUP
2nd Lt. H. M. Zeller, Jr.
2nd Lt. R. A. Drake
2nd Lt. P. E. Yeomans
2nd Lt. C. P. Bixel

EVENT XVII. COMBINED PISTOL AND SABER COMPETITION
2nd Lt. W. H. Hunter
2nd Lt. W. M. Burgess

Left, Top: Lieutenant A. M. Miller, Jr., Cavalry, winner The Cavalryman's Bowl and All Around Equestrian Championship, Troop Officers' Class, 1932. Center: Lieutenant P. E. Yeomans, Cavalry, winner Officers' Night Ride, 1932. Bottom: Lieutenant M. H. Matteson, Cavalry, winner of Lorillard Cup for the Advanced Equitation Class, 1932.
Right, Top: Lieutenant Colonel J. M. Wainwright, Cavalry, M. F. H. Cavalry School Hunt, riding "Flint Hill," winner Hunter Team, Cavalry School Race Meet, 1932. Center: Lieutenant N. M. Winn Cavalry, riding "Reno Capers," winner Green Hunter, Light-weight Hunter and Hunter Championship classes, Cavalry School Horse Show, 1932. Bottom: Lieutenant R. A. Drake, Cavalry, on "Irisher," winner of The Grimes Trophy and The Waring Trophy (a thoroughbred filly given by Mr. R. S. Waring, San Antonio, Texas, for best score over a modified Three Day Olympic Test.)

2nd Lt. R. G. Lowe
2nd Lt. R. A. Drake

EVENT XVIII. NONCOMMISSIONED OFFICERS' CLASS, COMBINED PISTOL AND SABER COMPETITION
Corp. T. K. Sandlin, B, 12th Cav.
Sgt. W. S. Murray, D, 5th Cav.
Sgt. A. C. Hutcherson, A, 14th Cav.
Sgt. V. A. Dennison, A, 14th Cav.

EVENT XIX. ADVANCED EQUITATION CLASS, GREEN POLO PONY COMPETITION
1st Lt. T. Q. Donaldson, Jr.
1st Lt. M. H. Matteson
1st Lt. B. G. Thayer
1st Lt. C. S. Babcock

EVENT XX. N. G. AND R. O. TROOP OFFICERS' AND ADVANCED CLASSES, POINT TO POINT RIDE
Capt. L. S. Tracey, 122nd Cav., Conn. N. G.
1st Lt. V. M. Lackey, 109th Cav., Tenn. N. G.
1st Lt. J. D. Sherer, Cav. Res.
2nd Lt. H. J. Donaldson, 113th Cav., La. N. G.

EVENT XXI. ADVANCED CLASS, HANDICAP JUMPING
Capt. P. S. Haydon
Capt. J. A. Hettinger
Capt. F. S. Jacobs
Capt. G. Rieman

EVENT XXII. THE STANDARD STAKES
2nd Lt. C. P. Bixel
2nd Lt. R. G. Lowe
2nd Lt. A. M. Miller, Jr.
2nd Lt. E. L. Rhodes

EVENT XXIII. HORSESHOEING JUDGING COMPETITION
2nd Lt. R. G. Lowe
Capt. C. R. Chase
2nd Lt. P. A. Ridge
1st Lt. P. E. Yeomans

EVENT XXIV. THE LORILLARD CUP, ADVANCED EQUITATION CLASS
1st Lt. M. H. Matteson
1st Lt. T. Q. Donaldson, Jr.
2nd Lt. W. H. Barnes
1st Lt. C. G. Meehan

The Cavalry School Horse Show and Race Meeting, May 30—June 4, 1932

Horse Show

THE Outdoor Horse Show Arena at the Cavalry School is one of the most pleasant places imaginable in which to show a horse or witness a horse show.

Rains, that would have postponed any horse show less favorably situated for at least a week, caused but two days' retirement to the West Riding Hall and were of little consequence to the progress of the Show.

The Sweepstakes for Hunters and Jumpers attracted a collection of tried and ring wise veterans. After considerable jumping, *Prominent Tom*, Captain C. E. Davis of Fort Leavenworth up, carried off the blue, closely followed by Lieutenant R. T. Garver, 13th Cavalry, on *Mussolini*, Lieutenant George Elms, 2d Cavalry, riding *Eagle* and Captain E. A. Williams riding *The Snake*, in that order. This class was no jumping kindergarten, and the eight horses who failed to place were all strong contenders with plenty of previous wins to their credit.

Lieutenant N. M. Winn's good mare *Reno Capers* won the Green and Light Weight Hunter Class, handily and went on to take the Hunter Championship over *Shamrock*, Major E. N. Hardy's big black veteran that probably shows to his best advantage over a long hard hunt. *Shamrock* had showed his power previously by winning the Privately Owned Hunters and taking third in the Heavyweight Class.

As usual, the Hunt Teams attracted their share of attention and with lots of stiff competition Lieutenant Willems, Lieutenant Winn and Lieutenant Mc[illegible] of the Advanced Equitation Class riding *Viclaris*, *Reno Capers* and *Hi Lo Jack*, respectively, finally came through to a well merited win.

The Pack Horse Jumping brought forth an unusual amount of interest. Taking eight jumps with a loaded pack horse on the lead beside you needs to be seen to be fully appreciated. Sufficient to say that it is beyond the primary grade in jumping events and demonstrates clearly how valuable it is to have well trained, willing pack animals when varied terrain is encountered. With four entries the 2d Cavalry made a clean sweep of the ribbons in this class.

The class for the Best Turned Out Individual Trooper was excellence itself. The judges were forced to spend much time and lots of argument before they could get the ribbons on to their satisfaction while the "side line experts" voted the entire class ribbons as the best lot of entries ever seen in such a class. When five entries of the class of these non-winners leave the ring without ribbons the winners may feel doubly proud.

Mr. R. S. Waring of San Angelo, Texas, well known judge and breeder of polo ponies and hunters, very generously donated a thoroughbred filly raised on his Lipan Springs Ranch, for the Officers' Charger Class. The entries were many and the contest close. The winner, Lieutenant Drake, went on to win the Remount Competition in his class as well.

Race Meeting

A great deal of credit for the success of the meet is due Captain R. E. Ireland, Captain M. Carson and Lieutenant E. J. Doyle for the conduct of the meet, the condition and schooling of most of the horses and the excellent condition of the courses, respectively.

The outstanding steeplechaser of the meet proved to be Lieutenant T. J. Randolph's good mount, *John Preston*. This big bay gelding won two of his three starts and was running smoothly when he misjudged a take-off on his third trial. Had his ability been known, *John Preston* would have been entered in the Cavalry School's defense of the "Elliott Memorial Cup," and it is safe to say that he will be prominent on the School's list of entries at Fort Sill next Spring, when every effort will be made to return this trophy to Fort Riley.

Flint Hill won the Hunter Trial with the same ease and grace that he has shown in carrying the M. F. H. of the Fort Riley Hunt in the field during the past season. Lieutenant Colonel Wainwright's ability to take a horse over any course or country with a maximum of smoothness and calmness at any gait is always a source of pleasure to judges and spectators alike.

Practically all of the horses in this class showed to advantage and it proved to be one of the most interesting and satisfactory "high lights" of the meet.

The Field Artillery School evidently sent their team here to win the "Elliott Memorial," as their best horses were pointed to that event. Taking both the win and the place should be the source of no little satisfaction to Fort Sill in the efficiency of their horses and riders.

Fourth Corps Area Polo Tournament

Fort Benning, Ga.,—April 22-May 15, 1932

DUE to many considerations it was decided to hold the annual Fourth Corps Area Polo Tournament at Fort Benning, Ga., during the maneuvers. This simplified matters a great deal, as most of the regular troops of the Corps Area were concentrated at Benning at this time. The Commandant of the Infantry School, Major General Campbell King, very kindly provided for quartering men and stabling the horses of the visiting teams.

Altogether, seven teams were entered in the Tournament as follows: 6th Cavalry, Fort Bragg, Fort McPherson, and the four teams from Benning: 29th Infantry, 83rd Field Artillery, Freebooters, and Students.

The advance "dope" on the teams was somewhat conflicting—The 29th Infantry was known to be well mounted and carried a very low aggregate handicap. The 6th Cavalry was exceptionally well mounted, having developed an excellent string of ponies in the last two years under the direction of Major Terry Allen, and later under Captain T. W. Herren. The Fort Bragg team was more or less a "dark horse". The Freebooters, composed of instructors in the Horsemanship Department of the Infantry School having just won the Post Tournament, found themselves crippled by injuries to two of their members: Major J. B. Thompson and Lieutenant L. J. Lockett. The Fort McPherson team was considered to be an uncertain quantity, and was by no means a favorite. In fact, as the tournament developed, the "dope bucket" was repeatedly upset.

Below is a tabulation of the games, giving the line-ups and scores:

First Game—April 24, 1932. Umpires: Major J. B. Thompson, Major Neal Johnson.

83rd Field Artillery—7 goals (earned 7). No. 1, Captain W. L. Bevan; No. 2, Lieutenant P. H. Draper; No. 3, Major A. V. Arnold; Back, Lieutenant W. H. Bartlett.

29th Infantry—6 goals (earned 4, handicap 2). No. 1, Lieutenant W. C. Sweeney; No. 2, Lieutenant C. W. Westlund; No. 3, Lieutenant W. G. Skelton; Back, Major L. S. Frasier.

Second Game—April 24, 1932. Umpires: Lieutenant C. B. Hutchinson, Lieutenant H. W. Brimmer.

Fort McPherson—8 goals (earned 7, handicap 1). No. 1, Captain A. G. Wing; No. 2, Major R. M. Howell; No. 3, W. O. O. A. Shubert; Back, Lieutenant J. K. Baker.

Infantry School Students—0 goals (earned 0). No. 1, Lieutenant O. O. Wilson; No. 2, Major T. de la M. Allen; No. 3, Lieutenant J. J. Matthews; Back, Lieutenant J. H. Griffiths.

Third Game—May 1, 1932. Umpires: Major Neal Johnson, Lieutenant J. K. Baker.

Fort Bragg—11 goals (earned 9, handicap 2). No. 1, Lieutenant W. E. Watters; No. 2, Captain Samuel White; No. 3, Lieutenant C. S. Whitmore; Back, Captain P. C. Fleming.

Freebooters—5 goals (earned 5). No. 1, Captain J. A. Nichols; No. 2, Captain J. P. Gannon; No. 3, Captain J. W. Blue; Back, Captain C. F. Gee.

Fourth Game—May 8, 1932. Umpires: Major J. B. Thompson, Lieutenant H. W. Brimmer.

Fort McPherson—8 goals (earned 8). No. 1, Captain A. G. Wing; No. 2, Major R. M. Howell; No. 3, W. O. O. A. Shubert; Back, Lieutenant J. K. Baker.

83rd Field Artillery—4 goals (earned 3, handicap 1). No. 1, Captain W. L. Bevan; No. 2, Lieutenant P. H. Draper; No. 3, Major A. V. Arnold; Back, Lieutenant W. H. Bartlett.

Fifth game—May 8, 1932. Umpires: Major T. de la M. Allen, Captain J. A. Boyers.

6th Cavalry—10 goals (earned 10). No. 1, Lieutenant C. B. Hutchinson; No. 2, Captain T. W. Herren; No. 3, Lieutenant Z. W. Moores; Back, Colonel Gordon Johnston.

Fort Bragg—7 goals (earned 4, handicap 3). No. 1, Lieutenant W. E. Watters; No. 2, Captain Samuel White; No. 3, Lieutenant C. S. Whitmore; Back, Captain P. C. Fleming.

Sixth game—May 15, 1932. Umpires: Captain J. A. Boyers, Lieutenant H. W. Brimmer.

Fort McPherson (winners)—4 goals (earned 2, handicap 2). No. 1, Captain A. G. Wing; No. 2, Major R. M. Howell; No. 3, W. O. O. A. Shubert; Back, Lieutenant J. K. Baker.

6th Cavalry—3 goals (earned 3). No. 1, Lieutenant C. B. Hutchinson; No. 2, Captain T. W. Herren; No. 3, Lieutenant Z. W. Moores; Back, Colonel Gordon Johnston.

4th Corps Area Consolation Tournament

First game—May 1, 1932. Umpires: Captain J. A. Nichols, Major Neal Johnson.

Infantry School Students—7 goals (earned 7). No. 1, Lieutenant O. O. Wilson; No. 2, Major T. de la M. Allen; No. 3, Lieutenant J. J. Matthews; Back, Lieutenant J. H. Griffiths.

29th Infantry—5 goals (earned 1, handicap 4). No. 1, Lieutenant W. C. Sweeney; No. 2, Lieutenant C. W. Westlund; No. 3, Lieutenant W. G. Skelton; Back, Major L. S. Frasier.

Second game—May 15, 1932. Umpires: Captain J. A. Boyers, Major Neal Johnson.

Infantry School Students (winners)—5 goals (earned 5). No. 1, Lieutenant O. O. Wilson; No. 2, Major T. de la M. Allen; No. 3, Lieutenant J. J. Matthews; Back, Lieutenant J. H. Griffiths.

Freebooters—5 goals (earned 4, handicap 1). No. 1, Captain J. A. Nichols; No. 2, Captain C. F. Gee; No. 3, Captain J. W. Blue; Back, Major J. B. Thompson.

So, in spite of the handicap of a limited number of players on which to draw for their team the team from Fort McPherson, Ga. emerged the champions of the Fourth Corps Area.

The Foreign Military Press

Reviewed by Major Alexander L. P. Johnson, Infantry

CHILE—*Memorial del Ejercito de Chile*—February, 1932.

"Replacement of Officers in War," by Major Ernesto Salbach.

World War experience shows that the heaviest casualties among officers of the active list were suffered during the early weeks of the war largely as a result of the desire of the trained professional officers to set an example of self-sacrificing heroism. Hostile snipers seeking out the conspicuous officer-targets likewise contributed heavily to the casualty list. As a consequence, all belligerent powers were soon confronted with the necessity of replacing these losses with less efficient, because less trained, personnel. The author advocates that a proportion of the officers of the active list in all grades be held in reserve in the zone of the interior as instructors for replacements and in turn to serve themselves as replacements.

The second serious problem of officer-replacement arose in connection with the general staff. At the outbreak of the world war not a single power had sufficient trained officers for general staff duty to fill all the requirements of the emergency. Moreover, it became necessary to grant the wish of many general staff officers to serve with troops at the front. Heavy casualties among them were inevitable. Training of competent general staff officers takes years. They cannot be improvised. Make-shift arrangements resorted to by all armies produced on the whole but mediocre results. The author believes that trained general staff officers should be employed in that capacity only, and that departure from this practice should be a rare exception rather than the rule.

ECUADOR—*El Ejercito Nacional*—No. 58, 1931.

"Europe in Arms," by Colonel A. Grasset, French Army.

Replying to certain figures on this subject which had been published in the *Berliner Illustrierte Zeitung* and reproduced by *The Illustrated London News*, the author undertakes to disprove allegations concerning the military strength of France. According to Colonel Grasset's figures, Soviet Russia, with a total peace strength of 1,812,000 men, is the foremost military power of the world today. It is followed, in order of relative strength, by Great Britain, Italy, France and the United States. Colonel Grasset credits the United States with a military force of 565,000 officers and men. This total comprises the regular army with 157,000 officers and men (100,000 within the territorial limits of the United States, 29,000 overseas, and 16,000 in the Marine Corps); the National Guard with a total of 157,000 officers and men; the Organized Reserve with 114,000 officers and 5,000 enlisted men; and the R.O.T.C. with a total enrollment of 112,000 and graduating annually 6,000 new reserve officers. The fortuitous circumstance that the totals do not agree, is possibly due to a typographical error. It is strange that Colonel Grasset overlooked the C.M.T.C., the U. S. Customs Guards, Forest Rangers, the various state constabularies, and the police departments at least of New York City and other large metropolitan areas. He counted similar forces in the case of Great Britain, Italy and Germany. Thus, he credits Germany with a total military strength of 285,000 by including the Security Police (Schutzpolizei or Schuppo) of 150,000 men, and the Harbor and River Police (Wasserschutz) of 30,000 men.

MEXICO—*Revista del Ejercito y de la Marina*—March, 1932.

The General Plan of Instruction in the new "Escuela Superior de Guerra."

Appreciating the importance of professional training and educating of army officers, the Mexican Government has recently established an institution of military learning bearing the designation "Escuela Superior de Guerra" (Superior School of War). The faculty consists of four sections: 1. Tactics and Strategy; 2. Technique; 3. Languages; 4. Physical Training.

The first section teaches the principles governing the conduct of war, tactical principles and decisions and psychology of leadership. The subjects covered by this section include also command and staff functions; geography and military history; fortifications topography; principles of naval strategy and tactics foreign armies; chemical warfare and meteorology.

The study of strategy and military art comprises (a) principles of the conduct of war; (b) theories of modern strategy; (c) technique of war. The tactical studies include (a) general tactics and general staff functions; (b) tactics and technique of the several arms and services.

The second section covers: 1. Sociology, political science and economics; 2. Law of war, public and private international law, constitutional law; 3. General technique and industrial mobilization; 4. General mobilization of national resources.

In the department of languages the study of English and French is obligatory. Facilities are afforded for the study of other foreign languages, such as German, Japanese, etc., etc.

The physical training course includes equitation, fencing, gymnastics and organized sports.

The course of instruction covers two years.

AUSTRIA—*Oesterreichische Wehrzeitung*—January 15, 1932.

"The Chino-Japanese Conflict in Manchuria," by Major General Theodore von Lerch, Retired.

The author states that he bases his summary upon authentic sources of information and official reports. The Japanese believe that the differences with China are wholly due to China's failure to perform her treaty obligations. China, on the other hand, declares that the Treaty of 1905—the 21 points—was never ratified by the national government; moreover, it was superseded by the Treaty of Washington in 1922, which recognizes China's absolute sovereignty and guarantees her territorial integrity.

Japan considers her substantial rights injured in three different directions:

1. Violation of the rights accruing to Japanese subjects in Manchuria under leaseholds granted them for a period of 30 years for commerical, industrial and agricultural purposes. These rights were confirmed by the treaty of Washington. Official pressure exerted upon Japanese and Koreans in Manchuria by the Chinese authorities, the growing disorders with consequent loss of security of person and property, and the apparent inability of the Chinese Government to cope with the situation, are also causes of Japanese complaint.

2. The extensive boycott organized against Japanese goods coupled with a strong pressure exerted upon Chinese to compel them to leave Japanese employment and a general prohibition of the sale of any merchandise by Chinese merchants to Japanese subjects. To these complaints the Chinese Government replies that the constitution of the Republic leaves it to the choice of each citizen to do business as he desires, and that the boycott was instituted by the people and not by the Government. The boycott, first used against the British in 1926, actually is China's newest and most effective weapon. In 1926, it paralyzed Honkong completely and forced the British to agree to substantial concessions to China.

3. The Manchurian railway situation. By the terms of the China-Japanese treaty, which confirmed the transfer of Russian rights in Liaotung peninsula to the Japanese, China agreed not to construct parallel railways in the proximity of the South Manchurian railways, or to construct such spurs or branches which might impair Japanese interests. Notwithstanding this, China began, in 1925, the construction of the Mukden-Pekin railroad, now completed as far as Tunglia, paralleling the Japanese-owned South Manchurian railroad. The new Chinese railroad is a direct connection between China and Siberia and may conceivably exclude the South-Manchurian railways from the China-Europe traffic.

Between 1927-1929 China completed the Kirin-Hailung branch railroad connecting with the Hailung-Mukden line. It likewise parallels the Japanese railroad and is to be extended as far as Harbin. The Japanese complain that the low Chinese rates seriously damage the business of the Japanese railways.

In 1930, China began the development of the Hulotao port area at the head of the Gulf of Liaotung. It will compete with the Japanese port of Dairen, formerly the Russian port of Dalny. The Chinese assert that Japanese rights in the premises are not impaired by existing treaty obligations.

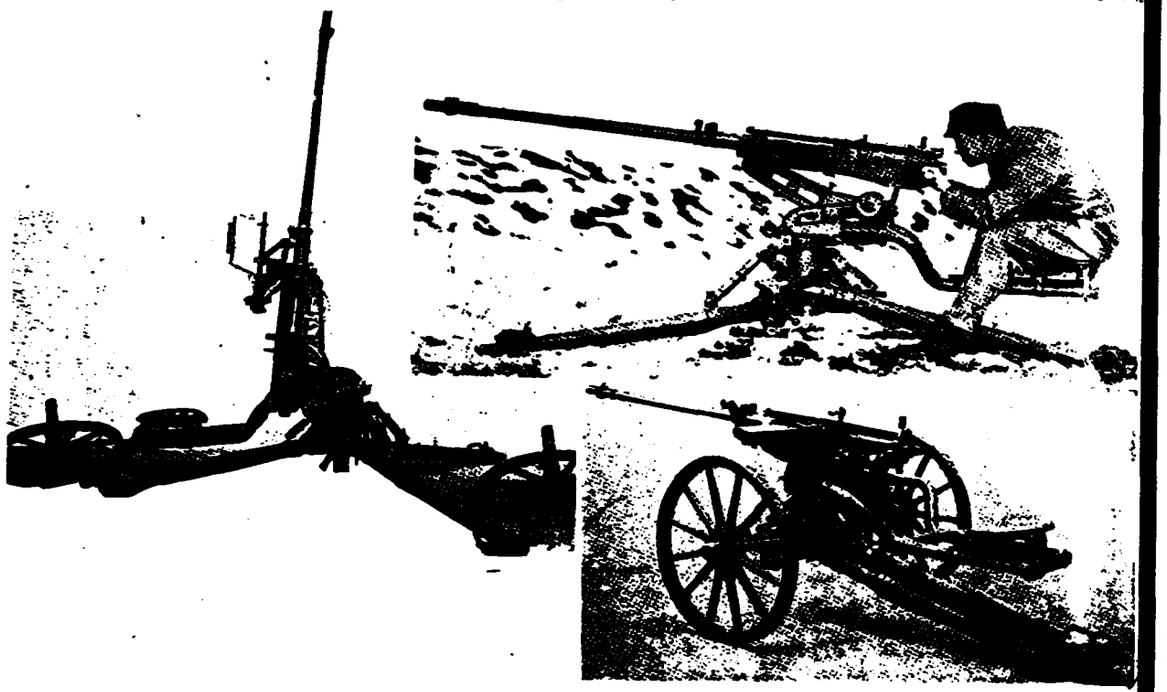
Again, China agreed to construct certain railway lines with the aid of Japanese capital. Now Japan complains that China actually prevents the completion of the railroad connecting Tunhua with the Korean frontier and the Japanese railroad terminus at that point. Similarly, the Chinese obstruct the construction of the Changehun-Tailai-Taonan railroad. This transverse railroad is of prime strategic importance to Japan since it would connect the Japanese base in Korea with North Manchuria.

The conflict between Chinese and Japanese railroad interests in Manchuria is thus quite obvious. Moreover, the Japanese capital investment in Manchuria represents a total of 1,588,870,000 yen.

In September, 1931, according to Japanese reports, Chinese soldiers destroyed the Liao railroad bridge on the Mukden-Dairen line. The Chinese retort that this sabotage was engineered by the Japanese to provide them with a pretext for intervention. Even before that incident Japanese public opinion had been strongly aroused by the murder of a captain of the Japanese Imperial General Staff by Chinese troops in Manchuria. The Chinese authorities disclaimed all knowledge of this incident. The Japanese, impelled by these incidents and the increasing activity of Chinese marauders in Manchuria, opened fire on Mukden, on September 19, 1931, and after a short bombardment occupied the Chinese quarters of that city, the barracks, arsenal and flying field. The Chinese garrison surrendered. After several minor clashes, the Japanese received reinforcements and continued their advance as far as Tsitsihar, capital of northern Manchuria.

The area of Chinchou, along the Mukden-Tientsin railroad, is strategically the most important in case of a clash between China and Japan. Chinese forces advancing along this railroad in an easterly direction would strike the Japanese at the most sensitive spot and menace their communications. Chinese regular troops actually assembled in that area. The Japanese promptly moved against them in several columns, along the Yinkow-Koupangtze, the Mukden-Chinchou lines and other routes farther north. This concentric advance compelled the Chinese early in January, this year, to withdraw. As a result of this move, China is now effectively cut off from her Manchurian province, and the Chinese naturally regard this situation as a violation of their sovereignty and of their territorial integrity.

The author believes that Japan will reach an agreement with Soviet Russia, for both countries need peace. The United States, he thinks, notwithstanding the concentration of the fleet in the Pacific, will think a lot before attempting to do more than to exert diplomatic pressure. He concludes that Japan is free to settle



the Far Eastern question according to her own best interests.

GERMANY—*Deutsche Wehr*—January 22, 1932.

"The 2 cm Machine Cannon S 5-100," by Major Dr. Gustave Daniker, Zurich.

The desire to provide a single weapon for antitank and antiaircraft use at least within the combat zone of infantry, led to the construction of the 2 cm. machine cannon. The S 5-100 is a product of the Solothurn Arms Corporation, Switzerland. In contrast to the Oerlikon type machine cannon, this weapon is a rigidly locked recoil-loader with moving barrel. At the moment of discharge, the barrel, housing and breechblock form a single locked unit. The recoil drives this mechanism rearward, compresses the twin-recoil spring which is housed at the bottom of the gun. In the rearward motion, the entire mechanism travels as a unit a distance of 18 mm., then the lock-handle rotates about its pivot and opens the breechblock while the motion to the rear continues for an additional 12 mm. A booster-lever supplies the additional force necessary to throw open the breechblock. At the same time the extractor-ejector removes the empty shell from the chamber and ejects it through an opening on the right. The counter-recoil spring moves the mechanism forward to its normal position, reloads the gun and locks the breechblock. In automatic fire, the firing pin is cocked in the rearward motion and the striker released at the end of the forward motion, immediately the breechblock is locked. When used as a single-loader, the mechanism is held fast by a catch at the end of the rearward motion with breechblock wide open.

The gun is provided with a number of safety devices. The construction is simple, sturdy and easily operated. Stripping and assembling of the gun are simple. The gun carriage is well adapted to the use of the weapon as an antitank and antiaircraft gun. The wheels are removable. The trail opens as a tripod with legs forming angles of 120° each. The legs of the tripod end in rings which permit the pinning of the piece to the ground by means of spikes. The gun may be fired from tripod or carriage. It is equipped with a duplex pointing gear which permits rapid swinging of the gun from target to target, as well as accurate adjustment for elevation and deflection. The gun can be transported on wheels coupled to a limber, using one draft-animal, or it may be carried by pack animals in four loads ranging from 110 to 120 kg. each, except load No. 2 which weighs 138 kg.

The gun is capable of great accuracy, but owing to the small calibre of the projectile it loses its effectiveness at long ranges. At less than 500 meters the projectile will pierce the armor of medium tanks and will cripple heavy tanks struck at sensitive points. The following data may be noted:

Calibre	2 cm
Length of barrel	1300 mm
Weight of barrel	17 kg
Weight of gun complete	50 kg
Weight of projectile:	
Armor piercing bullet	135 gr.
Explosive bullet	125 gr.
Tracer bullet	132 gr.
Muzzle velocity	850-880 m sec.
Maximum range	ca 5600 m
Maximum vertical range	ca 3800 m
Rate of fire	300 rounds min.
Weight in battery (trail without wheels)	204.5 kg.
Weight in battery (trail with wheels)	240.5 kg.
Weight of cartridge and projectile	302-312 gr.
Weight of empty magazine	3 kg.
Weight of magazine, 20 rounds	9.5 kg.

GREAT BRITAIN—*The Army, Navy and Air Force Gazette*—May 19, 1932.

"China Armed and Foreign Led." by Brig. Gen. C. D. Bruce, C. B. E.

An interesting analysis of the fighting qualities of the Chinese. For centuries the Chinese as a race have been famed for peaceful habits and their dislike for war. The Chinese idea of life excluded any form of violent exercise, and from their point of view, war is a violent exercise which no one but a fool takes part in if he can avoid it. Games, sports of any kind were anathema. Of course, this does not apply to the coolie class. Intellectuals, bankers, merchants and the like, when they played, played decorously with no more exertion than it takes to watch two small birds indulge in a fight. If there is anything in the old adage about "sound mind in sound bodies," the Chinese should be a poor race. Yet all in all, the Chinese is perhaps the most virile race in the world. There is quite a good deal of misapprehension concerning the military value of the Chinese soldier. Yet the military history of China is a long procession of conquests. Only military ambition combined with military spirit of the most intensive kind could create vast empires such as have been created at times by the Chinese. But for reasons hard to trace, Chinese military leadership has failed to manifest itself during the last few centuries. There is evidence, however, that the fighting spirit still exists if only adequate leadership can be found. Whenever such leadership appeared, the Chinese fought as bravely as any oriental race. That was proven by the experience of Major Charles "Chinese" Gordon, R. E., and again by "The Chinese Regiment" led by British officers and N. C. O.'s during the Boxer uprising.

The author observes "that a fighting spirit exists in China today those who have seen it put to the test have no doubt. The question in which some day the world may be interested is, can this spirit be evoked and made use of by Chinese leaders?"

HUNGARY—*Magyar Katonai Szemle*—May, 1932.

"Alfred Krauss, General of Infantry, By Major Joseph Nemeth.

A eulogy of the distinguished Austrian soldier on the occasion of his seventieth birthday. General Krauss achieved distinction before the World War as a prolific writer and student of military art. He was one of the successful instructors and, at the outbreak of the World War, Commandant of the Austro-Hungarian War College. He has the unique distnction of having come through the ordeal of the great war as Austria-Hungary's undefeated general. A fearless, candidly outspoken man, as an instructor of fledgling general staff officers he championed absolute freedom of speech and right of criticism for student-officers at the War College. He preached the doctrine that "Character" comes before "knowledge" and "substance" before "form." The success of the Austro-Hungarian break-through of the Italian front at Tolmino and the destruction of two Italian armies attaches to the name of General Krauss. His claim to lasting fame, however rests upon his writings. His clear, convincing style, ruthless objectivity and biting criticism is particularly effective. "Napoleon, Moltke and Benedek," "Ulm, 1805," and "The Russian Balkan Campaign, 1877" are classics of military literature. "The Causes of Our Defeat" is one of the outstanding contributions to the literature of World War history.

Some of his pungent remarks in "Ulm, 1805" deserve quotation. In the forward to that work General Krauss observes:

"When an army suffers defeat, there are always those creatures who will flay and sling mud at that unfortunate command which had bled in vain. To it attaches the opprobrium of defeat. The army, however, is but a factor of the state, so that we are justified in saying: as is the state, thus is its army.

"'Nations have ever paid with blood when they were governed by incompetent executives, when their administration fell into the hands of a bad or incompetent bureaucracy. The history of Ulm clearly proves that.

"Blame for defeat of an army belongs to those who are entrusted with its management: the government, the administration. In countries with popular representation, representatives with narrow vision are no less blameworthy. The army—and since the army of today is the nation in arms—the nation covers with its blood the errors and sins of its rulers. When an army suffers defeat because of the errors of the government, the catastrophe is so great that no one bothers about determining the true and basic causes of the disaster. On the contrary, everyone gladly joins with those who calumniate the hapless victim—the army—and drag it into the mud."

General Krauss concludes that scholarly dissertation by deducing the following valuable lessons:

"The first lesson is political. The politician must keep before his eyes clear, definite and great objectives."

"Policy and the army must be in absolute harmony. It would be crass folly to pursue an active foreign policy without an adequately prepared army. But it would be just as bad to maintain a large army and remain politically dormant. This harmony demands that the government, which seeks to achieve anything in its foreign policy, must endeavor with might and main that the means of realizing its policy, the army, be not neglected."

"The second lesson pertains to the power of decision of the military commander in the field."

"In war the enemy situation and intentions are unknown.

"Our own will, mission and situation are the factors upon which the decision of the military commander must rest."

"The third lesson is of importance to the ruler, the chief executive.

"The most important quality of a ruler is the ability to know human character. It enables him to choose from the mass of men who surround him those who are best fitted, most qualified to act as his counsellors.

"Knowledge of men enables the ruler to reward at the proper time and place, and to mete out punishment which will deter others whenever such action should become necessary.

"If the unfit be permitted to attain the summit of power and, standing at the helm, bring misfortune upon the state without incurring just and deserved punishment, but instead are permitted to stand aside rich in rewards and honors only to climb aboard again at the first opportunity, then it is inevitable that the unfit should always be in power, and those who possess ability be thrust aside."

ITALY—*Rivista Militare Italiana*—May, 1932.
"Hungary," Captain Gianni Baj Macario.

The crucial point of Europe's economic dislocation must be sought in the middle-Danube basin. The dismemberment of Hungary by the Treaty of Trianon was a most unfortunate decision which cannot be justified either on geographic, economic or historical grounds. The author points out that the sweeping arc of the Carpathians enclosing the fertile valley of the middle-Danube forms a natural geographic and economic unit which for a thousand years formed the Kingdom of Hungary. The dynastic policy of the House of Hapsburg and the devastations of Turkish rule are responsible for the changes which took place in the ethnic complex of that country. In the XV century, the Magyar element represented 75 to 80 per cent of the population, while the census of 1720 showed it to be only 45%, thereafter gradually increasing to 54% in 1910. In 1918, Hungary had an area of 325,411 sq. km. with a population of 21 million. The treaty of Trianon tore away 71.5% of the territory and 63% of the population. Among the 13,300,000 inhabitants transferred to the Succession States were 3,800,000 of Magyar race. The population of dismembered Hungary according to the 1929 Census is 8,600,000 of which 83% is Magyar.

Hungary's frontiers from a military point of view are significant. They are completely open, touching along five-sixth of their total length upon countries of the Little Entente, hostile to Hungary. The national capital is within range of heavy artillery emplaced upon Czechoslovakia soil. Airplanes may reach Budapest from beyond the frontiers within nine minutes. Against this potential menace from the air, the Treaty of Trianon prohibits Hungary from maintaining an air force, while her miniature army had but two anti-aircraft batteries. The loss of the capital would be disastrous. It is the industrial center of the realm as well as the center of its communications. Hungary's central location might favor operations on interior lines were it not for the fact that only 200 km. separate the northern and southern frontiers. Moreover, the country is bisected by the Danube which seriously impedes lateral movement. With one exception all bridges across the Danube are at Budapest, the lone exception near the Jugoslav border. A Hungarian defensive line, for example, along the Czecho-slovak frontier would be easily rolled up by a Roumanian army advancing from Transylvania, while the Jugoslavs would menace the rear. The unfortunate strategic situation coupled with the vast military superiority of the states of the Latin Entente makes the problem of the defense of Hungary insoluble.

Hungarian troops had a conspicious part in the World War. Regiments of the Honvéd ("home defenders") fought with incredible devotion and loyalty for the Hapsburg cause. Their conspicuous valor earned the respect and admiration of friend and foe alike. The traditions of the old army are preserved by the small army of 35,000 men which the Treaty of Trianon permits Hungary to maintain. This force comprises seven mixed brigades and two cavalry brigades. The brigade consists of two infantry regiments, one cyclist battalion, one troop of cavalry, one field artillery battalion, one signal company, one train and one motor detachment. The infantry regiment has three battalions, one technical company, one communications company, one machine gun company and a trench mortar company. The battalion consists of three rifle and one machine gun company. The cyclist battalion has one cyclist company, one rifle and one machine gun company. The artillery battalion contains one mountain, one field gun, one howitzer, one trench mortar-battery and one technical company. The cavalry regiment consists of two sabre troops and two machine gun troops. Independent formations comprise an artillery battalion consisting of one gun battery, one howitzer battery, two A. A. batteries and one trench howitzer battery.

GERMANY—*Militar-Wochenblatt*—April 11, 1932
"Reorganization of the French Ministries for National Defense," by "308."

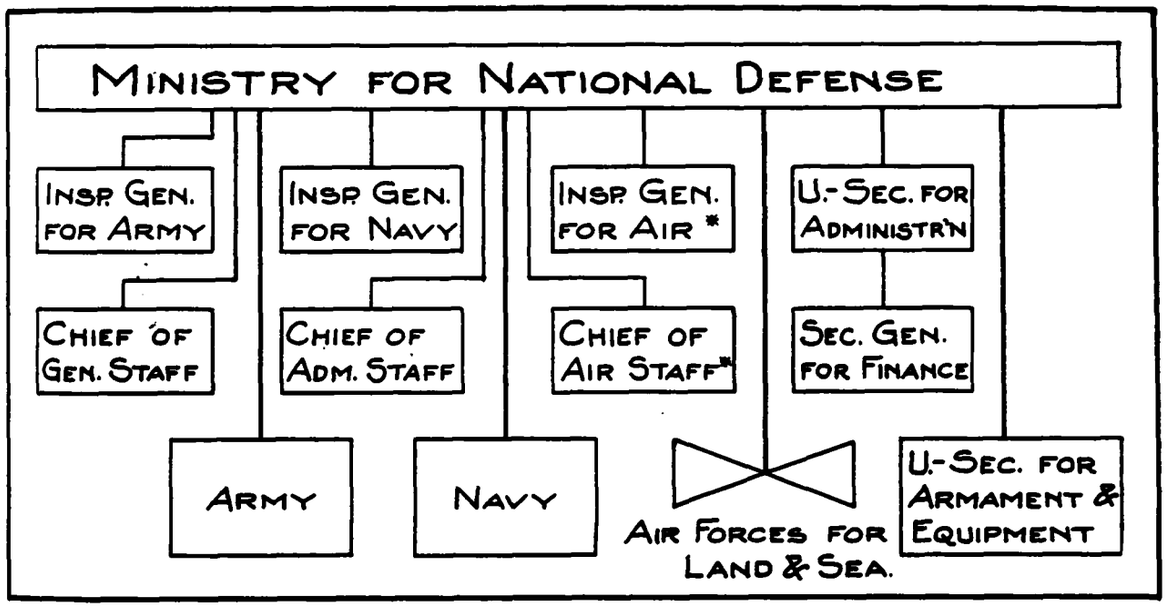
The consolidation in time of peace of all elements of national defense under a single head is the surest preparation for unity of command in time of war. Had it been possible to place the German land and sea forces under a single command at the outbreak of the World War, it would have had a beneficent influence upon the entire conduct of the war. In Great Britain, Lord Kitchener insisted upon placing all elements of national defense under a single head. Sir William Robertson proposed that the Premier assume the office of Minister of Defense.

In France, Clemenceau and Foch repeatedly emphasized the necessity of consolidation of the army, navy and air forces. Among the champions of this idea in the French senate and chamber of deputies were Painlevé, Maginot, Renaudel and Fabry. At the bottom of their plan for consolidation was the desire to remove once and for all the continual friction and rivalry between the ministries of war, navy and air. The majority in both houses of the French Parliament were, however, opposed to the proposition on the ground that it would concentrate too much power within the hands of a single person. For this reason, consolidation of the three ministries was not included in the general army reform bill in 1928. Tardieu, however, accomplished the feat without consulting Parliament, and will seek approval of the *fait accompli* when the newly elected Parliament convenes.

Besides military reasons for his action, Tardieu pleaded political reasons as well. In this era of disarmament conferences he hoped that this "simplification" and the placing at the head of the consolidated Ministry of Defense the well-known budget-expert Pietry would produce a reaction favorable to France. It would also permit the distribution of defense appropriations in accordance with military and budgetary interests and needs. Tardieu's declaration is significant. "The decisive problems of national defense in the political and true sense of the word is nothing but the problem of employing all military resources along the various fronts and in the different theatres of operation. To attain the desired objective, it is essential that all forces be under a single command."

The reform permits the establishment of unity of command in time of peace. According to the French press, General Weygand, Vice-Chairman of the Supreme War Council, is to become the Commander-in-Chief of the consolidated arms of national defense. The chiefs of staff of the army, navy and air forces will become the deputies. As a result of this consolidation, the Ministry of Air, organized in 1929, ceased to exist. Its section for commercial and civil aviation, and some phases of its technical work, have been transferred to the Ministry of Public Works. The remainder was merged with the army and navy in the newly organized Ministry of National Defense.

Diagramatically the organization of the Ministry of Defense is as follows:



**The offices of Insp. Gen. for Air and Chief of Air Staff are combined in one person.*

BOOK REVIEWS

PHILIPPINE UNCERTAINTY—AN AMERICAN PROBLEM, by Harry B. Hawes; foreword by Senator William E. Borah. 360 pages. The Century Co., New York, 1932. Price $3.00.

If the Philippine problem harbors any uncertainty, it is not in the mind of the author. Senator Hawes has some very positive ideas regarding the solution of this problem, and the volume he offers to the public constitutes his brief in support of his case. Senator Hawes frankly admits that irritation was one of the causes for his book. That frame of mind is an easily discernible *leitmotif* throughout the able though by no means judicial presentation of his argument. That Senator Hawes was deeply impressed by the well organized demonstrations in favor of Philippine independence is quite understandable. Filipinos are splendid organizers, astute showmen, picturesque performers, but only the ignorant and naively credulous will be swayed by mere appearances and tricks of trade. It is evident, however, that Senator Hawes accepted at face value everything he saw or heard that seemed to support his thesis. Thus, writing of Colonel Santos of the Philippine Constabulary and former governor of the province of Lanao, unquestionably a brave soldier, able administrator and astute politician, the author observes that "during his term there was little trouble with the Moros. They understood him and he understood them." One is tempted to say in the language of the street: "And How!" Evidently Senator Hawes heard, nothing about the Datu Amai Binaning and similar atrocious affairs. Indeed, the Constabulary force under Colonel, then Captain, Santos among disarmed Moros was a potent factor in bringing about that understanding of which the Senator from Missouri writes.

Again, Senator Hawes, to refute "allegations" of tribal differences among the Filipinos, quotes the genial Camilo Osías, one of the resident Commissioners in Washington, who at a Senate hearing on bills looking to Philippine independence, pointed to the Filipino gentlemen present, and asked Senator Hawes and his colleagues to pick among them the Ilocanos, the Tagalogs and the Visayans: "I ask you to look at the various Filipinos here and see if there is any more difference among us than there is between an American of the Connecticut Tribe, let us say, and one of the Michigan Tribe, or of the Missouri Tribe, or of the Maryland Tribe, or of the Pacific Coast Tribe, or some other American Tribe." Evidently the gentleman from Missouri was easily persuaded by this verisimilar mode of reasoning. Had this comparison been applied to various tribes of American Indians, or to Caucasians, let us say, of the German Tribe, the French Tribe, the Italian Tribe, the Polish Tribe, or any other tribe of the white race as it had been applied to the various tribes of the Malay race, it would not require much perspicacity or astuteness to discover some very potent differences among them.

Still another example of Senator Hawes' naive credulity is afforded by his reference to "Manila Americans." Apparently someone persuaded him to believe that "Manila Americans" are largely recruited from the ranks of officers and men of our army who for some reason or other chose to remain in the Philippine Islands. He charges them with having opposed liberalism in the Philippine Government and, although "they individually have no very great financial stake in the Philippines," he avers, "they have constituted themselves, nevertheless, spokesmen for all Americans and resent on the part of a visitor from the States any expression of opinion which has not been first censored by them." It would indeed be interesting to determine with exactness how far this statement is from actual truth. The writer of these lines, not so many years ago, met and knew practically the entire American colony in the Philippine Islands, and he can confidently assert that the number of those who owe their presence in the Philippine Islands to service as enlisted men in the Army is quite negligible, while the number of former or retired officers of the Army is practically nil. The majority of Americans, whose presence in the Philippines is at all attributable to military service, are former officers and enlisted men of volunteers, who, Senator Hawes' assertion to the contrary notwithstanding, are on the whole substantial and respectable citizens, successful business men who have earnestly endeavored to maintain the prestige and dignity of the United States in the Far East, and whose financial stake just about represents the fruits of the labors of a lifetime. Senator Hawes' statement concerning them is neither just nor based upon facts. This unwarranted tirade against respectable American citizens is sufficient to place this literary effort in the limbo of partisan polemics and political propaganda.

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PRACTICAL LIGHT HORSE BREEDING, by Major John F. Wall, Q. M. C., (Remount), American Remount Association. 171 pages, illustrated. Foreword by Colonel E. R. Bradley, Idle Hour Farm Kentucky. $4.50.

The first edition of this book came off the press in 1931, after the subject matter had appeared serially in the *Blood Horse*. The second edition, revised and indexed, was published in 1932, for the very gratifying reason that the first edition was exhausted prior to its printing.

Throughout his 21 years of service the author, Major Wall, has been a close observer and student of the horse, and has, from time to time, contributed well thought out articles to the service journals. He has also had the benefit of no small amount of practical experience as, in addition to his long service with mounted commands, he has spent the past four years in the Remount Service of the Quartermaster Corps, two years of which were spent in the "heart of the horse country", at Lexington, Kentucky.

The title of the book, "Practical Light Horse Breeding" is well chosen, for the book covers all phases of light horse breeding, but is over all, practical. The style of writing makes for easy reading. Egotism is entirely lacking. The author tells not what his or any one else's opinion is on this or that, but what results have been obtained from this or that method, and practice. "Never do this" and "always do that" are expressions which do not appear in the book—a trait which in itself marks the horseman of knowledge and experience.

In addition to valuable data on the selection, care and handling of stallions and brood mares, the care and handling of foals, and experiences with such breeding menaces as disease and parasites, the contents include descriptions and experiences of some of the well known breeding establishments with particular reference to personnel, buildings, paddocks, soils, and grasses. There follow two very interesting chapters on the American horse in sport, on the farm and in the army, and the production of hunters, chargers and polo ponies.

Designed primarily as a series of articles of interest to lovers of the horse, the book is more than that. It is an invaluable aid to one managing any sort of horse breeding establishment, or engaged in any duty connected with breeding, selecting or caring for breeding stock. It can well be used as a text book for those students of the horse who delve deeper than does he who is interested only in maintaining his balance on a horse after the animal has passed four years of age.

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FUNDAMENTALS OF HORSEMANSHIP, by Lieutenant J. Gilbert Rademan, 103rd Cavalry, Pennsylvania National Guard. Camac Publishers: 153 pages, illustrated.

The author has served eight years in the cavalry of the Regular Army and four years as an officer in one of the best of the National Guard cavalry regiments in the country. All of his time is devoted to horses and instruction in horsemanship. He is a close student of horsemanship and for the past several years has been in complete charge of the Cavalry Riding School in Philadelphia.

The title of the book is well chosen and amply defines the contents. The author presents a clear guide to good riding but makes no attempt to go beyond the elements. He builds up a groundwork whereby the student of riding may have a basis for personal experimentation and a more complete mastery of the art of equitation. Because one should not attempt to build a house without first becoming familiar with the tools he is going to use, several pages are devoted to the psychology and temperament of horses and to horse equipment. The gaits of the horse, the seat, hands, and aids of the rider are discussed in a simple but thorough manner. A chapter each is devoted to jumping, cross-country riding, and suppling exercises.

The clever pen-and-ink sketches are unusually apt in bringing out the points which the author emphasizes in the text.

There is little included in these pages which cannot be found in published Army training regulations, of which the author makes acknowledgment in his preface. There is little of which the average horseman is not aware. But the subject is well presented; there is no extraneous matter and in this day of rising popularity of the horse, Lieutenant Rademan's book should find a welcome reception by those who ride and especially by those who have anything to do with instruction in riding.

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Succès Stratégiques—Succès Tactiques, by Colonel L. Loizeau; Preface by General Gamelin. 232 pages, 13 sketches. Berger-Levrault, Paris, 1931. Price 15 francs.

The author seeks to determine the relation which exists between strategical success and tactical success. Drawing upon World War experience, Colonel Loizeau discusses the Schlieffen plan and the manner of its execution by Moltke, Falkenhayn and Ludendorff. Similarly the author subjects to methodical analysis the conduct of the war by the Allies under the leadership of Marshal Foch. He concludes that "everything must be subordinated to the achievement of strategic success, and that tactical success, though it may favor strategical success, cannot replace it."

General Loizeau's essay, based upon authoritative sources, and presented in clear, concise style, should be of interest to all students of the art of war. It is invaluable to all officers.

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FAMOUS SADDLE HORSES—compiled by Susanne. The Farmers Home Journal Company, Louisville, Kentucky, 1932. 485 pages, illustrated.

This book is a compilation of descriptions and brief histories of all the members of this distinctly American family of horses which have gained fame or notoriety in the show ring, in the field or in stud. There is a foreword by the compiler adequately testifying to her interest in and love of the saddle horse. There is a brief outline of the origin and development of the breed. The remainder of the book comprises tabulated information on one hundred and seven saddle horses which have risen to fame.

There follow statistics on saddlers at the World Fair of 1893, at the Kentucky State Fair from 1916 to 1931, inclusive, and the American Saddle Horse Breeders Futurity from 1927 to 1931, inclusive.

The compiler is considered by those who know the

saddle horse to be a real authority on the subject she has covered. Not only has she given unsparingly of her own time and energies in unearthing records and files, but she has had the assistance of some of the leading breeders of the country, many of whom could give information, facts, and figures never heretofore recorded but handed down by word of mouth through generations of horsemen. Her book can be accepted without question as founded on facts and history of the saddle horse of today, its foundation and career.

Although the saddle horse is probably at the height of its popularity at this time, the subject of saddle horses has always been of minor importance to the military service and this book, while of immense value as a reference book for breeders and exhibitors, for which purpose it was written, it is not of particular value to the military service.

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TWENTY YEARS OF THE CHINESE REPUBLIC, by Harold Archer Van Dorn, Ph.D. Published by Alfred A. Knopf, New York, 1932. 309 pages. Price $3.50.

Doctor Van Dorn has written a most interesting book on the progress China has made after twenty years of a republican form of government. He divides his subject into five general headings—political, social, economic, educational, and religious. Many data are presented on each subhead, and readers who have never been to China will be able to obtain a rather clear picture of some of the progress so far achieved, and some of the major objectives being striven for by the various civilian leaders of China. Even the reader who has been made more or less cynical by residence, or extended visits, in China will undoubtedly have his store of knowledge added to by some of the author's statistics, which are presented in a very entertaining narrative form.

The author states in the foreword—"I have endeavored to set forth both the record and an interpretation of the progress achieved." Very little fault can be found with the "record" as presented, but some of the "interpretations," as is perfectly natural, are open to question. For example, there are a number of well-informed people who would dispute the statement that China is now unified under the Kuomintang Party! In discussing the wave of nationalism sweeping the country, an unbiased reader could very well be pardoned for wondering if the author were not allowing his enthusiasm a rather free rein and "letting the wish be father to the thought!" And so with other "interpretations." On the whole, though, the book is worth reading, if one does not let the author's enthusiasm and unquestioned bias sweep him off his mental balance. With this caution it is recommended to officers who are interested in the Far Eastern situation.

Elkin Leland Franklin

A gallant cavalryman has ridden on ahead. He [illegible] the shadows, pressed on over the hill and galloped [illegible] into the setting sun, alone and unafraid. And [illegible] our march is over and we too arrive at the bivouac, dusty and tired, he will be welcoming us, with his generous, capable hand outstretched, pointing to the picket [illegible] and the watering place.

Elkin Leland Franklin was born in Texas on August 19, 1885. He graduated from the U. S. Military Academy in 1909 and joined his regiment, the 13th Cavalry, in the Phillippines. On returning to the United States two years later, he continued to serve with the cavalry at Ft. [illegible] on the border and with the Punitive Expedition to Mexico in 1916. The following year he was appointed a major in the Signal Corps. In 1918 he went to France, took part in the Second Battle of the Marne and was awarded the Silver Star. The following October he was promoted to Lieutenant Colonel.

Colonel Franklin's heart was in the Cavalry and from 1920 on he served in the Cavalry with great distinction. As one of his commanders said of him, "He is the most tireless, active, unselfish officer I know. He is one of our very best Cavalry officers. He can stand up under any hardship and keep going."

He graduated from Riley and Leavenworth and, during the last two years, served on the General Staff in Hawaii. He was fatally injured in a polo game in Honolulu June 23rd.

Vigorously and courageously he lived, always ready. Even for the last swift order he was prepared, and when it came, he met it like a true Cavalryman, his heart high and valiant.

"Lead on, brave comrade, we saddle and follow,
The going is easier, you've shown us the trail"

Organization Activities

The First Dragoons, The Black Hawk Regiment

Fort D. A. Russell, Texas

ON MAY 21st the 2nd Squadron held a Review in honor of the retirement of Master Sergeant John B. Aitken and the promotion of 1st Sergeant Gado to the vacancy thus created. Master Sergeant Aitken retires after thirty consecutive years with the Cavalry without the loss of a single day's duty.

Brigadier General Walter C. Short and Major J. B. Coulter arrived May 26th, to conduct the annual tactical inspection of the First Cavalry. General Short's inspection was extremely thorough. He left Fort Russell expressing his appreciation of the efficient and excellent appearance of the regiment in all phases of his inspection.

On June 9th, the Commanding Officer, without previous warning, ordered the immediate mobilization of the regiment. Officers' Call was sounded at 7:40 A. M. at which time organizations were handed their mobilization orders. The speed, alacrity and complete action demonstrated by the organizations of the regiment and post in their immediate mobilization was extremely gratifying to the Regimental Commander. At 2:00 P. M. all organizations moved out fully equipped for a period of extended field service.

In connection with the mobilization test and in order to institute a newly adopted policy of training for officers and men, the first Border Patrol Exercise was held. These exercises are held without previous warning and constitute the establishing of the regimental radio net at control points in the U. S. Border sector assigned to the First Cavalry and the dispatching of officers' patrols by porté trucks to sensitive points in the area, where an assumed raid has been made by bandit forces. The gratifying feature of these exercises is the willing cooperation of the Inspector, U. S. Border Patrol, Immigration Service, at Marfa, in supplying transportation and assisting in promoting the realistic features of the exercises.

On June 11th, the Regimental Basketball Trophy was presented to Troop A at squadron review held on that date.

On June 16th, Border Patrol Exercise No. 2, was held. Without previous warning, orders were delivered to the Commanding Officers of Troop A and Headquarters Troop at 7:50 A. M. of a bandit raid at Alamo Springs, fifty-three miles from Fort Russell. At 8:22 A. M. an officer's patrol left Fort Russell by porté truck for Alamo Springs. The regimental radio net was established at Alamo Springs, fifty-three miles; Presidio, sixty-eight miles, and San Esteban Farm, twelve miles. By 12:20 P. M. all units had reported arrival at points where they were ordered.

On June 23rd, Border Patrol Exercise No. 3 was held. Under the same conditions as above, an Officer's patrol was dispatched by porté to Penitas, thirty-three miles, and the radio net was established at Penitas: Antelope Springs, eighteen miles; Haley's Ranch, twenty-four miles. By 10:45 A. M. all units reported in place.

The objects and results obtained from the Border Patrol Exercises were as follows:

a. Objects: The use of commandeered civilian transportation; the adaptability of the roads and trails to the general scheme; the correction of the U. S. G. S. Maps of the area to conform to recent changes in roads, fences, trails, land ownership; the inter-communication between the SCR 163 radio sets and the determining of skip distances prevalent in this locality for this set; and the training of officers, men and animals to respond without previous warning to practical situations and to devise expedients therefor.

b. Results: The results obtained were exceedingly gratifying. Although the time element entered strongly into each exercise and a minute chronology of events was registered, there was no attempt to make the exercises a race against time at the cost of careful and complete attention to details. Officers and men indicated a maximum of interest and displayed an attitude of willing cooperation in order to successfully complete each exercise.

Third Cavalry (Less 1st Squadron)

Fort Myer, Virginia

THE Third Cavalry Polo Team, composed of Captain Lucian K. Truscott, Jr., Captain George I. Smith, 1st Lieutenant Charles H. Noble and 1st Lieutenant Clarence W. Bennett, completed its spring schedule by winning the Riggs Memorial Trophy in Baltimore and the Argentine Cup played in Washington. Competing teams in the first match included Fauquier-Loudoun and the Maryland Polo Club. The Argentine Cup was contested for by the War Department, Fort Humphreys, the Quantico Marines and Fort Hoyle.

The Celebration of the Washington Bicentennial has made many demands on the Post for parades and exhibitions. Most recent were the Flag Day parade and the parade for the Confederate Reunion on June 25th. The latter was headed by four mounted members of Forrest's Cavalry. In the afternoon an exhibition ride in honor of the veterans was held at the Post.

A horse show for the benefit of the 1932 Olympic Equestrian Team, was held at the new Fort Myer Gardens show ring on July 9th. In addition to an excellently designed ring, the Gardens includes an outside course over a mile in length, containing twelve varied obstacles. Numerous outside exhibitors took

part in the show. The Fort Myer Horse Show Team, competing in the two open jumping classes, won seven ribbons. The Polo Team took six of the eight places in the polo events.

Summer training camps began June 17th with the reception of fifty R. O. T. C. students from the Virginia Military Institute and the Pennsylvania Military Academy. Two hundred and sixty C. M. T. C. students, reporting for duty on July 6th, have been organized into three rifle troops, commanded for the first two weeks by officers of the 307th Reserve Cavalry. The 1932 camp has been named Camp Guy V. Henry, in honor of the late Brigadier General Guy V. Henry, father of the Chief of Cavalry.

Major George S. Patton Jr., Captain John W. Weeks and Captain Marion Carson have recently reported to the regiment for duty. Officers scheduled to leave are Captain Hugh J. Fitzgerald to Fort Leavenworth. 1st Lieutenant Christian Knudson to Culver Military Academy. 1st Lieutenant Willard A. Holbrook to Fort Monmouth. 1st Lieutenant Charles H. Noble to Fort Riley, 1st Lieutenant F. W. Makinney, Jr., to Fort Bliss, and 1st Lieutenant W. A. Bugher to West Point.

4th Cavalry

Fort Meade, South Dakota

ON June 22nd, a review was held for Major General Johnson Hagood, Corps Area Commander, upon his arrival at Fort Meade. The General stepped over into Wyoming that evening and did some trout fishing prior to his departure the following day.

Troop A has replaced Troop F as the exhibition troop of the regiment. For the past several years, Troop F, known in the Black Hills as the "Black Horse Troop," has entertained the crowds at the rodeos and frontier days with a musical drill which has become almost a tradition to the old timers of the hills.

Troop A, making its first appearance at the Belle Fourche Rodeo, gave an exhibition drill which gave to the spectators an excellent picture of the way a cavalry troop maneuvers and uses its various weapons. Aided by a continuous explanation over a loud speaker system, the drill became not only entertaining, but of extreme interest, and educational in nature. The spectators apparently welcomed this educational side of the exhibition, and offered many words of praise.

Polo at Fort Meade this year finds us with a large new playing field and with about a dozen enthusiastic players. Practice games have been played with Pierre, Fort Francis E. Warren, and almost weekly games with our neighbor Sturgis.

Trout fishing near-by is excellent this season, and many a man is leaving his military duties over the week ends to pit his skill against that of the trout. One sergeant boasts over 350 this season, and the largest one on record in the hills for the season.

All members of the post are greatly interested in the post baseball league. At present, Headquarters Troop leads, having won six and lost none. F Troop, however, is making a strong bid for the cup.

Recent departures from the regiment include Major Edward F. Shaifer, Major J. K. Colwell and Captain Jacob A. Blankenship. The regiment has recently welcomed Captain Charles Cramer and First Lieutenant F. H. Bunnell, and awaits the arrival of Captain F. E. Bertholet, First Lieutenant John H. Stodter and Theodore C. Wenzlaff.

Sixth Cavalry

Fort Oglethorpe, Ga.

THE Sixth Cavalry after a successful march and maneuver to Ft. Benning Ga. was busily occupied with the Citizens Military Training Camp at Ft. Oglethorpe.

General Edward King, Corps Area Commander, General John F. Preston, Inspector General, and Colonel T. A. Roberts visited the Regiment for informal inspections on June 16th. They all remained over Sunday to see the 6th Cavalry polo team defeat the Corp Area Champions from Ft. McPherson, Ga.

The Machine Gun Troop left Ft. Oglethorpe on June 14th for Camp Knox, Kentucky.

Lieuts. R. M. Neal and John T. Ward have joined the regiment. Lt. Neal was assigned to the Machine Gun Troop and Lt. Ward to Headquarters Troop.

Maj. R. O. Henry has joined the regiment and is now on duty with the C. M. T. C as Executive officer.

Lt. Don E. Carelton joined the regiment on June 10th and accompanied the Machine Gun Troop to Camp Knox, Ky.

Lt. Col. Walton Goodwin has been assigned to the regiment and is expected to join in the fall.

The following officers have been relieved of assignment and have left for other stations. Capt. W. R. Stickman and Lt. Joseph Williams.

The Band recently visited Nashville, Tenn. as guests of the Spanish American War veterans.

Col. Gordon Johnston, Commanding the Sixth Cavalry has received the decoration of the "Purple Heart" from the War Department. Col. Johnston is said to be the most decorated officer in the army being possessor of the Distinguished Service Medal, the Distinguished Service Cross and the Medal of Honor, besides many foreign decorations. The Sixth Cavalry is proud of him!

The Regiment besides its routine Military duties is endearing itself to the hearts of its civilian friends in the community by rendering every possible service to the many unfortunates who are victims of the depression.

A new motion picture theatre is under construction at the Post and will be ready for occupancy in the late fall.

Eighth Cavalry

Fort Bliss, Texas

THE Eighth Cavalry is well started in its summer training program. On July 5th the regiment moved to the target range at Dona Ana, New Mexico, where it will carry on its record practice during the month of July.

The regiment has just received the commendation of the Corps Area Commander for the excellent records achieved in this year's instruction in the mounted and dismounted pistol and saber.

Upon the departure last month of Colonel W. R. Smedberg, Jr., Colonel C. H. Muller assumed command of the Eighth Cavalry. Colonel Muller came to Fort Bliss from the Cavalry School, Fort Riley, Kansas. He has recently returned from Berlin, Germany, where he was military attaché to the American Embassy.

Lieut. Colonel Donald A. Robinson left Fort Bliss in June on a leave through the northwest prior to joining the next War College class in Washington. Major R. L. Creed has departed for duty with the Academic Staff of the Cavalry School. Major D. E. Murphy has been assigned to Major Creed's vacancy. Major W. D. Crittenberger leaves this summer for duty in the Philippine Islands on the Department General Staff. Lieut. T. Q. Donaldson, Jr., has arrived from the Cavalry School. Lieut. G. W. Bailey, Jr., just returned from the Philippine Islands, and Lieut. William J. Reardon who has finished the school year at Fort Riley have reported for duty.

As is usually the case during the summer the regiment is devoting much time and enthusiasm to its baseball team which now leads the Post League. Several out of town games have been scheduled for the team.

Headquarters Tenth Cavalry

Fort Leavenworth, Kansas

THE following named enlisted men, after 30 years service with character excellent, were recently retired: Staff Sgt. Turner Douglas, Master Sgt. Hugh C. Scott, Staff Sgt. John Costly, Sgt. Robert Bady, Staff Sgt. Arthur B. Youngs.

The Tenth Cavalry Baseball Team is now tied with the Guard & Service Co. for the Post Championship. The deciding game will be played in the near future.

The Fort Leavenworth Polo Team composed of Major J. F. Richmond, 10th Cavalry; Major Pearson Menoher, 10th Cavalry; Major C. S. Ferrin, (DOL); Major H. D. Jay, (DOL); and Captain M. E. Jones, 10th Cavalry, defeated the Kansas City Country Club in Kansas City on May 20, 1932, by a score of 12 to 7. The Fort Leavenworth Polo Team composed of Major Menoher, 10th Cavalry; Major Jay, DOL; Captain C. E. Davis, 10th Cavalry; and Captain M. E. Jones, 10th Calavlry, and Major Ferrin (DOL) won the Intra-Circuit Rocky Mountain Polo Championship by defeating Fort Riley in the finals by a score of 12 to 7. Fort Leavenworth was awarded a 2 goal handicap.

All members of the Tenth Cavalry who have completed firing to date have qualified. The three highest scores are as follows: Sgt. Wm. Washington, Hq. Tr 326; Cpl. R. M. Lang, Tr A 320; and Cpl. Sidney Wilson, Hq. Tr 319.

The Officers Summer Camp of The C & G S S was operated by the Tenth Cavalry, and Colonel Russel Reeder, Camp Commander 2nd Year Class, commends Captain Paul C. Febiger, and Captain Marcus E. Jones, 10th Cavalry, for their united efforts in preparing the camp and in the splendid details of arrangements. Especial mention is made of the excellent mess supervised by Captain Jones.

Captain C. E. Davis, Adjutant and C. O. Hq. Troop, has been transferred to the 14th Cavalry at Fort Sheridan, he is a great loss to the regiment. Major J. F. Richmond, Regimental Commander, has been detailed with the Tennessee National Guard, effective July 1, 1932. The heartiest wishes of both officers and men accompany Major Richmond in his new assignment. He has always proved to be a friend of the enlisted men and improved their living conditions beyond anyone's expectations. Major Menoher who has served with the 10th Cavalry as a Captain at Fort Huachuca, will assume command on July 1, 1932. The Regiment is very fortunate in getting an old 10th Cavalry Officer as their new Regimental Commander.

Machine Gun Troop, Tenth Cavalry

Fort Myer, Virginia

THE Machine Gun Troop, 10th Cavalry, in addition to its regular duties is now practicing a Musical Ride which will be given at Purcellville, Virginia, on September 22nd at an Emancipation Day Celebration. During the month of April, seventeen men fired the qualification course with the rifle. Two men were Experts, twelve were Sharpshooters, and three Marksmen.

At the National Capital Horseshow in May the Troop had one entry in the Trooper's mount class, Private Robert T. Kelly on *Senorita*, which won 3d place.

The Troop has built a Horseshow Ring and a sporting Hunter Course on the Experimental Farm, which will be used for a War Department Horseshow for the benefit of the Olympic Games, on July 9th.

2d Squadron, 10th Cavalry

West Point, N. Y.

DURING the period April 15-May 15 the Squadron conducted its regular target season, firing course "A". Lieut. Samuel P. Walker, a distinguished rifleman, was in charge of the firing, which was supervised by all troop officers. Of the number who fired the course 150 had never fired before. The record, therefore, is an excellent one. Results:

	Experts	Sharpshooters	Marksmen
Troop E	6	24	86
Troop F	8	22	83

Troop E qualified	84.32%
Troop F qualified	89.31%
Squadron qualified	86.41%

In the Enlisted Men's Track Meet, held May 22nd, the Squadron took first place with an overwhelming score of 80 points; thus winning all four post championships of baseball, football, basketball, and track. Private Lynch of Troop F broke the high jump record with a leap of five feet eight inches.

Baseball came into its own with the organization of

an excellent team, which plays not only in the Post League but also against teams in nearby towns. To date the team has played 14 games of which it has won 12.

On June 9th the Squadron Escort of Honor, Captain Frank L. Carr, commanding, consisting of 28 men in blue uniforms on matched bays, beautifully equipped, had the pleasure of escorting an old 10th Cavalry officer, Major General James G. Harbord, retired.

Immediately after graduation Troops E and F entered on a period of mounted and dismounted drill which lasted until the end of June. Sergeant Carlton A. Pegram continued in charge of the Remount Squad of 15 selected riders. Twenty new remounts were added to his string from Reno. Starting July 11th cadets of the first class received cavalry instruction. Two cavalry camps were maintained, one on Popolopen Creek, the other at Round Pond. Selected non-commissioned officers acted as assistant instructors during that period. In addition, at each camp one platoon of the Squadron acted as the "opposing forces" for tactical problems involving both mounted and dismounted action.

On July 30th the Squadron celebrated its Anniversary Day in honor of the 66th birthday of the Regiment. Men, their families and friends were transported by bus and cars to the Cavalry Camp at Popolopen where they arrived at noon. Lunch was served and in the afternoon swimming and games were indulged in. In the evening about 400 enjoyed a tremendous barbecue dinner after which a rousing entertainment was given on a prepared stage, the squadron orchestra furnishing the music.

Retirements, of interest to the service, are as follows: Staff Sgt. Roy Burch, Staff Sgt. Jake Davis, 1st Sgt. Albert E. Ray.

12th Cavalry (Less 2d Squadron),

Fort Brown, Texas

DURING the period May 5th to June 2nd, the 12th Cavalry, Colonel F. W. Glover, Commanding, was engaged in the 2d Division Maneuvers in the Christine-Tilden area, some 60 miles south of San Antonio.

The regiment (less 2d Squadron) and the 2d Squadron departed from their respective stations, Fort Brown and Fort Ringgold, Texas, on May 5th, concentrating at Linn on May 7th, and with the remainder of the composite Cavalry Brigade near Tilden, Texas, on May 15th.

From May 16th to 21st, the 12th Cavalry, as a part of the 1st Red Cavalry Brigade (Reinforced) General H. S. Hawkins, Commanding, actively participated in the operations against the 2d Blue Division in the area Christine-Tilden. The mission of holding the crossings of the San Miguel Creek and Frio River and of delaying the movements of Blue forces south of Christine, proved to be a most interesting and instructive task for the Cavalry troops involved. General Hawkins general plan of operation to accomplish his mission, that is, of using one part of his command against the head of the hostile column, while the other was sent to attack the enemy in flank or rear, gave each regiment opportunity for almost every type of Cavalry action against an aggressive, well trained foe.

One of the high lights of the maneuvers was a dawn attack made by the 1st Squadron, 12th Cavalry, under command of Major O. I. Holman, on May 19th, and its subsequent capture of the 3d Infantry Brigade Headquarters, together with the Brigade Staff, and also of the Headquarters and 2d Battalion of the 12th Field Artillery. The 1st Squadron was dispatched on the mission of operating against the Blue flank and rear at 9:00, P. M., on the night of the 18th, by the Cavalry Brigade Commander. By a wide encircling movement, the Squadron, moving across country and through difficult brush, gained a position during the night, unobserved, from which to launch its surpise attack at dawn of the 19th against the bivouacs of the Blue troops above mentioned. The success of the 1st Squadron in this action did much toward disrupting the plans of the Blue forces for their operations for the day, as was indicated by their failure to attack the Red main position until 3:30 o'clock in the afternoon of that day.

The Machine Gun Troop, 12th Cavalry, received valuable training in antiaircraft fire from June 13th to 18th, when, in cooperation with an airplane from the 3d attack group, Fort Crockett, Texas, it fired at A towed targets. The firing was done into the Gulf of Mexico at Boca Chica Beach, about 25 miles east of Fort Brown. For reasons of safety it was only possible to engage the targets only laterally and the angle through which the guns were able to fire was also very limited for similar reasons, adding considerably to the difficulty as well as sportiness of the firing.

Pistol firing against the towed targets was also practiced by selected shots with an average percentage of 13% hits against the lateral targets towed at an altitude of from 10 to 50 feet and at a range of from 15 to 50 yards.

As an experiment, 12 gauge shotguns loaded with buckshot shells were used against the low flying targets with excellent results.

The following officers have recently been assigned to the 12th Cavalry at this station: Major Clyde Pickett, 1st Lieutenant Raymond D. Palmer, 1st Lieutenant Charles H. Reed. Major Pickett reported for duty on June 25, 1932, and Lieutenant Palmer on July 1932. Lieutenant Reed is still on leave of absence.

Captain James M. Adamson, who has been relieved from further duty with the 12th Cavalry, departed on June 7, 1932, on leave of absence prior to joining his new station, Fort Reno, Oklahoma.

2d Squadron, 12th Cavalry

Fort Ringgold, Texas

DURING May the Squadron joined the Regiment to participate in the Second Division Maneuvers, marching 430 miles to and from the Maneuver Area in the vicinity of Tilden. This was the first opportunity for the Regiment to unite since 1931.

We of the wide open spaces along this section of the silvery Rio Grande must travel 110 miles to the Fort McIntosh Rifle Range in order to avail ourselves of a rifle season. Our range is temporarily, and probably permanently, rendered dangerous due to an impending oil boom within the danger area in rear of our butts.

The small bore competition was won by F Troop. E Troop captured the Post Baseball Championship—a 3 team league.

The N. C. O's Club held its monthly dance on June 25th, excellent music being furnished by the Regimental orchestra, which motored up from Fort Brown.

Captain Fudge has just joined from Camp Perry.

14th Cavalry (Less 1st Squadron)

Fort Des Moines, Iowa

THE 14th Cavalry, commanded by Colonel C. E. Stodter, with 18 officers and 240 enlisted men, left Fort Des Moines, Iowa, June 7, 1932, en route to Camp Ripley, Minnesota, to participate in maneuvers as part of the 14th Brigade, commanded by Brigadier General John H. Hughes. The maneuvers were held from June 26th to 30th, both dates inclusive.

305th Cavalry

Philadelphia, Pa.

ON the evening of June 29th the inactive training season of this Regiment came to a conclusion with a mounted drill. We feel that every member of the Regiment attending the Wednesday noon conferences and Wednesday evening training periods has attained a high rate of efficiency. The schedule called for intensive training in preparation for this summer's active duty training period.

Capt. J. C. Groome, Jr., the son of a former commanding officer of the Regiment offered a pair of hand-made spurs for an outstanding individual performance during the inactive training season. It was decided to give them for the best attendance at Wednesday night rides. Capt. J. D. Grannis, Jr., commanding F Troop, and Second Lieutenant F. H. Riordan, Jr., each turned in a perfect attendance record and were presented with spurs at the last ride of the season.

Lieutenant Erle L. Jackson, who very sucessfully taught life-saving and conducted the swimming business and events of last summer's CMT Camp, has reported to Fort Myer, Virginia, for a thirty-day detail of work along similar lines.

306th Cavalry

Baltimore, Md.

NOW that the inactive duty training is over, those officers selected as Instructors at the Cavalry Citizens' Military Training Camp at Fort Myer, Virginia, are looking forward to an instructive tour of active duty. This particular form of active duty furnishes to Reserve Officers the one opportunity they get to handle men of somewhat the same degree of training that they will have under their command in case of an emergency. For this reason, all officers should be given opportunity to attend at least one camp of this kind.

Two years ago, the officers of this regiment attended the first two weeks of C. M. T. C. training and will attend the last two weeks this summer which will round out their previous experience. Included in this training will be a march to the target range and a few days spent in firing the rifle and pistol.

Second Squadron and Machine Gun Troop, 306th Cavalry

Washington, D. C.

THE instructor has covered the following subjects in recent conferences: "Target Designation", "Organization of the Ground", "Defense, Squadron Regiment". At the last conference of the year, held June 16th, the Unit Instructor, Major Harley C. Dagley, summed up the achievements and shortcomings of the past year and outlined his policies for next year, together with tentative plans for instruction, both in the conference room and equitation hall.

The year was brought to an enjoyable close, socially, by a dinner in honor of Colonel Frederick H. Payne, Assistant Secretary of War, which was given on Tuesday evening, May 24th, at the Racquet Club. Other Guests of Honor were:

Representative Edward Wheeler Goss, of Connecticut.

Major General Henry D. Todd, Field Artillery, Ret'd.

Major General Blanton Winship, Judge Advocate General.

Colonel Maurice Fitzmaurice Day, Military Attaché to the British Embassy.

Colonel M. S. Jarvis, Senior Instructor, Organized Reserves, Washington Units.

Major Bennett A. Molter, Air-Res., National Secretary, Reserve Officers' Association of the United States.

Captain Gustaf Frederick Von Rosen, Military Attaché to the Swedish Legation.

Captain John B. Murphy, Inf-Res., Assistant Secretary, Reserve Officers' Association of the United States.

Colonel John Philip Hill, of the 306th, officiated as Toastmaster and received from Major Molter the Charter of the newly organized "Cavalry" Chapter of the Reserve Officers' Association of the United States.

The promotions of Second Lieutenants Ernest Humphrey Daniel, Jr., George E. Monk, Jesse Thomas Nicholas, to be First Lieutenants and the appointment of Houghton Nelson as a Second Lieutenant in the Cavalry Reserve are announced with pleasure.

307th Cavalry

Richmond, Virginia

THE inactive period just ended has been most successful. Attendance at Group and Troop Schools as well as Extension School enrollments has shown a marked increase.

The Regimental Commander, Lieutenant Colonel William Henry Clifford, and seventeen troop officers reported for duty at Fort Myer, Va., July 3rd.

Ten officers, recent graduates of V. M. I., who have been assigned to the regiment, received active duty training during June. These officers were attached to troops of the 3rd U. S. Cavalry at Fort Myer, Va. All agree that it was a most instructive tour.

The following officers of the class of 1932, Virginia Military Institute, have been assigned to the regiment:

2nd Lt. Pleasant H. Bagby.
2nd Lt. Robert P. Brown.
2nd Lt. Harley W. Duane, Jr.
2nd Lt. Thomas G. Slater.
2nd Lt. Stuart C. Will,
2nd Lt. Robert R. Turner.
2nd Lt. Alexander W. Bryant.
2nd Lt. George B. Johnson.
2nd Lt. Howard Fletcher, Jr.
2nd Lt. Joseph B. Seay.
2nd Lt. Leonard P. Roberts, III.

3d Squad. and M. G. Troop, 307th Cavalry

Norfolk, Va.

THE Memorial Day Parade, May 30, 1932 was one of the largest and most colorful held in Norfolk, Virginia, in many years. Military units participating included a Battery of Coast Artillery from Fort Monroe, a provisional battalion from the Naval Training Station, a provisional battalion from the United States Coast Guard, a battalion of the 1st Infantry, Virginia National Guard, the 29th Signal Company and the 110th Ambulance Company. In addition to the military units many patriotic societies, the Boy Scouts of America and certain equipment and personnel from the City of Norfolk participated.

The parade was organized and led by the Unit Instructor, Major David H. Blakelock, who was appointed Grand Marshal by the United Memorial Day Observance Committee.

1st Lieut. Robert B. Batte, 307th Cavalry, and 2nd Lieut. William A. Trolan, 322nd Cavalry, acted as aides to the Grand Marshal.

Major James R. Mullen, 307th Cavalry, Squadron Commander has been quite ill for the past few months and has recently suffered a severe operation. He is at present confined to the hospital but it is expected that he will be fully recovered by fall.

The following named officers of the squadron have received orders for active duty training, at Fort Myer for the period July 3 to 16.—

1st Lieut. Robert B. Batte,
1st Lieut. Southgate W. Taylor,
2nd Lieut. William T. Saunders.

308th Cavalry

Pittsburgh, Pennsylvania

THE Three Hundred and Eighth Cavalry is busy preparing for active duty training. The officers in Pittsburgh are riding in Aspinwall under the supervision of the Regimental Commander, who knows the country well and has given us some very fine rides.

The Memorial Day ride was a great success, and everyone who went along had a wonderful time. The ride has developed into an annual affair and we look forward to it each year.

Many of the officers under Lieut. Ayres are practicing with the pistol at the Aspinwall Range and expect to acquit themselves creditably this summer at Fort Myer.

Many officers from the Regiment attended the Reserve Officers Ball at Uniontown, Saturday July 2nd. Major General Paul B. Malone, the Corps Area Commander was present with Mrs. Malone, as well as Colonel Geo. T. Bowman, Cavalry, Liaison Officer of the Organized Reserves in the Third Corps Area. All complimented the Reserve Officers at Uniontown upon this dance which was one of the best that has been held in this vicinity for some time.

Lieut. Colonel John H. Shenkel, 308th Cavalry, will attend active duty training this summer with the 79th Division at Fort George G. Meade Maryland.

862d Field Artillery (Horse)

Baltimore, Md.

THE riding classes held at Fort Hoyle, Maryland on Sunday mornings during the past Fall and Spring have been suspended for the Summer. Through these classes the riding of the reserve officers has made substantial improvement, and their interest in horsemanship has been augmented.

The regiment goes to camp at Fort Hoyle, Maryland from July 31st to August 13th. Our officers feel very much at home at Fort Hoyle, as they have been there for training for several successive summers and have many warm friends among the officers of the garrison and their families.

Although the reservation at Fort Hoyle is not all that could be wished for as a place of training, it offers much that makes for the joy of living.

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DESIGN

1. The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and the solidarity of the Cavalry of the Army of the United States.—*Article III of the Constitution.*

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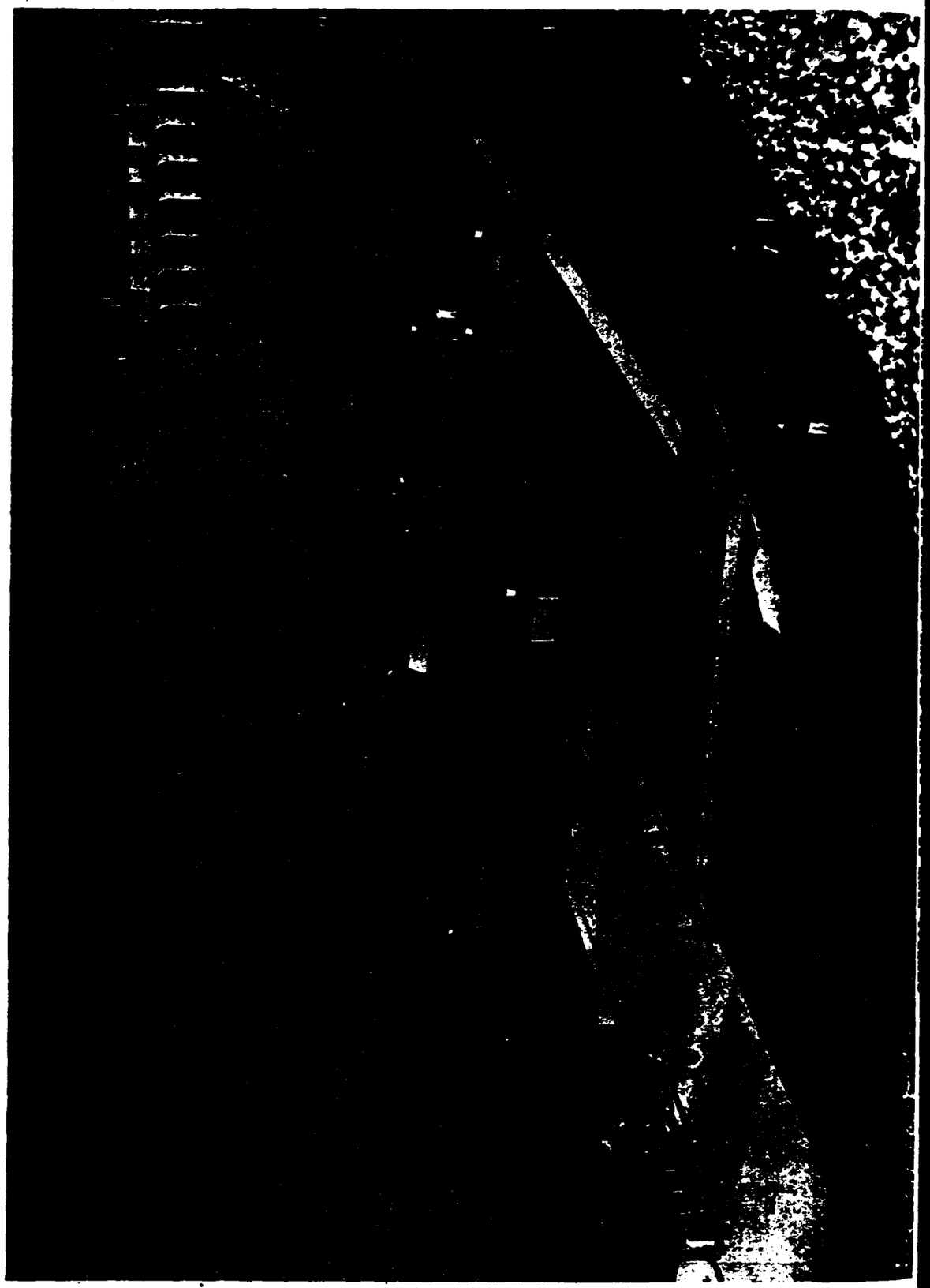


Equestrian Events, Games of the Xth Olympiad

*By Major William M. Grimes, Cavalry**

General

THE equestrian sports of the Games of the Xth Olympiad are past history. However, I doubt very much if those fortunate enough to have witnessed that glamorous equine panorama will ever forget either the contests, the contestants, the spectators, the superb setting, or the staging.

Five chockablock days for horsemen! No matter where your interests lay you could drink your fill. If schooling was the apple of your eye, what a feast was spread out on Riviera's lawns on August 10th and 11th for the *Dressage* and the Three-Day training test; if you were a 'unting cross-country sort, the steeplechase and the endurance phases of the Three-Day event were enough to fill your cup to the brim. On the other hand, if the airs of the *haute école* and the gruelling endurance phases did not quench your equine thirst, you still might have found a *pièce de résistance* in the *Prix des Nations*—a 1050-meter whirl-a-round of impressive fences, ditches and water laid out on the floor of the Olympic stadium. If none of the foregoing interested you, I don't know what would have—as golf was not a sport on the programme of the Games of the Xth Olympiad.

As stated in the beginning of this account, the Games of the Xth Olympiad are past history. However, after all such contests there always follow a period of explanations and the reasons for "this and that." No attempt will be made in this article to explain why "this" and why "that." The records speak for themselves. I don't suppose any Olympiad was staged under more perfect conditions as to facilities, management and weather. Suffice it to say that the equestrian sports were beautifully staged and managed by the U. S. Cavalry Association, as the American representative of the *Fédération Equestre Internationale*.

Lieutenant Colonel John A. Barry, Cavalry, was the individual largely responsible for the detailed conduct of the equestrian events in Los Angeles, including the selection, preparation and construction of all courses and the detailed management thereof, a difficult task well administered and handled.

The schooling events took place on the beautiful turfed polo field of the Riviera Country Club. The setting was ideal. Approximately 25,000 people witnessed the two schooling tests. Looking back on it now, I doubt if ten per cent of the audience fully appreciated the marvelous exhibitions it was their privilege to witness. Once in a lifetime, perhaps, horsemen see such exhibitions as that given by Commandant Le Sage and the horse *Taine*. One will journey far before again seeing such a splendid layout as tested the endurance of the Three-Day horses; the fences on the cross-country course were designed to test the courage and skill of both rider and mount. How well our gallant Three-Day team measured up to every requirement of this course! Who will ever forget the beautiful setting of the *Prix des Nations?*—the grassy turf of the Olympic stadium seemed to fairly bristle with fences of every description. Predominating were those of typical American hunting country: an old-fashioned snake fence, Tennessee stake and rider rock fence, oxer, a Maryland post and rail, Aiken brush, water jump ditch, bank and bar, gates of various kinds,

The Jury of Appeal. Left to right: Count Clarence Von Rosen, Sr. (Sweden) Vice President Fédération Equestre Internationale, Major General Guy V. Henry (USA), President Fédération Equestre Internationale, Commandant G. Hector, Secretary, Fédération Equestre Internationale.

yawning ditches; a chicken coop seemingly as high as the Olympic peristyle, with its white sides appearing to protude abruptly out of the green carpet of the stadium's floor. Lastly, the stadium's population of 105,000, following in breathless silence every performance of each horse and rider. If Chamberlin and *Show Girl* could not win, how happy the audience was over the well-earned victory of the smiling Nipponese Lieutenant Nishi riding the courageous and experienced *Uranus!*

The Competitors

As in past Olympics all entries were from the armies of the several competing countries. The United States, Sweden and Mexico entered all three events *(Dress-*

*Technical Assistant to the Chief of Cavalry at the Olympic Games.

age, Equestrian Championship or Three-Day Event, and the *Prix des Nations)*. Japan entered the Three-Day Event and the *Prix des Nations*, Holland the Three-Day Event only, and France the *Dressage* only. Mexico made her debut in Olympic competition.

The Japanese team consisted of 11 horses and the following riders:

Colonel Kochei Yusa, Cavalry, Chef de Mission
Major Shunzo Kido, Cavalry
Major Yasushi Imamura, Cavalry
Major Shigetomo Yoshida, Cavalry
Captain Morishige Yamamoto, Cavalry-Reserve
Captain Taro Nara, Artillery
Lieutenant Baron Takeichi Nishi, Cavalry

Jury for Dressage. Left to right: General La Font (France), Lt. Col. Sloan Doak (USA), Count Carl G. Bonde (Sweden).

The Swedish team consisted of ten horses and the following riders:

Count Carl Gustaf Bonde, Equerry to the King of Sweden
Captain Count G. F. von Rosen, Swedish Royal Horse Guards
Major Bertil Sandstrom, King's Own Hussars, Swedish Cavalry School
Major Ernst Hallberg, 2nd Hussars
Lieutenant Gustaf-Adolf Boltenstern, Cavalry Royal Horse Guards
Lieutenant Count Clarence Von Rosen, Jr., Horse Guards
Lieutenant Arne Francke, 2nd Hussars
Lieutenant Thomas Bystrom, 2nd Hussars

The Dutch team consisted of four horses and the following riders:

Major C. H. Labouchère, Cavalry, Chef de Mission
Lieutenant Charles F. P. de Mortanges, Cavalry
Lieutenant Karel J. Schummelketel, Colonial Army Cavalry
Lieutenant Jonkheer A. Van Lennep, Artillery

The French team consisted of four horses and the following riders:

Commandant Georges Hector, Cavalry, Chef de Mission
Commandant François Xavier Le Sage, Cavalry, French Cavalry School
Commandant Charles Marion, Cavalry
Capitaine André Jousseaume, Artillery, French Field Artillery School

The Mexican team consisted of nine horses and the following riders:

Colonel S. Urvina, Cavalry, Mexican Military School, Chef de Mission
Major Carlos H. Mejía, Cavalry
Captain P. Ortiz, Cavalry, Mexican Staff School
Captain José P. Allende, Cavalry, Aide to the President of Mexico
Captain N. Mazkiaran, Cavalry, Mexican Military School
Captain J. I. Lepe, Cavalry, Mexican Military School
Captain M. Figueroa, Cavalry, Mexican Military School
Captain Andres Bocanegra, Cavalry, Aide to the Minister of War
Captain Armando Barriguete, Cavalry, Mexican Military School
Lieutenant G. Gracida, Cavalry 6th Regiment.

The American team consisted of 15 horses and the following riders:

Lieutenant Colonel C. L. Scott, Cavalry, Chef de Mission
Major Harry D. Chamberlin, Cavalry
Captain W. B. Bradford, Cavalry
Captain I. L. Kitts, F. A.
Captain E. Y. Argo, F. A.
Captain H. E. Tuttle, Q.M.C
Captain Alvin C. Moore, Cavalry Reserve
1st Lieutenant J. W. Wofford, Cavalry
1st Lieutenant E. F. Thomson, Cavalry

Of three European teams, France and Sweden shipped to New York and thence by rail to Los Angeles returning over the same route; the Dutch team shipped to and from Los Angeles via the Panama Canal. The Mexican team shipped by rail to Los Angeles, and the Japanese team, of course, shipped directly by water.

The Japanese team was the first to arrive, landing at the port of Los Angeles early in July. All teams landed in Los Angeles in sufficient time to acclimate horses and riders.

The horses of the foreign teams were stabled at the spacious Riviera Country Club, Santa Monica.

Captain Gustav B. Guenther, Cavalry, acted as Liaison Officer with the foreign teams.

Juries—Judges, Etc.

The following gentlemen served on the several juries, etc.

Jury of Appeal
United States—Major General Guy V. Henry, President *Fédération Equestre Internationale*
France—Commandant Georges Hector, Secretary *Fédération Equestre Internationale*
Sweden—Count Clarence Von Rosen, Sr., Vice President, *Fédération Equestre Internationale*

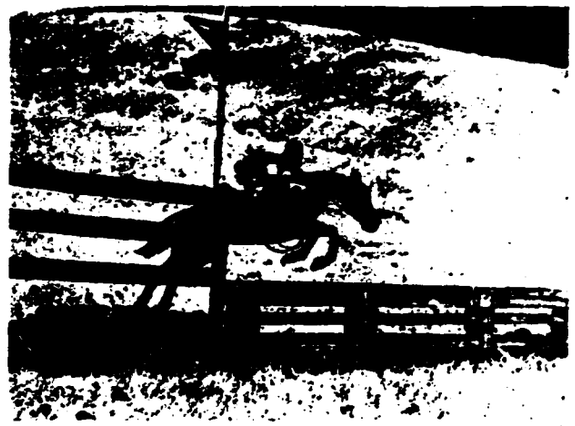
Dressage
United States—Lieutenant Colonel Sloan Doak, Cavalry
France—General La Font
Sweden—Count Carl G. Bonde

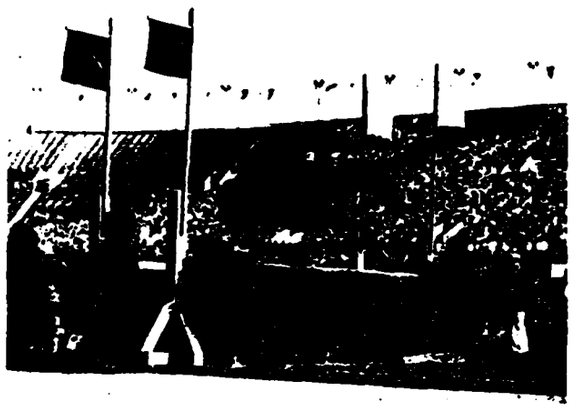
Concours Complet
United States—Lieutenant Colonel Sloan Doak, Cavalry
Holland—Commandant C. H. Labouchère
Sweden—Count Carl G. Bonde

Prix des Nations
United States—Lieutenant Colonel Sloan Doak, Cavalry
Japan—Colonel Kochei Yusa
Sweden—Count Carl G. Bonde

International Examining Commission—Three-Day Event
United States—Carleton Burke
France—General La Font
Japan—Colonel Kochei Yusa
Veterinarian—Captain P. H. Hudgins, U. S. A., Ret.

In addition to the foregoing, numerous regular, national guard, and reserve officers served as ground judges in the stadium jumping events and the steeplechase and cross-country phases of the Three-Day Event. In this latter event approximately 65 ground judges were required: these included timers, starters, checkers, scorers, judges at jumps, etc.





Top: Major H. D. Chamberlin on "Pleasant Smiles," Cross country Course, Endurance Phase, Three-Day Event.
Middle: Capt. E. Y. Argo on "Honolulu Tom Boy," Steeplechase Course, Endurance Phase, Three-Day Event.
Bottom: Lieutenant Thomson on "Jenny Camp," Stadium Jumping Course, Endurance Phase, Three-Day Event.

The Dressage

The *Dressage* competition was held on Wednesday morning, August 10th, on one of the polo fields of the Riviera Club. Team and individual entries were made by France, Mexico, Sweden, and the United States—ten entries in all—with three riders each from all save Mexico, which made an individual entry only. Captain Moore of the U. S. Army, riding *Water Pat*, was the first rider, followed in turn by the first riders representing Sweden, Mexico and France.

Our team consisted of:
Captain Hiram E. Tuttle, Q. M. C. on *Olympic*—T. B. B. G., 16.2½, 1225, 8 years (*Radius Rose-Odette VI.*)
Captain Isaac L. Kitts, F. A., on *American Lady*—T. B. B. M., 16, 1025, 11 years. (*Prince Henry-Half a Sovereign*)
Captain Alvin H. Moore, Cav. Res., on *Water Pat*—(*Latardo-Water Birdie*) T. B., Br., G., 15.3, 1100, 8 years.

The French team consisted of:
Commandant François X. Le Sage, on *Taine*
Commandant Charles Marion, on *Limon*
Captain André Jousseaume, on *Sorella*

The Swedish team consisted of:
Lieutenant Gustaf-Adolf Boltenstern, on *Ingo*
Major Bertil Sandstrom, on *Kreta*
Lieutenant Thomas Bystrom, on *Gulliver*

The Mexican team consisted of:
Lieutenant G. Gracida, on *El Pavo*

After several riders from each country had ridden, it was very apparent that the audience was witnessing two distinct *dressage* schools—one the French, the other the Swedish. The French team were all mounted on light thoroughbreds; their schooling was indicative of extreme lightness, balance, evenness, and grace; in passing from one movement to another there seemed to be an almost imperceptible pause. Our team showed unmistakable influence of the French school and doctrines; our horses too were all thoroughbreds. The Swedish team, on the other hand, rode a much heavier and what to us would appear to be a less breedy type

of horse; their horses were well schooled, their movements smooth and uniform; one might say they were almost routine in their evenness. In passing from one movement to another the Swedes appeared to speed, to accelerate and even slur the transitions, whereas the French transitions were more clearly defined by an almost imperceptible pause.

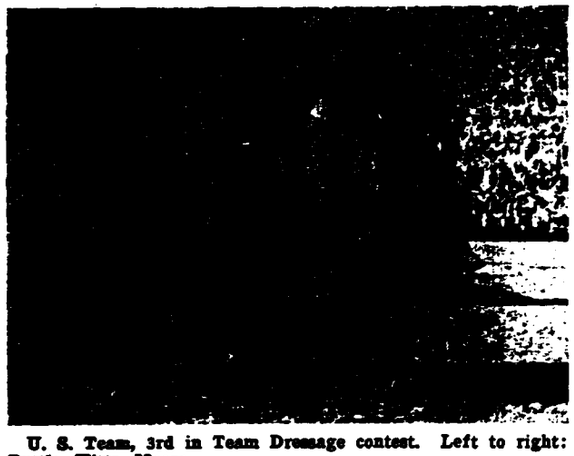
Individual Classification

A	B	C	D
Order	Name	Country	Standing of riders in rating of each judge; viz., place total
1	Commandant Francois X. Le Sage	France	6
2	Commandant Charles Marion	France	14
3	Captain Hiram E. Tuttle, Q. M. C.	U. S.	14
4	Lieutenant Thomas Bystrom	Sweden	16
5	Captain André Jousseaume	France	17
6	Captain Isaac L. Kitts, F. A.	U. S.	17
7	Captain Alvin H. Moore, Cav. Res.	U. S.	20
8	Lieutenant Gustaf-Adolf Boltenstern	Sweden	21
9	Lieutenant G. Gracida	Mexico	30
*10	Major Bertil Sandstrom	Sweden	9

*Note—Major Sandstrom was placed tenth by the Jury of Appeals for violation of a rule of the *Federation Equestre Internationale*—clucking to his horse, an unauthorized aid in the Dressage.

Note.—The figure in Column D is obtained as follows: Commandant Le Sage was rated, respectively, by the three *Dressage* jurors, as: Second Place, First Place, and Third Place, giving a place total of "6" as indicated.

Truly the record of our *Dressage* team was remarkable, when it is considered that not a rider nor a horse had ever before been in an international *dressage* competition, that the team had been in training less than 8 months and that we were greatly limited in the quality and quantity of suitable *dressage* prospects and qualified riders. As a nation, we are not *dressage* or school minded; at the Xth Olympiad, we



U. S. Team, 3rd in Team Dressage contest. Left to right: Tuttle, Kitts, Moore.

were competing with European countries whose equestrian history is full of the *dressage;* their riders and horses had the advantage of experience in international competition; our riders and horses were without this background and experience. Captains Tuttle, Kitts and Moore each put up highly creditable individual performances, which in turn reflected great credit on the team as a whole. If ever long and favorable effort was rewarded, certainly it was on August 10th in the showing of our *Dressage* team.

Three-Day Event

I think we can safely say that, if there was one event the winning of which meant more than any other, it was the *Concours Complet D'Equitation*, or the Three-Day Event.

In the minds of most horsemen the Three-Day Event is the military event *par excellence* on the Olympic programme. The requirements for this event more nearly coincide with our conception of the ideal charger. If, in selecting and training our chargers, we followed more closely the requirements of a Three-Day horse, how much better all of us would be mounted!

The Three-Day Event is essentially a team event. Entries were made by Holland, Sweden, Japan, Mexico, and the United States, as follows:

Holland
- Lieutenant Charles F. P. de Mortanges, on *Marcroix*
- Lieutenant Jonkheer A. Van Lennep, on *Henk*
- Lieutenant Karel J. Schummelketel, on *Duiveltje*

Sweden
- Captain Ernst Hallberg, on *Marokan*
- Lieutenant Clarence Von Rosen, Jr., on *Sunnyside Maid*
- Lieutenant Arne Francke, on *Fridolin*

Japan
- Lieutenant Colonel Shunzo Kido, on *Kyu Gun*
- Captain Taro Nara, on *Sonshin*
- Captain Morishige Yamamoto, on *Kingo*

Mexico
- Captain Armando Barriguete, on *Monza*
- Captain José P. Allende, on *El Torero*

United States
- Major Harry D. Chamberlin, on *Pleasant Smiles*, T. B., B., G., 16.1, 1100, 8 years (*Transvaal-Bread Winner*)
- Captain Edwin Y. Argo, on *Honolulu Tom Boy*, T. B., Ch., M., 15.2½, 1050, 6 years (*Honolulu Boy-B. M. 534*)
- Lieutenant Earl F. Thomson, on *Jenny Camp*, ½T. B., B., M., 16, 1000, 6 years (*Gordon Russell-B. M. 392*)

Our team was mounted on outstanding types of American thoroughbreds with the exception of Thomson on *Jenny Camp*, a half thoroughbred. They were in excellent condition—ready, fit and "rearing to go." How well they and their riders were prepared is witnessed in the account that follows. None of the other teams were mounted on clean bred horses exclusively. The Swedes had one clean bred, one three-quarter bred and one unknown; the Dutch horses were all ½T. B.; the Japanese had no clean breds, neither did the Mexicans. It was the consensus of opinion of practically all competitors that the thoroughbred was the only type of horse that could satisfactorily meet the rigid present-day requirements of the Three-Day Event.

Training Test, Three-Day Event

The Three-Day Event started on Thursday, August 11th, with the training test, at the Riviera Club.

The *Fédération Equestre Internationale* in order to place more emphasis on the *training test* (schooling) of this event did two things, viz: First, increased the number of alloted points to 400; and then disqualified any rider who failed to make a score of at least 150 points. Knowing the *Fédération's* attitude regarding schooling, those responsible for the training of our *Three-Day Team* recognized the necessity of concentrating on the schooling phase of the Three-Day. This was a sound and wise decision: if successful it would enable us to "feather our nest" prior to the endurance phase and give us a margin on which to operate. Just how successful we were is attested by the results listed below. Out of 14 competitors, all three of the U. S. Army riders placed within the first six, viz: First, second and sixth. Our team stood first as a team with a total average score of 973.333; Sweden was second with 904.332, and Holland, third with 856.833.

It was a very pretty sight, indeed, to witness the 11-minute period allowed for the execution of the prescribed movements. Listed below are the individual scores of this phase:

Order	Name	Country	Horse	Average Score
1	Chamberlin, Major	U. S.	*Pleasant Smiles*	340.333
2	Argo, Captain	U. S.	*Honolulu Tom Boy*	333.0
3	Mortanges, Lt.	Holland	*Marcroix*	311.833
4	Von Rosen, Lt.	Sweden	*Sunnyside Maid*	310.666
5	Francke, Lt.	Sweden	*Fridolin*	303.333
6	Thomson, Lt.	U. S.	*Jenny Camp*	300.666
7	Hallberg, Captain	Sweden	*Marokan*	299.332
8	Van Lennep, Lt.	Holland	*Henk*	271.5
9	Schummelketel, Lt.	Holland	*Duiveltje*	267.5
10	Yamamoto, Captain	Japan	*Kingo*	251.333
11	Nara, Captain	Japan	*Sonshin*	242.000
12	Kido, Lt.	Japan	*Kyu Gun*	212.82
13	Allende, Captain	Mexico	*El Torero*	171.166
*14	Barriguete, Captain	Mexico	*Monza*	119.166

*Note.—Eliminated for failure to make the requisite number of points—150 points, minimum.

Endurance Phase Three-Day Event

On Friday, August 12th, began the rigorous endurance phase of the Three-Day Event. There were many thrilling episodes connected with the running thereof. First a word as to the 22½-mile course to be made in two hours, 5 minutes and 6 seconds. There were 5 separate and distinct phases, viz:

Phase A—4½ miles roads and paths over a winding trail leading up a canyon and over some difficult foothills. Rate, 9 miles per hour.

Phase B—2½ miles steeplechase course consisting of 15 fences—brush, open ditches and water jump—jumps as specified by National Steeplechase and Hunt Association rules—Rate 22½ miles per hour.

Phase C—9½ miles—more roads and paths. In order to get to Phase D. (Endurance) it was necessary to follow certain streets from the Riviera Club area to the high mesa in the vicinity of Loyola College. Rate 9 miles per hour.

Phase D—5 miles—the course included 34 obstacles, brush, post and rail, Aiken fence, ditch in and out across road, stone fence, concrete culvert, logs, water trough, baled hay, chicken coop, etc. Fences were, in general, solid and imposing in size. Rate 17 miles per hour.

Phase E—1½ miles, gallop on the flat, to be made in 6 minutes.

The terrain in and around the Riviera area is, from an equestrian point of view, far different from the lovely galloping country to be found in the hunting areas of our eastern seaboard, with their natural

U. S. Team, winner of Three-Day Event. Left to right: Chamberlin, Argo, Thomson.

fences and stretches of nice galloping turf. In Los Angeles, it was extremely difficult to find suitable terrain on which to stage the endurance phase: it was necessary to construct not only a steeplechase course—since none was in existence—but likewise to construct all the fences for the endurance phase. As I recall it, there was not a single fence that was not "planted" so to speak—post and rail fences, stone walls, etc., such as we know in the east, are not to be found in and around Santa Monica. Unfortunately the going on the Cross-country course was hard—the ground was baked, with numerous cracks and ridges. However, it was the best to be had and it was as fair for one horse and rider as for another.

Let us go through a few phases with several riders. First, Lieutenant Thomson of the U. S. Army riding *Jenny Camp*—winner of the endurance phase. Lieutenant Thomson and the gallant *Jenny Camp* incurred not a single jump penalty in either the steeplechase or cross-country phases—some forty odd jumps clean as a whistle.—truly a remarkable achievement. Lieutenant Thomson gathered a six-point bonus for the steeplechase. Second place went to Lieutenant Mortanges riding *Marcroix*, the winner of the Individual Three-Day Event in 1928; he received a 70-point penalty in the cross-country phase and a 6-point bonus in each of the cross-country and steeplechase phases. Lieutenant Von Rosen of Sweden placed third in the individual classification with a 50-point penalty in the steeplechase and with a 12.5 point time penalty and a 4-point bonus for the cross-country phase. Captain Hallberg of Sweden placed fourth, with Major Chamberlin of the U. S. in fifth place. Lieutenant Schummelketel of Holland was sixth, and Captain Yamamoto

of Japan seventh. Captain Argo of the U. S., who was eighth, on this day, gave one of the highlight performances of the Games. Prior to the team's departure from Fort Rosecrans, Argo slipped and fell on a staircase and dislocated his shoulder; he entered the events with his shoulder strapped to his side. The Training test caused him no difficulty, but the water jump on the steeplechase was a disastrous fence for him. Here, Argo's shoulder popped out once more, as a result of a peculiar twist of *Honolulu Tom Boy;* during this period the excruciating pain caused intense suffering, and it was only by the greatest display

Dutch Team, second in Three-Day Event—Left to right: Lieutenants Van Lennep, de Mortanges, Schummelketel.

of grit and determination that Argo carried on, riding a distance of approximately twenty miles and negotiating some forty odd fences with a score high enough to warrant an individual classification of eighth for the endurance phase. After the water jump on the steeplechase course, it became necessary for Argo to radically change his seat, in order to ease the strain on his injured shoulder.

Colonel Kido of Japan was unfortunate enough to be eliminated at the last fence of the endurance phase (jump No. 34, a chicken coop across a road). This was the irony of fate after a twenty-mile gallop and negotiating over two score fences. Captain Nara of Japan was eliminated on the twelfth jump of the steeplechase, and Captain Allende of Mexico was eliminated for failure to keep to the course between the twelfth and thirteenth obstacles. Lieutenant Francke of Sweden was eliminated three jumps from the finish —at Jump 31 of the cross-country phase. Major Chamberlin had a perfect performance on the steeplechase course; but on the cross-country course *Pleasant Smiles* plowed through the thirty-second jump with a resultant terrific fall for Chamberlin and his mount. However, undeterred, *Pleasant Smiles* gallantly carried his rider on to the finish.

Of the thirteen riders who started the endurance phase, two were eliminated in the steeplechase course, and two were eliminated in the cross-country phase. Three riders got through the steeplechase and cross-country courses without any faults at fences (Schummelketel of Holland, Thomson of the U. S. and Yamamoto of Japan). Lieutenant Mortanges of Holland was the only rider to receive a bonus on both the steeplechase and cross-country phases; six each, or a total of twelve.

The finish of the endurance phase was a scene of intense activity, as each horse and rider drew up after the long twenty-two mile ride. Only two teams finished with three riders up—Holland and the United States. Each of these teams finished with all three horses in reasonably good shape. By far the most alert, the most unconcerned and the least fatigued horse was the bold and courageous filly, *Jenny Camp.* She was a picture of perfect health and condition as she nibbled some hay a few minutes after completing the course. Only a courageous hearted thoroughbred like *Pleasant Smiles* could have carried on and finished after his terrific fall towards the end of the cross-country phase. The same applies to his rider.

At noon on Saturday, August 13th, all horses which had satisfactorily completed the endurance phase were examined by an international commission, for the purpose of eliminating all horses suffering from the effects of the first two days' tests. All satisfactorily passed the commission.

Insofar as the *Endurance Phase* itself is concerned the *individual* classification of the first three riders follows:

1st—Lieut. E. F. Thomson. U. S., *Jenny Camp* 1271
2nd—Lieut. C. F. P. de Mortanges. Holland.
Marcroix 1242
3rd—Count Clarence von Rosen. Jr., Sweden.
Sunnyside Maid 1241

Team standing for endurance based on total of individual scores:

1st—United States 3256
2nd—Holland 3144

At the close of the *endurance phase* (including the schooling) the *team standing* was:

1st—United States 4259.33
2nd—Holland 4001.33

Individual standings:

1st—Lieut. Thomson, U. S., *Jenny Camp* 1571
2nd—Lieut. Mortanges, Holland. *Marcroix* 1553
3rd—Lieut. Von Rosen, Sweden. *Sunnyside Maid* 1552

Here again we see an American officer winning the Individual *Endurance* phase and our team first as a team.

Stadium Jumping Phase

The final phase of the test was the stadium jumping held on the afternoon of August 13th. A beautiful course of twelve jumps faced each horse and rider; the fences were between three feet seven and three feet nine in height. Each horse was required to take the course at a fourteen mile gallop.

The standing of the several riders was:

Order	Name	Country	Horse	Total Penalty
1	Argo, Captain	U. S.	*Honolulu Tom Boy*	0.75
2	Mortanges	Holland	*Marcroix*	40
2	Hallberg	Sweden	*Marokan*	40
3	Yamamoto	Japan	*Kingo*	40.5
4	Von Rosen	Sweden	*Sunnyside Maid*	42.5
5	Schummelketel	Holland	*Duiveltje*	80
6	Thomson	U. S.	*Jenny Camp*	80
6	Chamberlin	U. S.	*Pleasant Smiles*	80
7	Van Lennep	Holland	*Henk*	114.5

Captain Argo, riding *Honolulu Tom Boy,* made a remarkable performance; not a fault at a jump—only a time penalty of 0.75. Lieutenant Thomson on *Jenny Camp* went into the final phase of the Three-Day Event with a 17.2 point lead over his nearest competitor. Lieutenant Mortanges of Holland on *Marcroix.* However, in the stadium jumping phase *Marcroix* negotiated the course more cleanly than did *Jenny Camp. Marcroix* had one knockdown and touched the water once, whereas *Jenny Camp* had one knockdown and was in the water at the fourth and eighth obstacles, which lost Lieutenant Thomson the Individual Three-Day Championship.

The final scores of the Three-Day Event are listed below—and what records of achievement they are:

Team Standing

Rider	Country	Horse	Score
Lieutenant Thomson	U. S.	*Jenny Camp*	1811.0
Captain Argo	U. S.	*Honolulu Tom Boy*	1539.25
Major Chamberlin	U. S.	*Pleasant Smiles*	1687.833
Team total	U. S.		5038.083
Lieut. Schummelketel	Holland	*Duiveltje*	1614.5
Lieut. Van Lennep	Holland	*Henk*	1260.75
Lieut. Mortanges	Holland	*Marcroix*	1813.833
Team total	Holland		4689.083

Our team led from the start; the victory was a glorious achievement for our riders and horses. Each rider of our team won an individual phase, viz: training, endurance and stadium jumping. The *team,* as a team, likewise won every phase! This is the first time that the Three-Day Event has been won by any nation but Sweden and Holland. The foundation for this victory was begun in 1912 and was added to by the experiences gained in 1920, 1924, and 1928. The result speaks volumes for the resourcefulness, determination, courage, and skill of our riders and mounts. The cornerstone of the Three-Day victory was laid on "condition"—for which two individuals are largely responsible—namely, Lieutenant Colonel Charles L. Scott, Team Manager, and Major James E. Noonan, Veterinary Corps, Team Veterinarian.

Condition, while a great contributing factor, alone could not assure victory—there were long tedious hours spent in the saddle preparing for these events. Here is where the experienced eye of Major Chamberlin was so useful for the schooling and jumping.

It goes without saying that victory would not have been possible without the loyal and wholehearted cooperation of every officer and enlisted man serving with the team. For loyalty, faithfulness and devotion the work of the enlisted attendants of the team, under conditions which at times were most trying, stands out as one of the high spots of the Games of the Xth Olympiad. The part played by these men cannot be measured. Suffice it to say that theirs was a contribution that assured success to our team.

Individual standings of competitors follow:

Order	Rider	Country	Horse	Score
1	Mortanges, Lt.	Holland	*Marcroix*	1813.833
2	Thomson, Lt.	U. S.	*Jenny Camp*	1811.0
3	Von Rosen, Lt.	Sweden	*Sunnyside Maid*	1509.416
4	Chamberlin, Maj.	U. S.	*Pleasant Smiles*	1687.833
5	Hallberg, Captain	Sweden	*Marokan*	1679.33
6	Schummelketel, Lt.	Holland	*Duiveltje*	1614.5
7	Yamamoto, Captain	Japan	*Kingo*	1609.583
8	Argo, Captain	U. S.	*Honolulu TomBoy*	1539.25
9	Van Lennep, Lt.	Holland	*Henk*	1260.75

Top: Commandant LeSage, French Army, on "Taine"—winner of the Individual Dressage. Middle: Lieutenant Charles F. P. de Mortanges, Dutch Army, with "Marcroix." Highest individual score—Three-Day Event. Bottom: Lieutenant Baron Nishi of Japan. Highest Individual Score, Prix des Nations.

To win the individual Three-Day Event is a glorious victory; to win it twice in two successive Olympics with the same horse is an honor that has never before been achieved. Lieutenant Mortanges of Holland and the gallant 12-year old half-bred bay gelding *Marcroix* richly and truly deserve the title of "Olympic Champions."

Prix Des Nations (Jumping Event)

The *Prix des Nations* was the closing event of the equestrian sports; indeed, it was the *grand finale* of all the sports of the Games of the Xth Olympiad. On Sunday afternoon, August 14th, over 105,000 people were in the Olympic stadium to witness the closing ceremonies and the *Prix des Nations*. This audience saw the greatest jumping exhibition ever staged in this country.

There were four team entries—Mexico, United States, Japan, and Sweden, making a total of twelve individual competitors.

The United States team consisted of:

Major Harry D. Chamberlin, Cavalry, on *Show Girl*, T.B., Gr. M., 15.3, 1150, 8 years, *(Stress-Chanata)*.

Captain William B. Bradford, Cav., on *Joe Aleshire*, ½T.B., B., G., 16.1, 1200, 12 years, *(Red—S.B.-McDonald—T.B.)*

Lieut. John W. Wofford, Cavalry, on *Babe Wartham*, ½T.B., B., G., 16.2½, 1175, 13 years, (*Henry of Navarre—½ Coach*).

Our riders need no introduction; all were veterans seasoned and experienced in past international competition. As to horses, they likewise were experienced. Our *Prix des Nations* nominations were originally *Babe Wartham, Joe Aleshire,* and *Tan Bark,* with *Show Girl* as substitute. Forty-eight hours prior to the actual event the final team was selected with *Joe Aleshire, Babe Wartham,* and *Show Girl. Tan Bark* had not been in the best of condition, and it was decided not to enter him. Evidence of the soundness of *Show Girl's* selection, both as the general reserve mount for the entire team and as a competitor in the *Prix des Nations,* is borne out by her wonderful showing in this event. Many were disappointed in not seeing *Ugly* nominated; however, he was not in satisfactory condition.

The course as set up had twenty obstacles; it was approximately 1050 meters long and required a gallop of 400 meters per minute. The fences were stiff, mostly patterned after natural hunting country. They were also higher than in past Olympics, due to new requirements as to dimensions. Without doubt it was the most difficult course ever set up in the United States; however, this was but to be expected—this was Olympic competition,—a fact often overlooked by carping critics.

The Olympic stadium course demanded a galloping "lepper"—one bold, courageous, dependable, and experienced. Mere jumping ability was not sufficient—time and space factors demanded a horse that could move along. To these two qualities one had to add boldness and courage so as to face the yawning ditches, stretches of water, the breadth, height and variety of the fences; lastly, but not least, there was required dependability and experience—to steady, place and lift the bold gallant horse over the tight spots and trappy places at his fences.

Let us follow the four teams and the twelve riders. The first to attempt to negotiate the course was Captain Bocanegra of the Mexican Army—horse and rider reached the fifth obstacle (ditch and bank) where they were eliminated for three disobediences (refusals). Then came our first rider, Lieutenant Wofford on *Babe Wartham*. Wofford should have been eliminated at the eleventh fence, where he had his third disobedience, the other two being at the eighth and tenth fences. However, the jury permitted him to complete the course. The third entrant was Major Imamura of Japan; he was eliminated at the tenth fence, having suffered one disobedience at the eighth fence and two more at the tenth. All eyes now turned to Lieutenant Von Rosen of Sweden. Due to individual penalties up to this moment, the teams of Mexico, United States and Japan were already eliminated as teams. Lieutenant Von Rosen was the first rider to safely negotiate the course, with the excellent score of sixteen penalties. Major Mejía of the Mexican Army was eliminated at the second fence for three refusals. Then came Captain Bradford on old *Joe Aleshire* they completed the course with a score of twenty-four.

Sweden was eliminated as a team at the tenth fence—an Aiken brush—where Lieutenant Francke had three refusals. Up to this time Lieutenant Francke's mount was jumping very nicely. All teams were now eliminated. So, attention was now focused on the individual. So far Lieutenant Von Rosen was standing first, with sixteen faults; and Captain Bradford was second with twenty-four faults. The last Mexican rider, Captain Ortiz, was eliminated at the eighth fence where he had his third disobedience. Next came the final United States representative. Major Chamberlin on *Show Girl*. Many the time Chamberlin had ridden forth in team competition faced with the insurmountable task of turning in a perfect score—and how well he has succeeded is well known to all followers of our Army equestrian teams! Chamberlin and *Show Girl* were the cynosure of all eyes and the hopes of every American in the Olympic stadium. Chamberlin and the graceful, grey, rakish mare got away to a lovely start—four fences in perfect form—then a knockdown at the fifth fence (a four-point penalty)—feet in the water at the sixth fence and over water again at the thirteenth fence, making eight faults over water, or a grand total of twelve faults. What a roar of applause greeted this gallant rider and horse,—and well the audience might cheer. For the U. S. Army was now first with a rider having a score of twelve—no mean score for the *Prix des Nations!* Then came Lieutenant Baron Nishi riding the Japanese Army entry *Uranus*—a big upstanding 14-year old French half-bred. *Uranus* under the skilful riding of Lieutenant Nishi incurred no penalty until the water was touched at the sixth obstacle (4 faults)—a quick recovery, then three clean leaps and the first refusal at the tenth fence,—an Aiken brush (3 faults)—then on again with not a single remaining fault, a total of seven faults at fences and a time

penalty of one fault, or a grand total of eight faults, and the crowd hailed the winner of the *Prix des Nations!* A great victory for Japan, and well might they be proud of Nishi and *Uranus*.

Following is the scores of the individuals:

Order	Rider	Country	Horse	Score
1	Lieut. Nishi	Japan	*Uranus*	8
2	Major Chamberlin	U. S.	*Show Girl*	12
3	Lieut. Von Rosen	Sweden	*Empire*	16
4	Captain Bradford	U. S.	*Joe Aleshire*	24
5	Captain Hallberg	Sweden	*Kornett*	50.5

Some interesting sidelights:

a. No team had three riders to complete the course: therefore, there were no team awards.

b. United States and Sweden the only two countries having two riders up at finish.

c. Out of twelve riders—five completed the course.

d. Of those who finished the course Lieutenant Nishi was one of the two competitors who had a time penalty. Lieutenant Nishi had no knockdowns; his penalties were "feet in water", a "refusal" and "time."

e. Not a single rider and horse escaped a 4-fault penalty for feet in water at the sixth obstacle (leaning bar and water). The only rider whose horse did not touch the water at the thirteenth fence was the winner, Lieutenant Nishi.

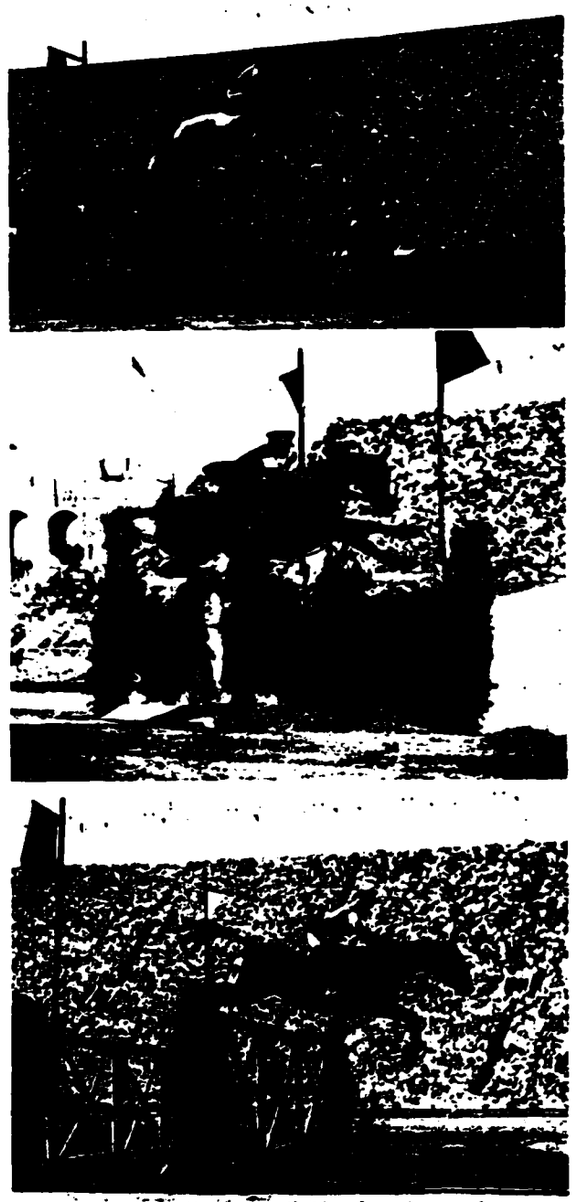
Recapitulation

To summarize, the showings made by the 1932 Olympic Games Equestrian Teams are as follows:

Nation	Dressage		Three-Day		Prix des Nations	
	Team	Individual	Team	Individual	Team	Individual
United States	III	III	I	II	.....	II
France	I	I & II	.....	.....	.....	.....
Sweden	II	.....	.....	III	.....	III
Holland	.....	.....	II	I	.....	.....
Japan	.....	.....	.....	.....	.....	I
Mexico	.....	.....	.....	.....	.....	.....

The 1932 Olympic Games Equestrian Team will go down as one of the most successful teams that has ever represented our Army in Olympic competition. It has set a high record of achievement. The team was fortunate in its personnel, as well as in its horseflesh. Extremely fortunate, too, the team has been in having as Chief of Cavalry* one who rode on and captained the first Olympic equestrian team of the American Army (1912). This in itself assured the team a broad and sympathetic understanding. This factor, coupled with the War Department's policy of helpfulness and cooperation, materially assisted the efforts of all concerned in winning an Olympic equestrian victory on American soil.

*Major General Guy V. Henry



U. S. PRIX DES NATIONS TEAM
Top: Major Chamberlain; Middle: Captain Bradford; Bottom: Lieutenant Wofford.

A Suggested Procedure

To be Followed When a Line Troop of Cavalry is Ordered to Prepare For Immediate Field Service of an Indefinite Duration

By First Lieutenant Frederick W. Drury, Cavalry

Assume:

1. **No "warning" order.**
2. **Date of return to home station—unknown.**
3. **Individual field equipment (clothing, belts, etc.) in possession of men.**
4. **In squad rooms, a wall locker and a trunk locker for each man.**
5. **Rifles in arm racks in squad rooms.**
6. **The following are at stables:**
   - **a. war set and extra tie ropes,**
   - **b. class "A" harness,**
   - **c. all packs.**
   - **d. extra horse shoes,**
   - **e. class "A" wagons and jockey box equipment.**
7. **The following are in store room in barracks:**
   - **a. extra laundry or barrack bag for each man, properly tagged with man's name and grade,**
   - **b. one additional name tag for each man,**
   - **c. ammunition,**
   - **d. class "A" mess and organizational equipment except that at stables,**
   - **e. all arms except rifles.**

A. As soon as the order for the turn-out is received, the 1st sergeant, mess sergeant, supply sergeant, stable sergeant, and all platoon sergeants will assemble in the orderly room for a conference with the troop commander. This conference will take precedence over *all* other duties.

B. After this conference the following procedure will be strictly followed *in the order given:*

1. All members of the troop, including officers' orderlies, will report immediately to their squad leaders at barracks. The stable sergeant *only* will remain at the stables. Teamsters, saddlers, and other troop specialists will proceed as indicated in "Special Instructions" given below.

2. All men will then dress in their most serviceable field uniforms, with war set belts, canteen covers, and suspenders.

3. All men will then make their cantle rolls and lay them at the foot of their bunks. Squad leaders will personally supervise this work.

4. Under the supervision of their squad leaders all men will then draw the following articles from the supply sergeant at the store room:

- **a. pistols,**
- **b. machine guns,**
- **c. ammunition.**
- **d. one (1) extra laundry bag per man,**
- **e. two (2) name tags per man.**

(Squad leaders, as they report to supply room, will furnish a detail to help the supply sergeant with this work.)

5. All men will then place their personal equipment and clothing *not* to be taken into the field in trunk lockers or barrack bags plainly tagged with the name, grade, and troop number of the man to whom it belongs. Wall lockers will be emptied and left open. Trunk lockers and barrack bags will then be piled neatly by squads in a location previously determined upon. Men on duty at the stables will see that their trunk lockers and barrack bags are taken to quarters and left in the proper locations. *(Property not placed in trunk lockers or tagged bags will probably be lost.)*

6. All men armed with rifles will then draw rifles from the arm racks in the squad rooms.

7. Platoon sergeants will then cause their platoons to fall in in front of barracks with the following equipment:

- a. cantle rolls,
- b. arms,
- c. raincoats (unless overcoats are prescribed, in which case the raincoats will *not* be carried.)

Squad leaders, under the close supervision of platoon sergeants, will then inspect their squads. The following points, particularly, will be noted:

- a. Completeness of equipment,
- b. Serviceability of clothing,
- c. Serviceability of shoes.
- d. Serviceability of gloves, hat cords, etc.
- e. Proper arms.

NOTE: This is a very important inspection, and squad and platoon leaders will be held strictly responsible that all members of their units are properly equipped and clothed. Necessary changes and corrections *must* be made at *this* inspection. There will be no opportunity later. Platoon and squad leaders will not report their units as formed until they have assured themselves that these units are absolutely ready for the field. There will be no excuses accepted for shortages or unserviceability of equipment, sloppy or dirty clothing or equipment.

8. After this inspection, no man will leave the troop, his platoon, or his squad without first securing authority to do so from an officer.

9. Platoon sergeants will then march their platoons to the stables *(filling canteens en route)*. Saddles will be packed and assembled by squads in a convenient location. All *pack saddles and relative pack equipment* will be placed in the aisles of stables directly behind each pack horse concerned, in such a manner that they can be placed upon the horses' backs systematically and at a moment's notice.

NOTES: a. While saddles are being packed, squad leaders will report to the stable sergeant and draw enough class "A" halters and tie ropes for the

men in their squads. Squad leaders of the M. G. Platoon and Troop Headquarters will draw sufficient additional tie ropes and halters for all pack horses.

b. Before packing his pommel roll, each man, under the supervision of his squad leader, will report to the stable sergeant with grain bag and get one (1) feed of grain per animal. Members of the M. G. Platoon and Troop Headquarters will carry two (2) feeds of grain in order to provide for the pack horses. Members of Troop Headquarters will also draw sufficient nose bags from the stable sergeant for all pack horses.

10. a. The 1st Squad, 1st Platoon, will then report, dismounted, to the supply sergeant at the storeroom to act as a loading detail for the wagons. This squad will remain on this duty until it has been relieved by another squad or dismissed by the officer in charge of loading wagons.

b. The 1st Squad, 2nd Platoon, will report, dismounted, to the mess sergeant at the kitchen. This squad will remain on this duty until it has been relieved by another squad or dismissed by the officer in charge of loading wagons.

11. The 1st and 2nd Platoons (less 1st Squad of each), assisted by Troop Headquarters and the M. G. Platoon, will then water, clean out the feet, and brush off *all* horses in the troop.

a. Horses will be tied outside the stable as for drill, unless the weather is inclement, in which case the horses will be left in the stables.

12. All platoons, under the supervision of the platoon sergeants, will then saddle, forming, when saddled, as for drill.

13. Squad leaders will then draw from the stable sergeant extra fitted shoes for all horses in their squads.

14. a. The 2nd Squad, 1st Platoon, will then report, mounted, to the supply sergeant at the storeroom, relieving the 1st Squad, 1st Platoon, which, upon relief, will proceed to the stables, saddle, and form with the remainder of the platoon. The 2nd Squad, 1st Platoon will remain on duty at the storeroom until it is dismissed by the officer in charge of loading wagons.

b. The 2nd Squad, 2nd Platoon, will report, mounted, to the mess sergeant at the kitchen, relieving the 1st Squad, 2nd Platoon, which, upon relief, will proceed to the stables, saddle, and form with the remainder of the Platoon. The 2nd Squad, 2nd Platoon, will remain on duty at the kitchen until it has been dismissed by the officer in charge of loading wagons.

15. All equipment will then be properly adjusted, upon the completion of which process platoon leaders will report their units as formed.

16. Upon the receipt of these reports, the troop commander, accompanied by platoon sergeants, will make a thorough inspection of all platoons. This inspection will cover the following points:

a. Adjustment of equipment including bitting,
b. Cleanliness of leather equipment,
c. Cleanliness of horses,
d. Correctness of arms,
e. Cleanliness of personal equipment of men,
f. Completeness of personal equipment of men,
g. Extra fitted shoes for each horse,
h. Extra grain, halter shanks, etc.
i. Condition of horses; lameness, etc.

NOTE: Deficiencies listed under headings b, c, e and f above will *not* be corrected; all other deficiencies *will* be corrected.

17. Platoons will remain dismounted until directed to mount.

C. The following *special instructions* will be obeyed by the individuals concerned:

1. *Teamsters.*

a. As soon as they have been notified of the turn-out, teamsters will at once proceed to the stables in fatigue clothes, water, groom, and harness wheel mules and buckboard team using class "A" equipment throughout. They will then get class "A" wagons and spot them as follows: Baggage—Storeroom; Ration—Kitchen; Buckboard—After getting officers' bedding rolls—at kitchen.

NOTE: Between the wagon shed and barracks, teamsters will stop at the stables, draw jockey box equipment, whips, wagon covers, etc., forage (if prescribed), and feed, from the stable sergeant. These supplies will be placed in the wagons.

b. After the wagons have been spotted, teamsters will get lead teams, water, brush off, and harness them, and hitch them to the wagons.

c. Teamsters will then inspect all harness for adjustment and then prepare their personal equipment, turning their teams over to a member of the squad on duty at the place the wagon is spotted.

d. Teamsters will then assist in the loading of their wagons and will then report to the officer in charge of loading wagons for instructions.

2. *Officers' orderlies.* Officers' orderlies will roll their rolls, etc., as rapidly as possible and will then report to their squad leaders for inspection. They will go to stables ahead of the troop and prepare the officer's horse and saddle equipment for the field. They will then pack and saddle their own horses, reporting mounted, upon completion of this duty, to the officers for whom they are acting as orderlies.

3. *Saddler.* The saddler will go to barracks with the stable crew, draw his own equipment and arms, and report to the 1st sergeant for inspection. He will also draw a rifle, pistol, and ammunition for the stable sergeant. He will then go to the stables, pack his saddle, and will then assist the stable sergeant. The saddler will carry a kit on his saddle bag.

4. *Horseshoers.* Horseshoers will go to barracks with the stable crew, draw their equipment and arms, and report to the 1st sergeant for inspection. They will then go to stables, pack their saddles, saddle, and will then assist the stable sergeant. Each horseshoer will carry an emergency kit on his saddle bags.

5. ***Supply sergeant and mess sergeant.*** **The supply sergeant and mess sergeant will remain on duty at barracks until their wagons have been loaded. They will then report to the 1st sergeant for instructions. Keys to all storerooms will be turned over to the N. C. O. in charge of quarters.**

6. ***N. C. O. in charge of quarters.*** **The N. C. O. in charge of quarters will, as soon as the call is sounded, proceed to the guard house, get garrison prisoners belonging to the troop, bring them back to the troop and report them to the supply sergeant to be equipped. After these prisoners have been equipped they will be turned over to their squad leaders. The N. C. O. in charge of quarters will then remain on duty at the telephone until he has been relieved by the 1st sergeant, after which he will secure his own equipment, proceed to stables, saddle, etc., and join his platoon.**

7. ***First sergeant.*** **The 1st sergeant will supervise all activities of the troop. As soon as he receives word that the troop is to be turned out, he will notify the troop commander and the other troop officers. He will then send a reliable man to notify the soldiers living out of barracks. At all times he will keep the troop commander informed of his whereabouts.**

8. ***Stable sergeant.***

a. The stable sergeant will see that sufficient grain is kept in the grain cart each night to supply one feed of grain per animal in the event the troop should be turned out in an emergency. This cart will be securely locked in the feed room each night in order that no loose animals can reach it.

b. He will remain constantly on duty at the stables, packing his saddle and saddling at a time which does not interfere with his other duties.

c. He will supervise the issue of grain, halters, tie ropes, and fitted horse shoes.

d. As soon as he is notified of the turn-out, he will segregate all sick animals until they have been inspected by the troop commander.

e. He will remain in a location such that he can hear the telephone.

f. He will see that all extra halters, tie ropes, fitted horse shoes, not claimed by the time the troop is ready to leave, are placed on the wagons.

g. He will turn over all keys to stable storerooms to the 1st sergeant, who will, in turn, turn over the keys to the man in charge of quarters or stables.

General.

1. ***Man left at quarters.*** **The 1st sergeant will detail a non-commissioned officer to remain at barracks. This N. C. O. will relieve the regularly detailed N. C. O. in charge of quarters as soon as word of the turn-out is received. After the troop and wagons have left barracks this N. C. O. will make a thorough inspection of quarters. He will place all arms in the storeroom, police the entire barracks, and lock or nail up all doors and windows in barracks. He will then report to the Post Adjutant for instructions.**

2. ***Man left at stables.*** **The 1st sergeant will detail a private to remain at stables. This man will relieve the stable sergeant at the telephone as soon as word of the turn-out is received. After the troop has left stables he will police the stables and all rooms connected therewith. He will lock or nail up all doors take sick horses to the veterinary hospital, and will then report to the Post Adjutant for instructions.**

3. ***Men for whom there are no horses.*** **These men will pack their saddles, place them in front of stables, and will then report to the 1st sergeant for instructions.**

4. ***Leaving stables.*** **Squad and platoon leaders will keep their units together at all times. No man will leave stables for any purpose without first securing permission to do so from an officer.**

5. ***Surplus feed bags and horseshoes.*** **The 1st sergeant will see that five additional feed bags are placed on the wagon. All surplus fitted shoes, halters, and tie ropes not claimed by the time the troop is ready to leave the stables, will be put on the wagons.**

6. ***Cooks.***

a. The first cook will ride on the buckboard.

b. The second cook, mounted, will accompany the cooking and ration pack horses.

7. ***Echelons.***

a. The supply sergeant and the first horseshoer will accompany the wagons.

b. The mess sergeant and the second horseshoer will accompany the troop.

8. ***Officers.***

a. The Commanding Officer, 1st Platoon, will supervise loading the wagons and will report with them to the troop commander at the stables.

b. The Commanding Officer, Machine Gun Platoon, and the Commanding Officer, 2nd Platoon, will assist the troop commander at the stables.

c. At all times, all troop officers will know the whereabouts of the troop commander.

9. ***Miscellaneous reminders for the troop commander.***

a. Inspect sick animals.

b. Take any surplus animals, not sick with troop as led horses.

c. Send note to commander of the guard re prisoners.

d. Be sure to take Council Book, blank checks, vouchers, maps, Army Regulations, M. C. M., etc., in troop field desk.

NOTE: It might be well to have the N. C. O. in charge of quarters get the field desk from Regimental Headquarters at the same time he secures the garrison prisoners for the troop.

e. Put valuable property in safe or turn it over to Post Adjutant.

f. Turn in Post Exchange checks and U. S. A. M. P. books.

g. Before leaving, inspect barracks and stables.

h. Inspect wagons for lashing of loads, etc.

i. Report to Squadron Commander when troop is ready to leave.

My Friend, Buffalo Bill

As Told by General Charles King to Don Russell, First Lieutenant, 342d Infantry

General Charles King, at 58 years of age, one of the oldest of living graduates of West Point, veteran of the Civil War, Apache and Sioux Indian wars, Spanish-American war, Philippine Insurrection, and World War, favorite novelist of a generation or so ago, once more tells the story of Buffalo Bill's greatest exploit, of which he was an eye-witness, in the following interview. It includes much new material gathered since his writing of the story nearly fifty years ago in "Campaigning With Crook," now out of print.

WAS there such a person as Buffalo Bill? You might doubt it, if you believed all that you read nowadays. Thousands of persons now living have seen the magnificent figure of William Frederick Cody directing the presentation of his Wild West show. But there are those who maintain that Cody was never anything but a showman, that he was only the hero of a series of dime novels and of exploits on the stage and in the arena.

It may be that Cody brought some of this on himself. He was always regarded as strictly honest while he served my regiment, the Fifth Cavalry, as chief of scouts. I think there is no doubt that later, under pressure of his publicity men, perhaps when his show was in difficulties, Cody somewhat dramatized and expanded his celebrated exploits. I do not believe he ever told anything that injured anyone else or tended to detract from another's accomplishments, but there is no question but that he made the best story he could about himself.

Now, even his most celebrated exploit, the killing of Yellow Hand, the Cheyenne chief, at the fight on the War Bonnet in 1876, is doubted. That is going too far. To take a grain of salt doesn't mean that you must put it in your eye.

I saw that fight from start to finish. Probably fifteen other persons were in a position to see all or any part of it. Of these it would seem at least a hundred survive, most of whom either killed Yellow Hand themselves or saw someone other than Buffalo Bill do it.

So long as General Wesley Merritt, General Eugene A. Carr, Colonels Mason, Sanford C. Kellogg and Leib, and Captains Montgomery, Hayes, and W. P. Hall were alive these modern claimants for the honor of having killed Yellow Hand were silent. At the time I never heard of the "Sergeant Jacob Blaut" whose story has been quoted. The members of the advance guard, under my command, were all—Sergeant Schreiber, a fine old veteran of whom the entire regiment was proud, Corporal Wilkinson, and eight private troopers—from my own company, K, commanded by the senior captain of the regiment, Brevet Lieutenant Colonel Julius W. Mason.

You will remember that in 1876 three expeditions were sent out against the Sioux under the respective commands of Generals Alfred H. Terry, George Crook and John Gibbon. After roughly handling General Crook's column the Indians fell on the Seventh Cavalry commanded by General George A. Custer and detached from Terry's column, and destroyed Custer and five of his twelve troops, the remaining seven under Major Reno and Captain Benteen suffering heavy casualties before they were rescued by Terry and Gibbon.

News of this disaster caused reinforcements to be sent to the troops in the field, and my regiment, the

Buffalo Bill.

Fifth Cavalry, was assembled from various stations in Kansas and ordered to join Crook. Shortly after we started our march William F. Cody, "Buffalo Bill," joined the regiment as chief of scouts, a position he had held previous to its five years service in Arizona from which it recently had returned.

We were marching toward Fort Laramie with seven troops and, at noon, Saturday, July 15, seven troops were resting at Rawhide Creek, eighteen miles from

the fort, when a courier appeared with dispatches stating that some eight hundred Cheyennes were preparing to leave their reservation with the intention of joining Sitting Bull and the Sioux. Merritt decided at once to attempt to head them off. To do this he had to march eighty to eighty-five miles around three sides of a long rectangle before the Indians could march thirty miles. Of course the Indians did not know there was a race—the roundabout course was taken to deceive them. A direct march toward them would have driven them toward the Sioux.

Eighty and more miles in a day and a half is no easy march, but Merritt's troops made it on time and by Sunday evening were across the trail the Indians were expected to take, at War Bonnet or Hat Creek, the Indian name being variously translated. The troops went in bivouac, hidden under the bluffs.

That night I was detailed to command the outposts toward the southeast, from which direction the enemy was expected.

At daybreak next morning I am on a hilltop with Corporal Wilkinson of K company—my troop—searching the horizon for Indians. Wilkinson is first to see a small group of the Cheyennes. Word is sent to General Merritt. Soon we see other small bands of the enemy. General Merritt, General Carr and several other officers come to the ridge. Among them is one troop captain, Sumner.

We see more and more Indians, but they are not approaching. Why? They do not seem to be trying to hide from us, so it does not seem probable that they suspect the trap. Our men have built very few fires, and those are well concealed.

Soon it is explained. To our right front, about four miles away, I should say, we see the white covers of our wagon train. We had supposed them left far, far behind in our rapid march, but Lieutenant William P. Hall has done much more than was expected of him, and as it happens almost too much.

We are not worried about him. He knows the Indians are about and he is ready with a trap for them. He has two companies of infantry as train guard, and we see no sign of them. We know why. They are hidden in the wagons.

The Cheyennes are due for a surprise when they attack that train. Before they recover from it, we shall be among them. Our scheme is not affected.

"Have the men had coffee?" General Merritt asks. "Yes, sir," reports Adjutant William C. Forbush. "Then, let them saddle up and close in mass under the bluffs," Merritt orders. General Carr leaves to see to the execution of this command. Sumner rejoins his troop.

Now comes a complication that spoils this plan and gives Buffalo Bill his chance. He and others of the scouts are with us on the hill.

Cody is the first to notice an unusual scurrying around among the Cheyennes. A dozen or so whip up their ponies and start down the ravine toward us. We look along the road by which the wagons are approaching and see why. Two couriers are advancing rapidly from the train towards us. They are Troopers Anderson and Keith of C company and they had ridden nearly twenty-five miles farther than we had for C troop had been sent from Rawhide clear up to the Niobrara crossing of the road to Fort Robinson. They have now been sent to find Merritt and they know about where he is to be found. Of course, they have no suspicion that the Indians have arrived as.

Now this road is to our right front, and the ravine down which the Indians are approaching is to our left, ravine and trail meeting slightly to the right and in front of our position. In other words, because of the intervening high ground, the Indians must pass close in front of us in order to run down the two couriers, and all in the world they are after is those poor fellows' scalps.

Cody is the first to see the opportunity.

"By Jove! General, now's our chance," I quote him in "Campaigning With Crook" and those were about his words. "Let our party mount here and we'll cut those fellows off."

"Up with you, then," is Merritt's answer. "Stay where you are, King. Watch them till they are close under you; then give the word. Come down, every other man of you."

I am the only man left on top of the hill. My hat is off. Only the top of my head and my binoculars are visible above the crest, and I am not seen. Merritt and two staff officers, Forbush and J. Hayden Pardee of the 23d Infantry, are crouching just out of sight down the slope. Nearby are Sergeant Schreiber and Corporal Wilkinson.

Cody, who was quick to see the chance and first to suggest it, is given the honor of leading the dash. He is mounted and ready below. With him are two scouts and five or six private troopers. The scouts are Tait and White, the latter Buffalo Bill's shadow and great admirer, known, for these reasons, as "Buffalo Chips." He was killed a few weeks later at Slim Buttes, when the chief, American Horse, was slain.

I watch the Indians through my binoculars. If I give the word too soon they may take alarm and escape. If I wait too long they may get the scalps of those two men. It is a magnificent sight as I see them drawing near, their beautiful long war bonnets trailing, the sun flashing from their armlets and polished lances, in their war paint, with their gaily decorated rawhide shields.

I look back.

"All ready, general?"

"All ready, King. Give the word when you like."

I wait until I hear the panting of their ponies, until they are much less than a hundred yards away.

"Now, lads, in with you."

Those were my exact words. They are also quoted in "Campaigning With Crook," and in an article which appeared in the *New York Herald* of July 22, 1876, of which more later.

Cody gives a cheer and leads his little band against the Indians' flank. The next few moments are busy ones. Merritt, Corporal Wilkinson and the rest spring

up beside me to see the attack. For a moment we see nothing, as both parties have been carried beyond our view. We hear a shot, then another, and look eagerly to see what is going on.

Suddenly, Wilkinson pulls at the general's sleeve excitedly; he points to the front; we are looking to the left. There, just in front of us, we see a fine figure of an Indian on horseback. He has just darted into view and hearing the shots and shouts behind him, has reined in quickly. He tries to see what is going on.

"Shall I fire?" Wilkinson asks.

"Yes, if you like," Merritt snaps.

The corporal fires. The Indian swings down in his saddle, and almost immediately an answering shot whistles by the general's ear, whether fired from under the horse's neck or otherwise I am not certain, but probably in the manner you may have seen in Wild West shows or in the movies, the Indian swinging down behind his pony's body.

The newspaper account says this Indian was shot by Wilkinson, but I do not think so. I think he was so excited that he missed. The only importance of it is that later Wilkinson got the idea into his head that he had killed Yellow Hand. Yellow Hand was shot only a few yards away, but it is somewhat doubtful if Wilkinson shot anybody, and I am sure that this was *not* the Indian called Yellow Hand. I think this was the only shot Wilkinson fired that day.

Years later Buffalo Bill's show played in the town where Wilkinson was then living, and as was his invariable custom when he heard of an old comrade being nearby, Cody paid high tribute to him in his press notices and invited him to come out to the show. They got together and presumably divided the honors; at all events Wilkinson said no more about shooting Yellow Hand, and Cody, of course, said nothing to discredit Wilkinson's story of having killed an Indian chief in the battle. The story still crops up, but that is all the basis for it.

But as these shots were fired, that of Wilkinson and that of the Cheyenne, I see the main body of the Indians rushing down the ravine and coming up by the dozens from all along the ridge. I shout a warning to Merritt.

"Send up the first company," he orders and springs to his saddle, followed by his adjutant.

The first company is my company, K troop (they were known officially as "companies" although "troop" is now the proper designation in cavalry). Its commander is Captain and Brevet Lieut. Colonel Mason.

Of course, I look around for my horse, but the orderly, who has been holding several, has lost him, and I see him dashing across the plain. It is perhaps 45 seconds before I run him down and then I am in a bad position for mounting. The McClellan saddle is high, the blanket roll and other field equipment of that day pile it up higher, and I have a crippled right arm. We circle around two or three times before I am able to make it, but I am mounted in time to join the first platoon of my company.

Now, this is long in the telling, but it is perhaps not much more than sixty seconds from the time we hear the first shot until we are dashing past Cody who is standing over the body of the Indian chief he has killed, waving the handsome war bonnet and shouting something—perhaps it is, "The first scalp for Custer." That is the way he always told the story and it is probable—the event was fresh and everyone was thinking of it.

But it was a war bonnet, not a scalp he was waving. He could not have scalped the Indian in that short time.

Nearby we see the Indian's pony, dead, in a heap.

General Charles King

The Indian was identified as Hay-o-wei, a young Cheyenne leader. The name was translated for us by a half-breed guide known as Little Bat as meaning "Yellow Hand," and so we always called him in speaking of the affair. Much later an Indian authority who claims to know the Cheyenne language told me the name really means "Yellow Hair" and probably refers to a scalp he had taken, possibly a white woman's.

Now what had happened?

If any reliance can be placed on the stories of the affair in Cody's autobiographies, Hay-o-wei recognized Cody when he first appeared and called out. "Come

on! Come on! White Long Hair." (Cooa Cooa Peha-ha-has-ka" in Cheyenne, according to Cody. "White Long Hair" was Cody's Indian name).

Later this doubtful story was expanded to a medieval romance involving a challenge and a duel between the lines. There was nothing like that. It was all over very quickly, and it was a general fight, although Cody and Hay-o-wei met without interference. The others were all busy.

As near as I could make out at the time, from what I saw and from what two soldiers who were in the charge with Cody said, both fired at once, Cody's shot piercing Hay-o-wei's leg and his pony's heart. The Indian's shot missed Cody, but Cody's horse stepped into a gopher hole and threw him. The soldiers say Cody got up, recovered his rifle, and fired again, the shot killing the Indian, who, of course, was also on the ground.

That was the story as I first wrote it. When we reached Fort Laramie after the long dusty march, and I was just setting out for a swim in the North Platte, Cody brought me a telegram from the *New York Herald*, then edited by James Gordon Bennett, asking for an account of his services in the campaign. Because he knew well I was his warm friend, and because he believed I had seen the entire affair between him and Hay-o-wei, he asked me to write an account of the fight. Because the matter was urgent and because I knew it meant much to him, I went at once with him and two civilians to the little frame building in which were the adjutant's office, the telegraph office, and one or two other rooms.

I wrote a brief story and, when I read it aloud to Cody, his companions, and the listening telegraph operator, I noticed the expression of pleasure on Cody's face at the rather vivid description.

"How'll that do?" I asked him as I finished.

"Oh, it's bully," he said. "It's fine, only—" but though he hesitated, he let it go, possibly thinking that as he had asked me to write, he ought to stand by what I wrote, so that never until long years after, forty-five years perhaps, when we were together at Pine Ridge Agency, did he tell me that he had finished Hay-o-wei with a big hunting knife.

"Why, we have it at home on the mantel-piece," he said.

Well, perhaps he did. Perhaps, in his excitement, Cody plunged in with his knife even as the poor fellow was dying, or perhaps it was a hand-to-hand fight with knives as he sometimes told the story, but if so it couldn't have lasted very long. Whatever happened, Cody was in considerable danger at that time, and one cannot blame him for making certain he wouldn't get a shot in the back. It was not civilized warfare.

The newspaper story, however, was not printed as I wrote it, and I presume one of the men present was a reporter who added other material he had gathered. My own story, four years later, in "Campaigning With Crook," was to the same effect, however.

But, at all events, Cody was waving the war bonnet as we of Company K dashed by in a charge on the would-be rescuers just emerging from the ravine.

The Indians fire a scattering volley as our long blue line pops over the ridge, but as they see the gray horse Troop B, Captain Robert H. Montgomery, about sixty yards to the right rear, and Troop I, Brevet Lieutenant Colonel Kellogg, coming front into line at the gallop about the same distance to our left rear, they wheel and scatter.

We advance cautiously in open order to the ridge, but as it is gained we see the Indians fleeing in all directions. We follow them thirty-five miles to the reservation, but they keep ahead, and by the time we get there it is impossible to tell which have been out on the war party and which have remained as friendly as all of them pretend to be.

But we have kept eight hundred re-inforcements from Sitting Bull, and the Cheyennes are discouraged from going on the warpath.

And no one can take the credit from Buffalo Bill of having led and planned the first attack, and of having killed the leader of the Indian party.

The collaborator would like to add a few words to General King's account.

General Merritt neglected to make an official report of the fight on the War Bonnet, probably because he left the regiment on leave shortly after it took place. This somewhat limits the historical evidence.

But Buffalo Bill's true claim to fame is supported by ample evidence. General Philip H. Sheridan in his "Personal Memoirs" tells of Cody's "exhibition of endurance and courage" in riding three hundred and fifty miles in less than sixty hours and refers to his services as "extremely valuable." General Nelson A. Miles in "Serving the Republic" refers to him as "a prince among hunters and frontiersmen," and remarks on his "superior horsemanship and rifle shooting."

But, even in his real achievements, there was something of the theatrical about Buffalo Bill that makes him hard to believe in a more prosaic age. On the occasion of the War Bonnet fight he is said to have worn one of his stage costumes, a Mexican outfit of black velvet slashed with scarlet and trimmed with silver buttons and lace. One can hardly imagine anyone riding to battle so attired—unless he thinks of Custer's black velvet coat and breeches, scarlet necktie, gold-lace chevrons, and wide brimmed hat that he wore as a brigadier-general of cavalry in the battles of the Army of the Potomac.

Was Cody thinking "first scalp for Custer" when he donned this similar dress, was he thinking of next winter's appearance before the footlights, or was it that he didn't have any other clothes to change to?

At any rate he became the hero of his own drama in "as plucky a single combat on both sides as is ever witnessed," as General King termed it long ago. It had all the elements of a modern western thriller—rescue of two soldiers, dash of cavalry, hand-to-hand combat—and no amount of over-dramatization can spoil it much.

Cavalry Machine Guns in Defense

By First Lieutenant W. P. Campbell, 14th Cavalry

NOTE: *In January 1932 a number of larger cities in Blueland declared a boycott against all Redland articles of trade. The latter country retaliated by declaring war and ordered an invasion of Blueland territory. Greencountry had decided during the latter part of 1931 to modernize her military forces, so, upon hearing of the outbreak of war, she immediately requested permission for a Commission of officers to visit Redland and Blueland for the purpose of studying the employment of the various arms. Major Tactful und Hanshaker of the Greencountry cavalry, who was Military Attache at the capital of Blueland, was appointed a member of the Commission and was attached to the Blueland Field Forces for the specific purpose of reporting on the use of cavalry machine guns. The following notes, which cover the use of a Cavalry Machine Gun Troop in a defensive operation which Major Hanshaker witnessed personally, are an extract from his field note book:*

I WAS attached to the First Cavalry Division, which was part of the advanced Blueland Forces and was in close proximity to an invading corps. However, the nearest known enemy command of any size was one Redland Infantry Regiment, which was a long day's march to our front. The Division C.O., General A. Dash, an immaculate, well tailored and decisive individual, whom I had met on many social occasions in the capital, informed me in the evening that his command would move out the next day to occupy and defend a sector near the international boundary, which would later be taken over by the 6th Infantry Division. He stated that I could accompany his personal staff and thus study the whole operation from a divisional standpoint. I replied that I should prefer to be attached to one of the regiments and see how a machine gun troop actually functioned in war.

General Dash smiled good naturedly and told one of his aides, Captain H. A. Diplomat, otherwise known as "Dippy" (although a very studious officer), who had commanded a Machine Gun Troop for over two years during recent border troubles, to escort me the next day and later issued instructions that we would accompany the First Cavalry. This regiment was to march at 3:00 A.M. preceding and covering the remainder of the division, with orders to occupy and organize its own sector of the division position upon arrival thereat. We reported to Colonel I. A. M. Crafty, a typical big red-faced hard-boiled regular of the 1st Cavalry, that night and explained the nature of our mission. He introduced me to his staff including Captain M. G. Competent (familiarly called "Shot Gunner") of the Machine Gun Troop and instructed Captain Diplomat to see that I was accorded every possible courtesy.

Next morning promptly at 3:00 A.M. the 1st Cavalry under Colonel Crafty moved out. Soon after starting, as I was riding along near the regimental commander, I noticed Captain Competent, the Machine Gun Troop commander, and asked him if he would mind explaining why he did not conduct his troop on the march. He replied: "In the Blueland Cavalry Service, the commander of the Machine Gun troop acts as a regimental staff officer and advises his colonel on all machine gun matters. Our regulations actually require him to join his regimental commander and ride with the regimental commander's group whenever combat is imminent. This allows him to become fully conversant with any possible situation quickly and thus places him in a position to make immediate recommendations for the employment of the armament of the Machine Gun Troop. You will notice, too, that a corporal liaison agent and his messenger have been furnished the colonel from the troop to maintain communication at all times between the regimental commanding officer and the Machine Gun Troop."

As soon as it was daylight I saw that the 1st Cavalry's advance guard was composed of the 3d squadron (less one Troop) with 3d Platoon and 3d 37 mm. Gun Squad, Machine Gun Troop, attached. These attached machine gun units marched at the rear of the support. The remainder of the Machine Gun Troop, except the antiaircraft cars, was in column between the 1st and 2d squadrons. Captain Diplomat said that, although a section of two machine guns would normally be attached to an advance guard the size of a troop, a whole platoon of four machine guns and a 37 mm. gun were attached to the advance guard here so that it would be sure to have sufficient fire power to perform its duties in case any Red cavalry attempted to delay the march.

Just after the second halt, I was riding with the Machine Gun Troop Second in Command, Lieutenant I. S. Clever, at the head of the machine gun troop, and brought up the question of the antiaircraft section on the march. He explained: "Car No. 1 is in the 1000-yard interval between the advance Guard and the main body, Car No. 2 is at the rear of the main body, Car No. 3 is with the trains, and Car No. 4 is acting as a control and communications car."

By 8:00 A.M. the regiment had been halted under cover, a march outpost had been formed by the advance guard, and the regimental commander, accompanied by Captain Competent and others of his staff, had made his reconnaissance of the 1st Cavalry sector. From a position on hill "A" Colonel Crafty pointed out the various terrain features which were visible and showed us his map which he had marked in red pencil.

Indicating a red line which lay on the forward slopes of hills "A" and "B," he said. "This is the main

line of resistance. The boundaries of the regiment are as I have shown in pencil so you see we are in the center of the division. My intention is to hold the regimental sector with three squadrons less a troop forward and one troop in reserve. The led horses, except those of the Regimental Reserve Troop which will be in Buck canyon, will be held immobile in Sleepy Hollow under cover of buildings.

More detail followed, then the Colonel asked Captain Competent for his recommendations for the employment of the machine gun troop.

During the entire march, Captain Competent had made a constant study of his map and the terrain. Also, he had just finished the reconnaissance of the regimental sector with the Colonel and thus was thoroughly familiar with the situation. Consequently, he immediately recommended that the regimental Machine Gun Troop support the defense by locating two machine gun platoons on the main line of resistance and one platoon on the squadron reserve line. He considered that the three 37 mm. guns should be placed as shown on the map to cover enemy routes of approach and that the antiaircraft section of four cars should be used to protect the led horses of the troop in regimental reserve. Machine Gun Combat wagons were to be released to the troop.

I heard nothing about coordinating the fire of adjacent units, so asked him, "Will any arrangement be made with the regiments on your right and left to cover by Machine Gun Fire the adjacent centers of resistance?" "Oh, yes," he replied, "you must have missed part of my recommendations, for I stated that the fire of all machine guns would be coordinated by me so as to provide mutually supporting as well as continuous bands of fire in front of our main line of resistance and of adjacent units on our right and left. I consider that the coordination secured by interchanging firing tasks with adjacent flank units in order to insure systematic flanking fire along the whole front is the basis of a good defensive position."

"Captain Competent, you kept out no Machine Guns for the Regimental Reserve. Is that a common practice in the Blueland Cavalry?"

"We believe that idle Machine Guns are a waste of power in defensive situations."

Captain Competent then handed me his map which showed the location of all units of the Machine Gun Troop in blue pencil. He informed me, "I am required to send a like copy to the Colonel as soon as my troop is in position, so that he will know the exact location of each machine gun, each One Pounder and each Antiaircraft Car."

While studying the map and terrain my attention was attracted to four officers who joined Captain Competent in rear of the crest of the hill. I learned they were the three Machine Gun Platoon Commanders and the Commander of the 1 Pounder Section and the Antiaircraft Section. After completing his explanation of the Regimental Defense plan and having his subordinates mark their maps in accordance with his own, the Machine Gun Troop Commanding Officer continued with his own plan, the main points of which I have jotted down:

"The 1st Platoon will be located in the forward part of the Center of Resistance occupied by the 1st Squadron which is on the right.

"The 2d Platoon will place one section in the forward part of the area occupied by the 2d Squadron which is in the center, and one section in the forward part of the area occupied by the 3d Squadron (less a troop) which is on the left.

"The primary mission of the 1st and 2d platoons is to fire on targets of opportunity within your sectors while your secondary mission is flanking fire across the front of adjacent units. Your arcs and bands of fire will be as I have shown on the map.

"The 3d Platoon will compose the rear guns and will take position on the squadron reserve line as indicated. You will site your guns so as to cover the intervals between and the flanks of the organized tactical localities to your front. You may find it necessary to employ indirect fire but avoid it if possible. When necessary, you will furnish antiaircraft protection for the regimental battle position.

"All guns will be sited so as to cover likely approaches by long range fire.

"Each squad will keep twelve boxes of ammunition (3000 rounds) at the gun position.

"The spring wagon after being loaded with ammunition and the ammunition section will be 200 yards north of Road Bend in trees at 'M.'

"The remainder of the led horses will be at Sleepy Hollow under cover.

"As soon as you are in your position ready to fire report to the troop command post by a runner who will be retained.

"My command post will be near the regimental command post in the ravine south of Hill 2."

As the platoon leaders moved out to make their reconnaissances, I decided to remain with the Lieutenant commanding the 1st Platoon, whom my instructor and body guard called "T. B." Altho T. B. was a dried-up scrawny-looking little fellow with a low forehead, a long beaky nose, thick lips, a large Adam's apple and no chin, he was an agreeable surprise.

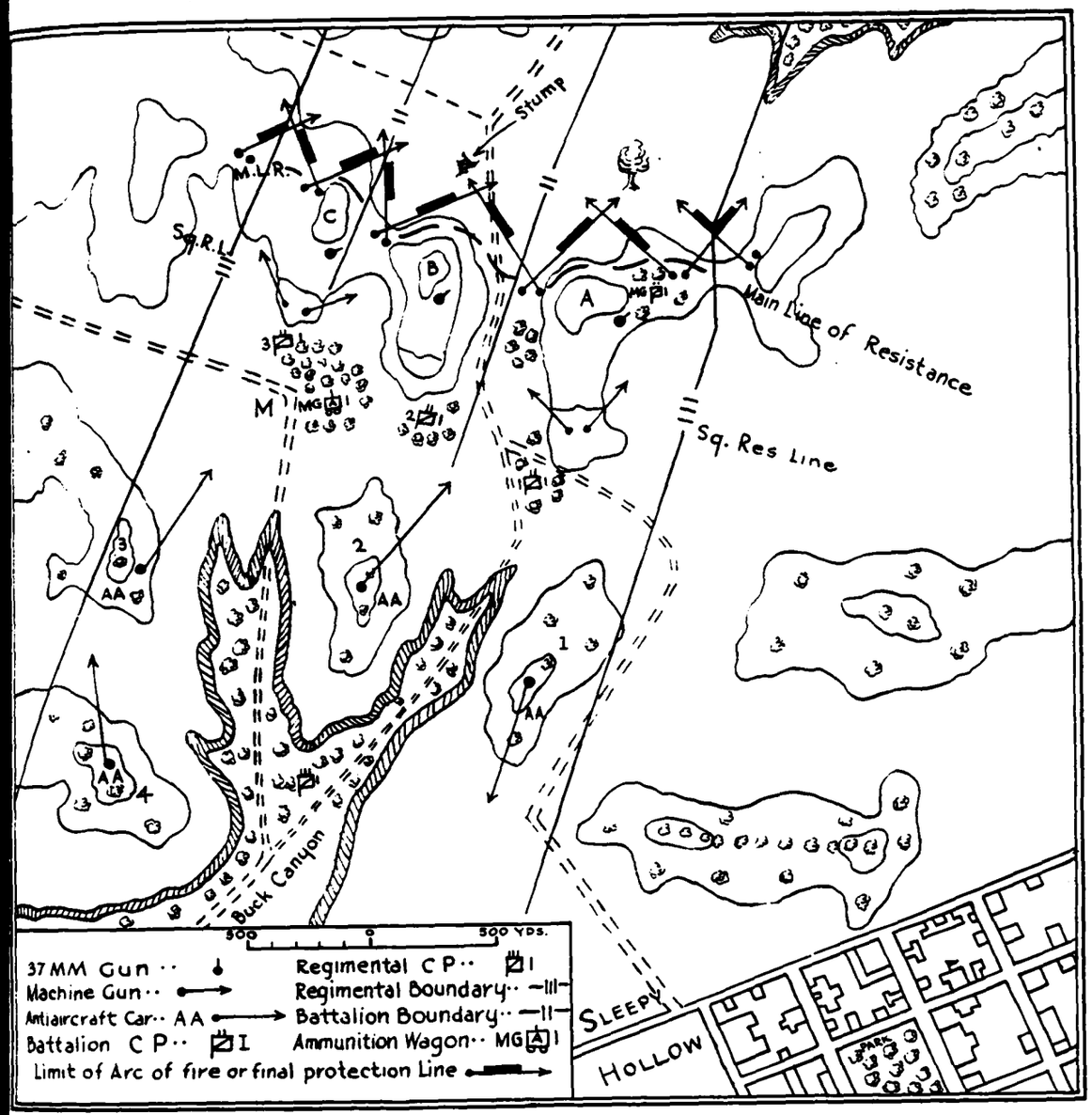
"I presume you are going back to get your platoon now," I remarked a bit haughtily.

"No, Sir," said T. B., "before leaving I ordered the platoon to a forward rendezvous about one-half of a mile back, because I knew we would go into action in this vicinity. Also, it saves a long ride back and a good deal of time. My messenger was sent to get them as soon as I learned my mission."

After T.B. had made his reconnaissance, Dippy asked him where he expected to put his Command Post. He said it would be near the right section at the clump of trees 100 yards east of Hill "A".

"What decided you in this?" I asked.

"Control," T.B. said. "You no doubt realize that I have three choices, one near the 1st Squadron Command Post and one with either of the two sections. I would be too far from my guns at the Squadron



Command Post. With either section, tho, I can watch the development of the fight and get good observation of my fire as well as exercise control over both sections. However, I chose the right section because from it I can observe the flank."

"In battle do you control fire?"

"No, Sir. I direct the fire of my guns; fire control is the function of the section sergeants."

"Then, who actually gives the command to open fire, Lieutenant?"

"The advance of the enemy is generally the signal for all guns to open fire at maximum practicable rates. However, as large bursts betray the gun position by sound, smoke clouds and muzzle blasts, the use of small bursts is habitual except when attacked mounted. Then all guns open with the maximum rate of fire."

At this moment the two section sergeants appeared on the scene and were immediately taken to a position from which they could get a full view of the front. The platoon commander gave them the general outline of the plan of defense, pointed out prominent landmarks, mentioned possible avenues of enemy approach, briefly showed them the complete troop installations from his map, and pointed out that the 1st Squadron would defend the center of resistance in which they

would be located. T.B. was careful that the sergeants located the forward positions to be occupied by the rifle troops to insure that the guns would be placed slightly in rear of the main line of resistance. In addition to the primary mission of firing on targets of opportunity he cautioned both section leaders to be sure to provide mutually supporting fire for adjacent units and be prepared to fire in close support of the main line of resistance.

It must be remembered that the M.L.R. is not one continuous line, but a series of platoon combat posts with varying intervals between them. For this reason, it is extremely important that these Machine Gun Section Sergeants know exactly the location of the rifle platoons whose fronts they protect by fire.

We went to the actual area T.B. selected for the left pair of guns where he gave direct orders to that section.

"The Second Section will occupy this area. Your arc of fire is between that tree stump and the Lone Tree.

"Your bands of fire will be to the limits of your arc of fire.

"Dig your emplacements in this cover and be sure to conceal your guns.

"Keep your twelve boxes of ammunition (3000 rounds) per gun, which are on the two squad pack horses, at the gun positions. The Troop Ammunition Section with six extra boxes per gun will be near the Light Wagon in those trees at 'M'.

"When your led horses are unpacked send them to the clump of trees near the road bend at 'M'.

"Report when you are ready to fire."

T.B. then went over to the other section position while we remained to see how the 2d Section Sergeant would carry out his duties.

Sergeant Doit, while walking over to his position, had called to the messenger whom he had brought up with him: "Return to the section and bring it forward mounted to that group of trees, then have the corporals join me here followed by their guns."

When the two gun corporals arrived the sergeant briefly explained the situation from the edge of some cover, giving them about the same information as he had received from the platoon commander. Sergeant Doit then gave each corporal a definite mission and field of fire, pointed where the emplacements would be dug, told them how much ammunition to bring forward, and finally stated where he would be.

I asked Sergeant Doit if he always gave each gun a definite mission and he said: "No, sir, if practicable we site all guns in pairs and assign the same mission to both guns, but in this case, the area to be covered by the section is so large that it appeared more desirable to give each squad a separate mission."

Both gun corporals, from a small covered area, in rear of their gun positions, explained the situation briefly to their gun crews and then conducted their guns forward to the positions selected by the Section Sergeant.

We watched the men mount the guns and noted some of the calculations which were made. The guns were aimed at the Lone Tree and the tree stump with the sights set at the range obtained from an average estimate of several men. The traversing dials were set at zero and the guns clamped, then the corporals took the quadrant elevations of the guns by means of clinometers. Improvised aiming stakes were then taken out and placed in front of each gun on the line of sight. The same process was followed for each terrain feature where a target might appear and all the data set down on a Defense Card by each corporal. A copy of each of these Range Cards was sent to Sergeant Doit and one kept with each gun.

"I realize that the gunner can fire with good effect on any of those points where he suspects the enemy without seeing them by using the calculations obtained," I said, "but just why is it necessary to obtain these indirect fire data?"

"In defense all machine guns have definite tasks which they must accomplish, regardless of atmospheric conditions or time of day," Dippy told me. "With reasonable accuracy it is possible to estimate the actual ground covered by the danger space by designating a fixed line of fire on a specific aiming point. You will note for example that the range to the Lone Tree is 700 yards and from the Fire Control Tables we learn that; for a range up to 700 yards, the danger space is continuous; also that the beaten zone at this range is 150 yards long by 1 yard wide. This width, of course, can be increased by tapping or traversing the gun. These two guns can effectively defend an arc of 800 mils (45 degrees) but can cover efficiently at any one time only 750 mils each."

"You mean, then, that these indirect fire precautions are necessary so that all guns can fire thru fog, smoke, or dust and during darkness when the enemy cannot be seen?"

"Certainly," replied Captain Diplomat, condescendingly, "in fact the effect of such fire on the morale and organization of advancing enemy troops is beyond description."

A rifle platoon was digging in about 100 yards to our right front, so we walked over to its commander and asked him if any steps had been taken to coordinate machine gun fire with his rifle fire. The youngster stated that the Machine Gun Officer had been over and told him where the guns were and where they would fire; also that his platoon would be expected to give protection to the machine gun section in rear of his combat post.

To see how far forward these machine guns were surprised me and I stated that I had thought they should not be in advance of the troop support platoons of a forward position.

"A most erroneous idea," replied Dippy emphatically. "The ground is the all important factor because machine gun tactics are simply fire tactics. In order to get a clear field of fire machine guns have to be well forward in this situation. On the other hand,

for obvious reasons, one platoon of rear guns was placed on the Squadron Reserve Line."

"What about employing these forward guns for indirect fire?" I asked.

"Hell, no," he said in disgust, "forward guns never use indirect fire, particularly cavalry forward guns. They must shoot straight, not blindly. However, as I just said, they take precautions against possible necessity for indirect fire due to fog, smoke, gas, etc."

On our way back to the 37 mm gun positions we ran across that funny-looking but very efficient T.B. again. He had just been to see the 1st Squadron Commanding Officer to coordinate his fire with that of the Squadron. I told him I liked his Machine Gun positions and asked him what he considered in picking them out. T.B. thought a minute and said, "I try to get positions with good fields of fire and command of enemy positions; with defiladed approaches for the guns; with good observation of fire of enemy positions; with cover from view and if possible from fire; with facility of movement and communication to the front, flank, and rear; with appropriate nearby cover for led animals; and locations with good alternate positions, usually to a flank, for occupation if the guns are located by artillery. In selecting Machine Gun positions I always remember a statement by General Ludendorff which appeared in a document on German Principles of Elastic Defense. 'Commanding points should not ordinarily be used by machine guns.'"

"Just where do you locate your alternate positions?" I asked.

"For sections and platoons, they should be located to the flank and rear within 300 yards of the first position and should have concealed routes from the battle emplacement to them. Alternate positions should be so located as to permit at least a partial performance of the original mission. They should be marked and data figured for them so that they can be occupied at night, if necessary, and fire opened."

The enemy had not yet appeared, so we continued on back to the 37 mm Gun positions. From the map you will note that these guns were located in defensive areas and about equally distributed so that they could cover the whole regimental sector. They were under concealment on commanding ground and were from 250 to 350 yards in rear of the Main Line of Resistance. The officer in command of the one-pounders told me it was normal to locate them centrally in each center of resistance with any or all of the following missions:

1. To cover the principal approaches.
2. To cover probable lines of advance for armored cars and hostile tanks.
3. To support an attack.
4. To fire on targets of opportunity.
5. To silence automatic rifles, Machine guns and 37 mm. guns.

It was noticeable that the one-pounders were not placed near other units. Upon inquiry, I learned that this was due to the fact that they draw artillery fire.

Captain Diplomat reminded me that the one-pounder Section of 3 guns and the antiaircraft section of 4 cross-country cars were both under the command of one officer in the Blueland Cavalry Regiments. Dippy turned to the 37 mm gun officer and asked him to point out the location of the antiaircraft cars. The Lieutenant enthusiastically answered, "If you will walk up the hill with me a little way you can see the location of each car. One is on each of those hills (pointing to the south to hills 1. 2. 3. and 4). Each car is on a commanding position with all around observation and is in supporting distance of the other cars. The fourth car is normally used to replace casualties, but, to utilize the section to the fullest extent, an initial location is given it."

"What mission was given your cars?" I inquired.

The young officer answered with seeming importance, "Antiaircraft cars may furnish air protection for the regimental installations, trains, reserves, assembly positions, and led horses. In this particular situation my cars have the mission of furnishing antiaircraft protection for the led horses in those canyons (pointing to the Buck Canyon Forks), while certain machine guns in the main line of resistance and in the support line have been designated to furnish air protection for those positions."

It was nearing noon, so Captain Diplomat and I started toward the rear, hoping to find a stray chow wagon somewhere. On the way we discussed the appropriate missions that might be given cavalry machine guns in defense. I learned that the following were the main ones considered by the Blueland Cavalry Machine Gunners: to deny ground to the enemy; to protect flanks; to support counter attacks; to economize rifle units; to stop minor attacks and check and disorganize main attacks; to defend the main line of resistance and limit penetration; to fire in close support of the main line of resistance and provide mutually supporting fire for adjacent units; to sweep with long range fire important routes of approach; to interdict enemy concentration points and put over harassing fire day or night; and to cover a withdrawal.

Suddenly we heard a small amount of firing in the direction of the outpost line and wondered what kind of targets the Redland troops would present to our machine gun friends. Dippy remarked: "My idea of a good machine gun target is one that is deep and dense with relation to the direction of fire, such as a column, or lines taken in enfilade while unfavorable ones are broad and shallow, such as frontal fire on a skirmish line. Infantry halted or in close order formation presents a remunerative target, but in attack its waves must be taken in flank. Dismounted cavalry should be engaged the same as infantry, but mounted cavalry should be fired upon whenever and wherever it appears, provided the range and tactical situation permit. Tanks and armored cars are poor machine

gun targets, as are enemy machine guns, but the personnel of the latter is profitable. Planes, passenger cars, trucks, reconnaissance groups, staff parties, signalmen, and observers are fleeting but vulnerable. Bridges, trenches, buildings, obstacles, and woods are themselves unremunerative, but their exits are valuable when the enemy desires to cross or emerge from them."

We saw a nearby antiaircraft car open up on a rather high Redland plane, and some remark was made about the principle of employing these cars for antiaircraft protection. So I asked Captain Diplomat what his experience had taught him were the main general principles for the employment of cavalry machine guns in Defense. He thought a few minutes and said. "Machine guns are especially adapted to defense because of their characteristics. They are capable of direct or indirect accurate long range fire and thus can conquer fog, darkness, smoke, or rain; they can produce a large volume of rapid and sustained fire quickly and thus can get surprise easily; the tripod allows fire to be switched from target to target without change of position; they can deny areas to an enemy; their cone of fire is narrow, dense, deep, and easily observed; and they have a cyclic rate of fire of 500 rounds per minute.

"Machine gun fire is most effective when developed suddenly and in great volume from an unexpected direction.

"Machine gun fire is not opened on unimportant targets because they are left to riflemen and other automatic arms.

"The sector of fire or responsibility of a gun ordinarily should not be greater than 800 mils (45 degrees).

"Machine Guns must conceal themselves from ground and aerial observation.

"Before action commences every machine gun officer and non-commissioned officer should be thoroughly familiar with the situation because, during an attack, machine guns must maintain the closest possible touch with each other and with the troops with whom they are operating.

"Cooperation is the keynote of machine gun tactics. It should exist between machine gunners and riflemen, and between machine guns themselves.

"Mutually supporting fires should be arranged by machine gun commanders with adjacent units whether ordered or not.

"Machine Guns must be distributed in depth over the entire defensive position with the general mission of giving continuous resistance to an enemy attack.

"Machine Guns fight by fire alone, so their ammunition supply must be dependable.

"During an attack machine guns in rear of those on the main line of resistance fire on low flying hostile planes when not firing on enemy ground troops.

"On the battle field the role of machine guns is dependent, so their every effort must bear a direct relation to the plan of the commander of the force.

"Machine guns should be sited so as to deliver oblique or flanking fire against a hostile force moving forward in attack.

"When practicable the command post of any machine gun unit is normally located at or near the command post of the rifle unit to which it is attached.

"In a defense of some duration the Machine Gun Units and the Rifle Units should not be relieved the same day. Usually allow one day to intervene, the machine gun organization being relieved last.

"Place defensive machine guns in or near a strong point, so as to have ample rifle protection if needed."

Dippy and I now reached the brigade reserve where a hot meal was being served and decided to indulge, then start back to the front line, where we hoped to see some real action before night.

The Raid on Korosten

By Captain Hinterhoff, General Staff, Polish Army

NO other action of large cavalry units requires so much moral worth and talent on the part of the commanding officer, and fighting value of his troops, as a raid on the enemy rear. In spite of the great difficulties with which the commanding officer is confronted from the very outset of the raid to its end, in spite of enormous risk and responsibility for the lives of thousands of men subordinate to him, who execute his orders with confidence, one of the great ambitions of an efficient commanding cavalry officer in war time is to command a raid. A successful raid ensures the commanding officer a name and fame—which is only just, as a raid being quite an independent action, often deprived of any contact with the main force, the whole result and success of the raid are connected with and solely dependent on, the person and talent of the officer, on his quick grasp of the situation and indomitable energy.

A raid also sets several tasks before the men; it demands, besides gallantry, a great effort both physical and moral. On the Western front the action of large cavalry units was comparatively rare (the action of a French cavalry corps under General Sordet, and a German cavalry raid under Generals Marwitz and Richthoffen) and dating from 1915 cavalry detachments began gradually to fill the trenches. On the other hand the Eastern and Asiatic fronts, owing to their specific conditions, were the scenes of very interesting actions of cavalry on a large scale, to mention only the raids of General Allenby in Palestine, of General Henrys in Macedonia, and the raid of German cavalry on Molodeczno-Swieciany.

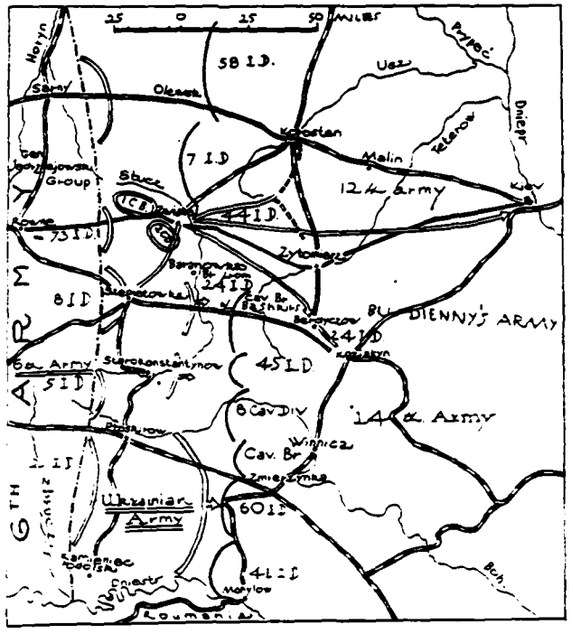
This form of action, however, was adopted by large units of cavalry in the Polish-Soviet War and in the Civil Wars in Soviet Russia, with which the Western cavalryman is not so familiar. Vast territories suitable for maneuver and a comparatively thin frontal line created suitable conditions for the development of cavalry action.

The records of the Polish-Soviet War can boast of several raids in a grand style, connected forever with the names of their commanders. I presume that the Western cavalrymen, who are interested in the history of cavalry battles in the East of Europe, are not unacquainted with the names of the Polish Generals, Rommel, Romer, Dreszer, and of the Russians Budienny and Gaj-Chan. A closer study of the activity of these officers will undoubtedly give to each cavalry officer ample material for reflection and consideration.

Operation Background.

After the victorious battle won through the genius of the commander-in-chief, Marshal Joseph Pilsudski, the final phase of the Polish-Soviet War, the strategical pursuit of the retreating Soviet army, began. On the Southern front, south of the Polesian marshes, the 6th Army consisting of two operation groups, pursuing the 12th and the 14th Soviet armies and the seriously damaged mounted army of General Budienny, reached the lines of the rivers Zbrucz and Horyn on the 20th of September, 1920, where the progress was checked. General Jedrzejowski the chief of the operating group issued orders to a Cavalry corps under the then Colonel Rommell (at present Division General and Army Inspector) of the region of Zwianel together with a cavalry brigade of the region of Zaslawie, to occupy the middle ground of the 6th Army, with the object of screening the main force. According to cavalry reconnaissances and intelligence supplied by agents, the position of the enemy facing General Jedrejowski's group was as follows: the 44th Soviet Infantry Division, which screening a part of the mounted army of Budienny had suffered serious loss from the detachments of the Polish cavalry division, held the left eastern bank of the River Slucz, south of Zwiahel, and to the north of the 44th Sov. Infantry Division, the 7th Soviet Infantry Division—and in the region of Olewsk the 58th Soviet Infantry Division.

To the rear of the army—in the region of Berdyczow—the 24th Soviet Infantry Division, which pushed forward one brigade south of the 44th Soviet Infantry Division, took possession of the River Slucz on the line



1. Situation on the South Front on Sept. 20, 1920, and Plans for the Raid

Rohaczow-Baranowka. Between the 12th and 14th Soviet armies were two Soviet cavalry brigades—the Bashkir and Cossack brigades. Moreover the Soviet command had at its disposal several excellently equipped armored trains.

The mounted army of Budienny considerably weakened by the losses sustained in the last encounters with the Polish cavalry and infantry was completing and reorganizing its ranks in the region Zytomierz-Berdyczow.

On account of the relatively good spirit of the Soviet army, an offensive on its part had to be reckoned with.

Decision of the Raid.

The commanding officer of the Cavalry Corps, the then Colonel Rommel, wishing on the one hand to take advantage of the continued dash of the offensive of his cavalry, which for several weeks had been pursuing Budienny's army, and on the other to paralyze the possible offensive of the enemy, submitted three proposals of using the Cavalry Corps in a raid.

Raid on Berdyczow had three objectives: the destruction of the mounted army, already considerably thinned and undergoing a reorganization in the Berdyczow zone; to approach the 12th Soviet army from the rear and by destroying railway connection, depots and by launching an attack on the rear detachments, paralyze the action of the 12th Soviet Army.

Raid on Korosten. a. The overwhelming of the Soviet Divisions in middle ground and in the rear in the Korosten region, thus defeating the right flank of the 12th Soviet Army; b. the demolition of the important railway junction in Korosten, which would render the transference of the Soviet forces to the North impossible and which would cut them off from direct communication between the northern and southern fronts.

Raid on Kiev. a. Rapid and violent action against the rear of the Soviet army and the demolition of railway stock and depots in the region of Kiev. b. By the action on the rear to demoralize the spirit of the Soviet army. Moreover this raid would, to a certain extent, bear a political character.

Of the three proposals of the Commander of the Corps, after a careful consideration both on the part of the Commander of the 6th Army and Headquarters, the raid on Korosten was decided upon for the 2nd of October.

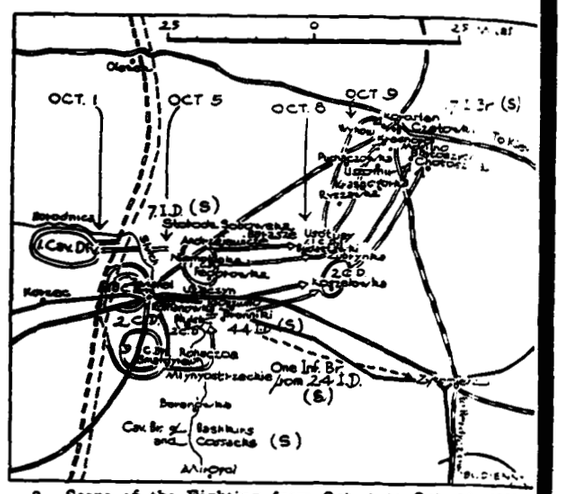
Preliminary Action (Sketch No. 2)

Foreseeing the raid, the Commander of the Corps issued orders for the regrouping of the forces of the Corps. The 1st Cavalry Division (6th and 7th cavalry brigades) to the northwest of Zwiahel; the 2nd Cavalry Division (8th cavalry brigade, Zwiahel; 9th brigade—Smoldyrew.)

The Cavalry Corps consisted of:

The Commander of the Corps
Colonel Rommel

Chief of the Staff
Captain Gen. Staff Praglowski



2. Scene of the Fighting from Oct. 1 to Oct. 10, 1920

1st Cavalry Division

6th Cavalry Brig.	7th Cavalry Brig.
1st Uhl. Reg. 400 sw. 12 m.g	2nd L. H. reg. 150 sw. 8 m.g
14th Uhl. Reg. 350 sw.	8th Uhl Reg. 400 sw. 12 m.g
12th Uhl. Reg. 300 sw.	9th Uhl Reg. 300 sw. 12 m.g
2 horse art. bat.	2 horse art. bat.
1050 swords	850 sw.

2nd Cavalry Division

8th Cavalry Brig.	9th Cavalry Brig.
2nd Uhl. Reg. 400 sw. 12 m.g	1st L. H. Reg. 400 sw. 12 m.g
108th Uhl Reg. 200 sw. 12 m.g	201st L. H. Reg. 300 sw. 12 m.g
115th Uhl. Reg. 200 sw. 12 m.g	203rd Uhl Reg. 200 sw. 12 m.g
1 horse art. bat.	1 horse art. bat.
880 sw.	900 sw.

The Corps consisted of 3500 swords, 142 m. g., 24 field guns.

The day of the 1st being assigned for the clearing of middle ground and for reconnaissance work, the two divisions received orders to make a sally in accordance with which the 2nd Division launched attacks with its two brigades on Kropiwno, the 8th cavalry brigade on the highroad between Zwiahel and Zytomierz, and the 9th brigade approaching Mlyny Ostrzeckie from the southwest, succeeded in defeating the 44th Infantry Division, capturing 1000 men, 10 heavy machine guns and 2 field guns. On the 2nd of October the commander of the corps received orders to raid Korosten on the 3rd of October. However, on account of considerable loss of ammunition in connection with the sallies of the 1st of October, the attack was postponed until the 8th of October. On the same day the 115th Regiment of the 8th Cavalry Brigade was ordered to make a sally on Zytomierz. This regiment, by forced march over wooded ground and avoiding contact with the enemy, returned only on the 5th bringing important intelligence as to the position of the enemy in the region of Zytomierz.

The commander of the Corps ordered a sally on the bank of the Slucz for the 5th of October. Detachments

of the Cavalry Division in conjunction with the 25th Infantry Brigade caused considerable loss to the 7th Soviet Infantry Division to the north of the highroad Zwiahel-Zytomierz, capturing 500 men. Here it is only fair to emphasize the action of the 25th Infantry Brigade, which facilitated to the cavalry the successful fording of the River Slucz.

After forcing back the enemy to the east, towards the evening of the 5th the Corps were regrouped as follows: 1st Cavalry Division in the region of Niemelenka-Fedorowka-Uzaczyn; 2nd Cavalry Division in the region: Hulsk-Kropiwna-Romanowka. In the course of the 6th and 7th of October, detachments of the Cavalry Corps finished their preparations in connection with the strenuous effort which awaited them; they were to take with them a five days store of provisions and fodder for the mounted artillery—the beginning of the raid was fixed for the 8th of October.

Position of the Enemy.

Intelligence acquired by the cavalry, which had taken part in the skirmishes of the last few days, stated certain changes in the grouping of the enemy. The 24th Soviet Infantry Division unchanged—one brigade holding the eastern bank of the Slucz on the line Rohaczow-Romanowka, whereas the main force in the rear of the army in Berdyczow. The 44th Soviet Infantry Division, on account of serious losses sustained on the 1st of October from the 2nd Cavalry Division in the region of Kropiwna, withdrew with the aim of reorganizing and refilling its ranks, to Zytomierz. The sector of the above mentioned Soviet Divisions was held by the force of two cavalry brigades (Bashkirs and Cossacks). The 7th Soviet Infantry Division after the battle of the 5th with the 1st Cavalry Division retreated to the region Barasze-Andrzejowicze-Sloboda Sobowska, to reorganize, in order to make good their losses. Moreover from the reserves of the Soviet army stationed in Korosten the 17th Soviet Infantry brigade was detrained.

Execution of the Raid.

Plan of Maneuver. The Commander of the Corps decided to take advantage of the breach to the north of the highroad Zytomierz-Zwiahel, between the 7th Soviet Infantry Division and detachments of the Soviet cavalry, caused by the retreat of the defeated 44th Soviet Infantry Division to Zytomierz, that he might with rapid maneuver reach these detachments from the rear. The above direction of the march, to say nothing of its security, thanks to dense woods, and a great distance from railway line patrolled by the four Soviet armoured trains, had also this advantage that even in case of Polish Cavalry maneuver being detected, they would not be able to ascertain the exact direction of the raid. Moreover, choosing a similar middle course with relation to Korosten and Zytomierz, the commander of the Corps left open to himself the two following possibilities: (1) with the whole force to strike on Korosten and alternatively (2) in case of intelligence that weaker forces be in Korotsen, to push there only one brigade, which would amply suffice for the accomplishment of the task—with the remaining three brigades to march to Zytomierz for the complete defeat of the 44th Soviet Infantry Division then in the act of reorganizing.

Execution.

In accordance with the plan and order of the commander of the Corps, the Cavalry Corps set out at dawn of the 8th of October, in marching columns in four directions. Shortly after 6 a. m. the 12th Uhlan Regiment, marching in the vanguard of the 6th Cavalry brigade, encountered enemy fire, which proceeded from the Soviet infantry scattered along the railway track and supported by artillery fire.

In spite of the exceedingly unfavorable conditions owing to wooded and broken terrain the regiment launched a vigorous attack, routing the enemy, thus opening the way for the march of the main force.

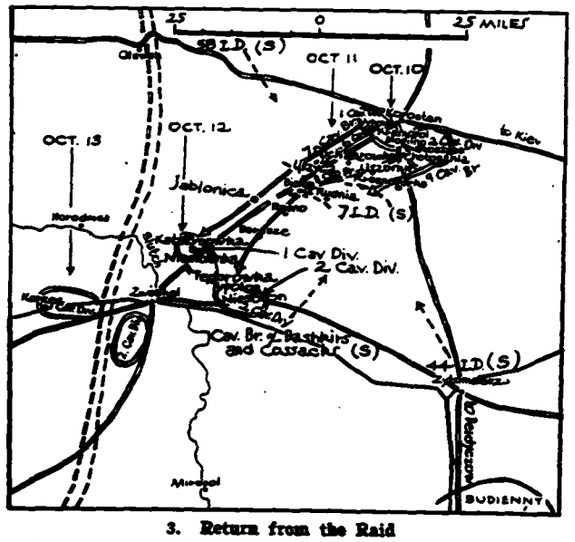
Detachments of the 2nd Cavalry Division established touch with the Bashkir Cavalry Brigade at Bromiki, which, however, speedily withdrew in southeasterly direction. At nightfall of the 8th of October, detachments of the Corps reached the following positions. 1st Cavalry Division—Usolusy-Buda-Stawki. 2nd Cavalry Division—Zubrynka-Koszelowka.

As intelligence of the arrival at Korosten of considerable detachments (the 17th Brigade) had been confirmed, the alternative plan of an attack on Zytomierz was abandoned, and it was decided by the Commander of the Corps to strike on Korosten. In connection with the above, the commander of the Corps decided that the following units were to reach and occupy the following positions: 1st Cavalry Division—Wyhow-Mogilno; 2nd Cavalry Division—Cholosznia-Bieloszyce; designating these points as the exit base for the attack on Korosten.

On the 9th, the detachments of the Corps, in accordance with the order issued the evening before, set out at dawn for their destination. Technical squadrons had been sent in advance to destroy railway lines, thus cutting all connection with the forces stationed at Korosten. Detachments of the 6th Cavalry Brigade, advancing along the highway Krasnogorka-Uszomir managed, without great effort, to drive back the weaker forces of the enemy. The 7th Cavalry Brigade advanced along the highway Ryczewka-Puchaczowka-Krasnopol.

On account of its quick progress, the 6th Cavalry Brigade reached Uszomir at 4:40 p. m. The commander of the Corps, who was accompanying the Brigade, so as to take advantage of what might appear to him a favorable situation, determined to shift the beginning of the attack, which was to begin at dawn of the 10th, to the night of the 9th. The decision of the commander of the Corps had its cause in the fact, that the commander of the 12th Soviet Army, probably alarmed by the maneuver of the Polish Cavalry, might issue orders directing forces to Korosten, with the view of forestalling and eventually opposing the raid. Subsequent events proved all the conjectures of the commander of the Corps to be right.

In spite of the exhausted condition of the horses, the 6th Cavalry Brigade set out by forced march and



3. Return from the Raid

at 7 p. m. reached Czelowka, 3 kilometers from Korosten, where it established touch with the vanguard of the 17th Soviet Infantry Brigade.

Detachments of the 7th Cavalry Brigade, and especially of the 2nd Cavalry Division, whose horse artillery horses were in a state of acute exhaustion after the forced march over heavy ground, proceeded on their strenuous march in pursuance of the energetic orders of the commander, who did not take into consideration reports about the state of horses.

It was, however, the 2nd Cavalry Division, which had the greatest distance to cover, that found itself in specially difficult circumstances. At 9 p. m. of the 9th, the commander of the Corps received information from the commander of the 2nd Cavalry Division that, owing to the exhaustion of horses and especially those of the horse artillery, which could not keep pace with cavalry over heavy ground, the forces under his command would be able to leave the region of Cholosznia only about 12 p. m. These reports, however, did not influence the decision of the commander of the Corps who was bent on surprising the enemy, except that he agreed to postpone the hour of attack to 3.30 a. m. of the 10th. In the course of the whole night, detachments of the 6th Cavalry Brigade exchanged artillery, rifle, and machine-gun fire with the Soviet infantry.

At 3.30 a. m. explosions on the railway lines Korosten-Kiev, and Korosten-Mozyrz signalled the beginning of the attack.

From the southwest, detachments of the 6th Cavalry Brigade advanced on foot, from the west the 7th Cavalry Brigade, while the 2nd Regiment of Light Horse, forming part of the 7th Cavalry Brigade, was at that time engaged in a struggle with the Soviet armored trains on the line Zwiahel-Korosten. The heavy fighting was transferred from the suburbs to the centre of the town, from where about 6 a. m. the remnants of Soviet detachments began to withdraw in great disorder, leaving in the hands of numerically weaker Polish forces hundreds of prisoners and a large quantity of war material. The enemy, retreating towards the east, encountered the detachments of the 2nd Cavalry Division, which after a whole night's forced march (on the preceding day it covered 70 kilometers) reached the appointed places before daylight, acting in conjunction with the 8th Cavalry Brigade, from the north, and with the 9th Cavalry brigade, from the west, on their advance on Korosten.

The raid on Korosten was attended with great success: the 17th Soviet Infantry Brigade was completely defeated, losing about 1000 prisoners and considerable war materiel, 3 modern Soviet armored trains were rendered harmless, a number of trains loaded with war materiel fell into our hands. The Korosten station was equally seriously damaged, and railway bridges were blown up, thus leaving the important railway junction of Korosten quite useless for the space of several weeks.

Return from the Raid.

On account of the fact that the moment of surprise had been fully taken advantage of, and that one had to reckon with serious reaction on the part of the commandership of the 12th Soviet Army in Kiev, which besides pushing forward the detachments of the 17th Infantry Brigade to Korosten, could direct detachments of mounted infantry, which were being reorganized in the region of Berdyczow, as well as to cut off the return route with the aid of parts of the 7th and 44th Soviet Infantry Division, which were reorganizing at Zytomierz, the commander of the Corps ordered, after a rest, the return of the detachments.

As it was afterwards found out through reports obtained from prisoners, the commander of the 12th army had ordered joint action on Korosten with the detachments of the 7th Soviet Infantry Division, the 44th Infantry Division, and 58th Soviet Infantry Division, together with the Bashkir Brigade.

This time also, that they might establish swifter contact with the main force, the course of the march of both divisions planned, was on either side of the railway line Korosten-Zwiahel.

From intelligence obtained, it was found out that detachments of the 7th Soviet Infantry Division were, in accordance with orders issued by the Commander of the 12th Soviet Army, concentrating on the 10th of October in the region of Jablonica-Rasno, to cut off the return route of the Polish Cavalry Corps. The commander of the Corps decided to strike the 7th Soviet Infantry Division. At daybreak of October 11th the 2nd Cavalry Division established a contact with its two brigades and the vanguard of the 7th Infantry Division, which was already advancing in two directions towards Korosten.

In the vicinity of the village Krasnogorka, the 9th Cavalry Brigade meeting a strong resistance from the enemy, launched an attack on foot, forcing the enemy to retreat in disorder towards the east and southeast.

At the same time the 8th cavalry brigade fought successfully with the 7th Soviet Infantry Division on the way to Uszomir-Bielka. After the battles of the day, the 2nd Cavalry Division captured 1000 prisoners, 5 guns, 25 heavy machine guns, and a considerable supply of war materiel.

On the night of the 11th and 12th, the remnants of the 7th Soviet Infantry Division, concentrating all their strength, tried to break through in the eastern direction. For this purpose, during the night they attacked the detachments of the 8th Cavalry Brigade in the region of Baranowicze-Rudnia.

As a result of the night's battle fought, on the one side by the despairing Soviet detachments, and on the other by the Polish regiments exhausted, yet full of fighting dash, the remnants of the 7th Soviet Infantry Division were completely vanquished.

In this battle the 7th Soviet Infantry Division ceased to exist, losing many men, about 1000 prisoners, 8 guns, about 50 heavy machine guns and the whole supply of war materiel.

In the early hours of the 12th, the commander of the Corps received a message by air from General Jedrzejowski, the Commander of the Operation Group, to retreat beyond the River Slucz, pending the truce which was to take place on the 14th of October.

On the day of the defeat of the 7th Soviet Infantry Division, the commander of the Corps planned an action with part of his forces in the north with the object of defeating the 58th Soviet Infantry Division, in the region of Olewsk, which was advancing towards the south, in accordance with orders issued by the Commander of the 12th Soviet Army. The order of the return march beyond the Slucz rendered the whole plan of action against the 58th Soviet Infantry Division null, and on the evening of the 12th, the detachments of the Corps reached the following regions: 1st Cavalry Division—Katerynowka-Niemelanka-Fedorowka. 2nd Cavalry Division—Tupolce-Niesolon. On the 13th both Divisions of the Corps crossed to the right bank of the Slucz.

The Value of the Raid.

If one is to take into account the value of the raid, it must be considered from two points of view—operation and execution. It is difficult to estimate the value and importance of the brilliantly executed raid on subsequent operations, as a truce was signed already on the 14th.

As the idea of the raid had been conceived by the Commander of the Army as an independent action without cooperation of other large units, its success could be of little advantage to the whole front. Undoubtedly, in case of a frontal attack of large infantry units cooperating with the action of the raid, the result of the whole action would be infinitely greater.

However, the Cavalry Corps, as such, accomplished the given task, thanks to the penetration into enemy lines a hundred kilometers deep, as well as inflicting serious loss—the 12th Soviet Army suffered so seriously as not to be taken into account as a large fighting unit. Moreover, the serious damaging of the Korosten railway junction rendered the provisioning of the 12th Soviet Army impossible for the space of several weeks, and prevented the transport of troops through Korosten to the northern front.

Point of View of Execution.

The detachments executed a raid right into enemy lines; depth 100 kilometers covering a distance of 250 kilometers in 5 days; scouting detachments made much more with minimum losses (a few officers and men killed and wounded); the Cavalry Corps completely defeated the 17th Soviet Infantry Brigade together with serious losses to the 2 Soviet Divisions, capturing 3500 prisoners, 100 heavy machine guns, 21 guns, and a quantity of war materiel, also destroying 3 armored trains.

We should here emphasize the spirit and indomitable will to conquer, when the detachments in spite of two days' heavy march, on the order of the commander of the Corps, who clearly comprehended the situation without any rest entered into the heavy night's struggle to come out victorious, notwithstanding the opposition of the enemy.

This raid being one of the most gallant feats of the young Polish Cavalry concluded the victorious struggle against the superior forces of the enemy.

So finished the 5 days' raid on Korosten, closing one of the most brilliant pages in the records of the Polish-Soviet War.

The Greatest Sport of All

By First Lieutenant George J. Rawlins, 26th Cavalry

ALL sports and athletics maintained in the Army are "for the good of the service." With very rare exceptions they are highly beneficial. When there are exceptions, generally the fault is in management, and not inherent in the particular sport.

The ideal army sport will have the following attributes. It will be within available finances. Open to the greatest number of participants. Contributes to health, muscular development and coordination. Develops mental alertness. Cultivates stamina and determination. Improves the technique of one or more military qualifications. Builds morale and team work. Engenders clean sportmanship. Is capable of proper supervision. Forms desirable civilian contacts.

Now let us consider a recreational activity which the writer feels is rather neglected. I refer to The Greatest Sport of All,—the ancient and honorable sport of Hunting.

In the magnificence of its antiquity, all other sports dwindle to the merest passing fads. It is older than Horsemanship, older than War itself. It even antedates the human race by a few geologic ages. In fact, it is probable that the first primordial globule of protoplasm to develop self-propulsion also became the first hunter.

At the dawn of written history, hunting excellence and martial excellence were almost synonymous. The great warrior and the great hunter were one. Traditions the world over have idealized the hunter, making him a legendary god or hero or saint. Ancient China, Babylonia and Egypt all had their quota. Many of the tales, on becoming supernatural, have substituted monsters in place of natural quarry. Greek and Norse mythology are full of such stories. Coming closer home, we find Saint George was able to send his taxidermist a dragon head, while Saint Patrick had a peculiar penchant for snakes.

From the ending of tribal life to the inception of democracy, hunting was one of the universal and almost constant sports of the ruling classes; Egyptian pictographs reveal Pharaohs shooting lions from chariots. From time immemorial, Indian princes have hunted the tiger from the backs of elephants. Marco Polo tells of lakes and marshes reserved by His Celestial Majesty for wild fowl shooting.

As game decreased, the ruling classes began to limit the hunting of their subjects and thereby contributed no little to history. The right to hunt was one of the first "inalienable rights" recorded by historians. In other words, the peasant hunter had the initiative and self-reliance to assert himself long before the great, but timid, mass of oppressed serfdom became audible. Thus, unreasonable game laws did much to bring forth Magna Charta. Robin Hood was primarily a poacher. Hunting restrictions furnished the rural peasant a strong incentive in the French Revolution.

It cannot be a mere coincidence that tribes and peoples with hunting proclivities have so consistently conquered other tribes and peoples with that instinct less developed,—other things being even approximately equal. Hunting as a racial occupation naturally belongs to the nomad. That cradle of civilization, the valley of the Euphrates, time and time again developed the agriculturist, the artisan and the trader, only to be subjugated by wandering races living to an extent by hunting. The Great Wall of China was erected by artisan and agriculturist against the nomad. The explorer is by instinct and of necessity a hunter; and he shares equally with sailor and trader the credit for Britain's far-flung empire. But then, in '76 the American colonist excelled his English brother in woodcraft, and the British regular was ineffective against "backwoods tactics." And while our success in the late World War is commonly attributed to our industrial development, the fact still remains that we as a nation are closer to pioneer ancestry than any other great nation involved.

It is both the technique and the spirit of the hunter that is needed in the soldier, just as we need both training and morale in the purely military sense. The spirit of the hunter is very close to the spirit of the pioneer: with all the strength and virility, self-reliance and determination implied in that term. Today, hunting and woodcraft are the most natural channels thru which the average man can express and cultivate the pioneer spirit. Without proper means of expression, these priceless instincts either die out or develop into misdirected manifestations.

The desideratum already referred to, which must belong to the ideal army sport, seems rather formidable. However, let us apply it somewhat in detail. The monetary outlay is not great. Any troop can afford sporting shotguns and rifles. Unlike most athletic equipment, they last for years. Camp equipment, animal transportation and rations can all be issued without additional expense. A small reconnaissance problem assists in training and makes it all quite legal.

The number of participants is limited by extraneous factors only. The sport appeals equally to Colonel X. with thirty years' service, and recruit Smith with thirty days' service. Health and physical development are obvious. Military technique is so interlocked with all the rest that it may be considered along with them.

There is absolutely no better training for the powers of observation than reading the signs of the woodlands. Whether you are trailing an elk through the jack pines or a rabbit in a cotton patch, your sight and hearing

(Concluded on Page 64)

The Imponderables in an Estimate of the Situation

As Illustrated by Stonewall Jackson's Valley Campaign

By Colonel Weston Jenkins, 390th Infantry

THE finest mental training for civil as well as military life in the solving of problems by that systematic process of thought taught in our service as the "Estimate of the Situation." No student can repeatedly go through this methodical weighing and comparison of the pertinent factors of a situation without forming habits of mind which will be invaluable to him, regardless of the vocation he pursues. Yet, useful as these exercises are, the most important factors in an Estimate of the Situation are left out of every problem we solve. We take account of relative strengths; the amount of artillery the writer of the problem has assigned to us as against the amount he has given the enemy. We can count noses and we can count tanks. We can measure the miles we have to go and compare it with the distance the enemy has to march,

"Then take the result, as you readily see,
Add seven and ninety and two,
Subtract seventeen and the answer must be
Exactly and perfectly true."

But it isn't always exactly and perfectly true. Inferior and poorly equipped armies have repeatedly defeated superior, well equipped forces. The favorite horse has often been the last in the field. There is evidently something else we must take into account; something beside guns and tanks and a count of noses. Obviously, we must weigh carefully the balance of material forces, but unless we use it in conformity with the higher factors, unless we understand the human equation, our superiority of force may prove an illusion.

What factors did Washington utilize at Valley Forge and Joan of Arc at Orleans? What did the Japanese overlook at Shanghai? What unseen forces did Lee and Jackson control, which McClellan and Pope could not grasp? What did Napoleon mean by "In war the moral is to the physical as three is to one"? What are these elusive things that are three times more powerful than guns and numbers and tanks and airplanes?

The Imponderables—the things of the mind and spirit and soul that cannot be weighed or measured or touched, yet have in them the power to move mountains and conquer the world. Stronger than bands of steel, more powerful than T. N. T., yet insubstantial, they exist as latent forces, waiting to be tapped by those who know their existence and understand their use.

Of themselves, the Imponderables can do nothing. What man by taking thought can add a cubit to his stature? Elan, unless properly directed, is apt to lead to foolhardy sacrifice; unreasoning faith only produces martyrs. But Cromwell took directed faith and elan and forged a thunderbolt. It is when one understands how the Imponderables impinge on the human mind, how they can breed fears, excite enthusiasm, paralyze initiative or reach into unexpected depths of endurance, that they make themselves felt and may be used to exert a physical influence on human works.

It is difficult to put these matters in a lesson to be solved. No teacher can write into a problem the breaking point of a sturdy will. Hopes, aspirations, fears and loftiness of soul have no unit of measure susceptible of exact definition or to comparison by mathematical computation. We must be in the living presence of these things to understand and evaluate them.

Yet they are susceptible to systematic examination and evaluation—not in a problem on paper, perhaps, but in the serious business of war. The great captains have all used them. Joan of Arc had a wonderful grasp of the Imponderables and their use. Here was an unlettered, poor peasant girl, sixteen years old, her life spent in the narrow routine of a medieval village; a shepherdess given to dreams and visions; yet the first army she ever saw, she commanded and led to victory. Her history is so surrounded with myth and legend that it is difficult to extract the real facts, but we know she was no figurehead. She saw clearly the combinations necessary for victory and it was her ideas, translated into action, which led to success. It is possible that the old soldiers who surrounded her were an exceedingly efficient staff but lacked imagination, and that Joan's clear mind and lofty soul understood how the patriotism and religious fervor dormant in the French could be roused into action by a proper use of the Imponderables. It would be of wonderful interest and value if we could piece together Joan of Arc's estimates of the situation and understand how she evaluated the Imponderables. However, history as a rule only tells us of the results of the combinations of the great captains and but little of the process of thought which led up to the result; how much weight they attached to this and why they rejected that.

One of the great masters of the Imponderables was Thomas Johnathon, better known as "Stonewall", Jackson. Fortunately, his campaigns have been studied by careful historians and we can come measurably near judging how he cast his Estimates of the Situation. The most reticent of generals before a battle, he made a practice of afterward enlightening his staff as to why he made the moves which puzzled them so at the time.

There seem to have been but two tangible factors he gave any weight to at all. Numbers opposed to him, he ignored—he had to. Supply and equipment, he perforce had to be content with what he had, which was little. His plans were built around the Imponderables which, with the tangible of mobility, he used to concentrate on the one sensitive spot at the critical time and won victories against overwhelming odds.

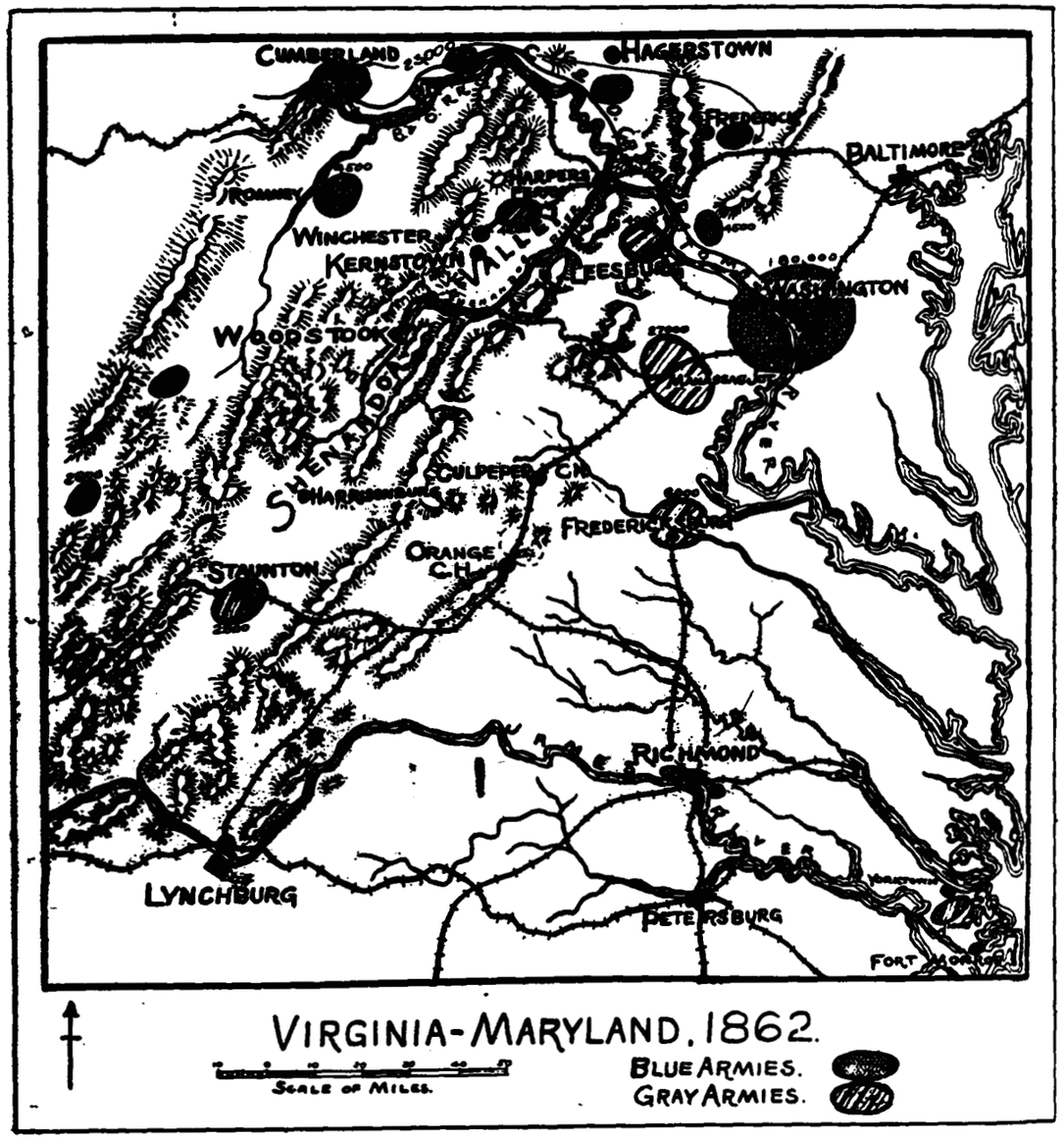
Let us turn to the battle of Kernstown.

MAP PROBLEM No. 1
Imponderables in
An Estimate of the Situation
Maps: General Map: Virginia and Maryland 1862.

GENERAL SITUATION: The Potomac River is the boundary between two hostile states. Blue, north, and Gray, south. Gray, formerly a part of the Blue nation, seceded the previous year, since which time there has been a state of war between them. The Blue capitol is at Washington, the Gray at Richmond.

The main Blue army (180,000) has concentrated in the vicinity of Washington, another army (23,000) covers the Potomac River from Harpers Ferry to Cumberland with Headquarters at Frederick, where there is a reserve of 4500 men. This army has an additional force of 4500 men at Romney. A smaller Blue army occupies western Virginia and threatens Staunton. In addition to these forces, Washington and Fort Monroe have permanent garrisons.

The main Gray army (50,000) covers Manassas Junction. Its right rests on Fredericksburg where there



are 6000 troops, its left on Winchester where there are 4200 of all arms, known as the Army of the Valley. Connecting this latter force with the main body at Manassas Junction there are some 4000 troops at Leesburg. A separate force of 11,000 is at Yorktown facing a threatened invasion from Fort Monroe. Some 2800 men are at Staunton protecting the upper Shenandoah Valley, and Richmond has a small garrison. These are all the Gray troops in the theatre of operations. No assistance can be expected from other theatres.

Blue has been spending the winter equipping and training his armies and is expected to initiate an invasion of Gray territory in the near future. Gray has spent the winter in minor operations, in consolidating his positions and in preparations to meet the expected spring offensive.

Blue resources are ample for any emergency. It holds command of the sea and its armies are fully equipped and supplied. Gray's resources are limited. Its armies are miserably clad and supplied, and poorly equipped.

Blue is well trained and determined with good morale. Gray is well trained and has exceptionally high morale due to previous victories. Gray's cavalry is superior to Blue's but his artillery is inferior.

The climate is mild, although rather rainy in the spring. Main roads are fair except in the immediate vicinity of the armies where movement cuts them up and artillery and transport have difficulty in movement. Side roads are generally bad.

Both Blue and Gray have unflinching determination to prosecute the war to the finish.

SPECIAL SITUATION: The Gray Army of the Valley, three work brigades of infantry (3600 rifles) with six batteries of artillery and one small regiment of cavalry attached, from positions in and about Winchester, has spent the winter covering the Shenandoah Valley and observing the Blue forces along the upper Potomac and in western Virginia. In the latter part of February, Blue forces advanced from Harpers Ferry and threatened Winchester with 23,000 troops. During the period 7-9 March, Gray forces at Manassas Junction and Leesburg retired south of the Rappahannock River. Instructions previously issued to the Commanding General of the Army of the Valley stated this retirement was contemplated and that he was to conform to it, delaying the enemy to his front as long as he could. These instructions were construed by General "Army of the Valley" as not requiring a deeper retirement than the occasion demanded. Accordingly on 11 March he retired forty miles to Woodstock, and Winchester was occupied in force by Blue.

On 17 March the main Blue army started its movement from Washington to Fort Monroe by water, with Richmond as its ultimate objective. On 8 March General "Army of the Valley" requested reinforcements hinting that with them he could seriously disturb Blue plans but his request was refused. Shortly after he received further instructions, the gist of which was as follows:

"You are to employ the invaders of the Valley without exposing yourself to the danger of defeat, by keeping so near the enemy as to prevent him from making any detachments to reinforce the main Blue army, but not so near that you might be compelled to fight."

After occupying Winchester, the Blue army consolidated its positions and, leaving some 10,000 troops just south of Winchester, started a withdrawal of the remainder.

By 20 March the general Blue plan was divined as a converging movement on Richmond with the main effort moving from Washington by water to some base along the lower Chesapeake Bay, while a strong force moving overland was to cooperate.

On the evening of 21 March, General "Army of the Valley" received reports from his cavalry that the Blue force to his front had been reduced by recent detachments to some 5000 or 6000 troops and was retiring. Wagon trains had been observed moving eastward from Winchester.

Required: General "Army of the Valley's" "Estimate of the Situation" as of 8:00 p. m. 21 March, 1862.

A Solution

General "Army of the Valley's" Estimate of the Situation as of 8:00 p. m., 21 March, 1862.

1. *Mission.*

As stated it reads:

"To employ the invaders of the Valley without exposing yourself to defeat by keeping so near the enemy to prevent him from making any detachments to reinforce the main Blue army, but not so near you might be compelled to fight."

While these instructions embody the letter of his instructions, the Commanding General "Army of the Valley" reads more into them than appears on the surface and seeks the spirit behind them.

Carefully analyzed these instructions convey two separate and distinct thoughts:

(1) The result to be effected: i. e. to prevent Blue from reinforcing his main effort by detaching troops now facing the Army of the Valley;

(2) General instructions limiting the manner by which the result is to be effected; i. e. by pressing the enemy closely but not to risk an engagement.

General "Army of the Valley" decided that his real mission lay in the result he was to accomplish, and his instructions as to how he was to effect this result were only binding while effective. If at any time they were not effective and did not accomplish the end, if other means were indicated as necessary, he was willing to run counter to that part of his instructions limiting his actions. The longer he pondered over the problem before him, the broader it seemed, until he felt that any move of his which simply retained the Blue forces now in the vicinity would be inadequate, that the spirit of his mission justified, the more daring strategy of drawing upon his little army, other forces destined for the main Blue effect.

In this he was exhibiting his character as a great general. The ordinary general would have looked mainly to that part of his instructions advising him to keep

in touch with the enemy without bringing on a general engagement. A good general might have seen further and attempted by pressing close to prevent any detachments from being made, but still kept from a general engagement, thus carrying out his instructions to the letter. But, it takes a truly great general to so work himself into the spirit of his instructions that he feels the full strength of all the forces which underly the strategy of a campaign and is able to discard the unessential and concentrate on the essence of the matter. So General "Army of the Valley" construes his real mission as follows:

> "To induce Blue to retain in the Valley all troops in the vicinity and draw upon himself all possible forces intended to reinforce the main Blue effort."

How? is a matter for the Estimate to determine.

2. *Opposing Forces.*

(a) Own Forces.

Composition and Strength: Three brigades infantry (3600 rifles), six batteries and one regiment cavalry (600 sabres). The infantry and five batteries are concentrated at Woodstock, while the cavalry with one battery is in close touch with the Blue outposts south of Winchester. Physical condition of troops—good; Morale—high; Training—good. They are troops seasoned by several campaigns and elated by previous victories.

Supply is barely sufficient, transportation is crude, clothing, rags; the men look more like scarecrows than soldiers—nothing is bright but their rifles.

Other Gray troops: The nearest are about fifty miles away along the Rapahannock where Gray's main army, some 40,000 men, is poised ready either to face a Blue advance from Washington or to move southeast of Richmond, whichever will be required. No help can be expected from these troops who are facing the main Blue effort. Indeed, instead of expecting assistance, he must render it; any move made by the Army of the Valley must help the main Gray force. The total of all Gray troops in the theatre of operations is somewhat over 80,000 of all arms.

(b) Enemy Forces.

Composition and Strength: 180,000 troops have been concentrated in and about Washington, of which an undetermined number have been put enroute for the Yorktown area. 4500 are near Fredericksburg, 23,000 along the upper Potomac of which 9000 are at Winchester and about the same number at Harpers Ferry. 4500 are at Romney and a number of smaller detachments in western Virginia. Including the garrisons of the Washington defenses, Blue has nearly 250,000 men in the theatre of operations. These forces consist of the proper complements of all arms.

Physical condition and training—fine.

Morale—good but not as high as Gray.

Supply and equipment—the best and most complete unlimited resources can furnish.

While a large number of these troops are tied to the defense of localities, such as Washington and the upper Potomac, still an overwhelming number can be concentrated for a mobile offensive operation.

(c) Relative Combat Strength: General "Army of the Valley" estimates that the enemy has 5000 to 6000 men to his immediate front, but 12,000 more are in or near the Valley which, with 4500 near Frederick and 4500 at Romney and some scattered detachments, could be called in and available in three days or so. So, while the force immediately facing him is only ten to fifteen percent stronger than he, nearly 30,000 Blue troops, or seven times his own strength, can be concentrated on him in a few days.

The main armies have not fully developed their lines of action as yet, but the whole Blue force outnumbers Gray three to one and his mobile field army, which will probably consist of from 120,000 to 175,000 troops, will outnumber Gray anywhere between the proportion of three to two up to two to one in the field.

Gray has withdrawn to the line of the Rapahannock with his main army.

Blue troops to General "Army of the Valley's" front are initiating a rearward and easterly movement. It hardly seems within the bounds of possibility that this little army of 4200 men in the Valley can influence vitally the movements of a host sixty times its size. The material factors are preponderantly against General "Army of the Valley," monstrously so. But we have not as yet considered the Imponderables in the case.

These General "Army of the Valley" evaluates as follows:

(1) By virtue of its constitution the Blue command rests eventually in the hands of the President of the country. He operates as a rule through his Secretary of War who gives directions to the high military command. At the present time the command of all Blue armies rests in one general (McClellan) who is in supreme command, but answerable to and removable by the President. General "Army of the Valley" has noted, however, that while the chain of command supposedly runs from the President through the Secretary of War and the supreme military commander to the various armies, there has at times been a tendency for the President and Secretary of War to usurp purely military functions; that sometimes one and sometimes the other would issue orders to army and detachment commanders over the head of the supreme military commander.

Here is the first Imponderable. Divided command and authority.

(2) General "Army of the Valley" has noted in the attitude of the Blue press and people, and also in the Blue administration, a certain lack of confidence in their General of the Armies, although the Blue army itself has implicit confidence in him. Then, too, certain rumors have it that there is a serious difference of opinion between the administration and the General of the Armies as to the plan of operations most desirable.

Here is the second Imponderable: Disunited councils and lack of confidence.

(3) General "Army of the Valley" knows that Blue places a very high value on the inviolability of their capitol, Washington. There are a number of excellent reasons why they should.

(a) With their capitol captured, the Blue governmental machine would be dislocated and even if moved to another locality, the interference would be embarrassing.

(b) A large number of Blue citizens hold the opinion that the war should terminate even at the price of Gray becoming a separate nation permanently. At the present time inactive and silent, a hostile occupation of the capitol would encourage the open activity of this group, perhaps with disastrous results upon the prosecution of the war.

(c) Even more important is the probability that if the Blue capitol were captured, foreign powers would recognize Gray as a separate and independent country. Foreign recognition would have far-reaching results affecting the prosecution of the war. It might endanger the blockade Blue has enforced against Gray through his command of the sea; it might even lead to foreign intervention.

(d) Blue, early in the war, was defeated in close proximity to Washington and for several days the capitol was open to capture. The memory of the panic at that time is fresh in the minds of the Blue administration.

So here we have the third Imponderable: A keen, almost morbid anxiety on the part of Blue for the safety of its capitol.

Washington is particularly vulnerable. It lies on the very frontier of the two states; it has no natural defenses and it can be attacked easily, either from the direction of Manassas or from Harpers Ferry down the Valley of the Potomac. It is separated from its wholly loyal population by the border State of Maryland, which, while nominally Blue territory, is highly sympathetic with the Gray cause. One of the two lines of communications between Washington and the loyal states from which the army draws its replacements and supplies is a railroad and canal paralleling the Potomac and passing through Harpers Ferry. The Blue administration's fears are not entirely groundless.

(4) There is another Imponderable which has engaged General "Army of the Valley's" attention: the personality of the Blue commanders, their intellectual grasp of the situation and their strength of character. He knows the prestige of victory is with Gray. From the caution exhibited by the Blue commanders in previous campaigns he believes, confronted by unexpected and puzzling moves, the Blue generals will prove irresolute. Following this reasoning he feels they will place an over-emphasis on the importance of any aggressive moves Gray may make.

So the fourth Imponderable lies in the cautions, character and irresolute minds of the opposing commanders.

(5) The fifth Imponderable is the relative fighting spirit of the Gray and Blue troops. General "Army of the Valley," while not underestimating his adversaries' fighting ability, has faith in the superior morale of his own troops, for Victory so far has perched on their bayonets and they are fighting on their own territory in defense of their own homes. With good reason he believes the mobility of his own troops is superior to the enemy.

(6) He has faith in himself and in the justice of his cause. He feels that the driving power of his will to victory is stronger than his opponents', for he knows exactly what he wants to do and they are restricted by a cautious uncertainty.

(7) Together with these six Imponderables, General "Army of the Valley" has a deep religious faith which is rare in any age. He honestly and completely believes that Divine Providence will aid a just cause if reverently invoked. His whole life and character is built around the conviction that while the Divine Will operates through the works and minds of men, it is a direct influence which in the end is conclusive and final. His faith is that of Cromwell. "Trust in God and keep your powder dry."

General "Army of the Valley" then has seven Imponderables which he can use to offset the enormous inequality of material force which confronts him:

(1) Divided authority and command in the hostile ranks;
(2) Divided councils and lack of confidence of Blue in their commander;
(3) The extreme anxiety of Blue for his Capitol, coupled with its vulnerability;
(4) The cautiousness and irresolution of the Blue commanders;
(5) His own faith in the fighting value and mobility of his troops and in his cause;
(6) His faith in his own will to conquer;
(7) His complete faith in Divine Providence.

(We will see what use he makes of these Imponderables.)

Enemy Situation:

(a) Plans open to enemy.

General "Army of the Valley" knows enough of the enemy's general plan to realize that the main effort is directed on Richmond, the Gray capitol. He knows this effort is in the nature of a converging attack, partly overland, through Manassas Junction and Fredericksburg and partly by water to some base on Chesapeake Bay, and thence by land toward Richmond. He understands that from 125,000 to 150,000 men are available to Blue for these operations and that Gray has only 70,000 to 80,000 men to oppose them.

In his immediate front his cavalry reports evidence of the enemy withdrawing and detaching troops to the east. This may either mean that Blue is

(1) evacuating the Valley entirely, or
(2) detaching troops to reinforce their main effort, leaving a force to contain him.

(b) Analysis of possible enemy plans.

General "Army of the Valley" discards the first contingency as unsound from the hostile viewpoint. Why should they evacuate the Valley entirely? They have not been defeated and there is still his force there to be observed and contained.

He feels it is much closer to the truth that Blue is retiring to better consolidate his position, that he will leave a comparatively small force to observe and contain him and is detaching what troops he can spare to reinforce the main Blue effort.

This is the very thing his mission is to prevent. But he knows that all factors point to the fact that this detachment is in harmony with Blue plans and seems practicable, for why should not the "Army of the Valley," a mere 4,000 or 5,000 men, be contained by a relatively small force? Even should Blue overestimate his strength, no supposedly sane man could believe that such a small force as Gray can possibly have in the Valley could seriously interfere with the Blue plans.

Own Situation:

(a) Plans open to General "Army of the Valley."

1. He could observe the Blue force in the Valley keeping his main body intact and while constituting a threat to refrain from any close engagement involving his force seriously.

2. He could advance cautiously against Blue and while not committing himself too seriously might, by a show of aggressiveness, induce Blue to recall the detachments now moving eastwardly.

3. He could attack Blue vigorously and, by pressing the action, draw on himself not only the Blue detachments now moving from the Valley but other troops destined for the main Blue effort.

4. He might retire in conformity with the rest of the Gray army.

(b) Analysis of plans.

General "Army of the Valley" rejects plan No. 4 at once; while his orders previously received might be urged in extenuation of this course, it in no way conforms to his mission as he sees it.

Plan No. 1—keeping contact but avoiding an engagement—he rejects also. While in apparent harmony with that part of his instructions which states how his mission is to be performed, he considers it repellent to his real mission, i. e. to induce Blue to detach troops from his main effort.

Plan No. 2—a cautious aggressive—has certain advantages. It seems practicable. While he is not quite sure of the strength of the force Blue has left in the Valley to contain him, he feels he would not be running too great a risk. If he is outnumbered and repulsed he could, by a show of aggressiveness, still constitute a threat which would require watching by Blue. The cautiousness of the Blue commanders will probably cause them to recall at least some of the troops recently detached. Thus the plan would probably fulfill the mission as outlined in his instructions.

However, there are risks. However weak Blue's strength in the immediate vicinity may be he can call superior numbers to his assistance in a few days. A cautious attack which was not altogether successful might increase Blue's confidence even to the point where he would feel he could handle the situation without recalling the detachments.

But over and above all these considerations, General "Army of the Valley" knows his real mission, as he sees it, would not be fulfilled by any such program. What is needed, and needed desperately by Gray, is something which will cause a complete change in Blue's plans.

Plan No. 3—a vigorous attack.

Advantages. It is practicable; the force opposed to him does not seem to be more than a rear guard. Also it will probably be unexpected, thus having the element of surprise. It will set in motion the Imponderables he has considered, for a strong aggressive movement is related to all the factors which make up these Imponderables.

(1) Blue will believe any offensive from the Valley, even if made by a small force, is the prelude to an advance by larger forces, striking at the rear of the advancing Blue armies. This will raise fears for the safety of Washington which can be reached via Harpers Ferry and the Valley of the Potomac or from Ashby's or Snickers Gap.

(2) It will be certain to diminish the confidence of the Blue administration and populace in their General in Chief. He will wish to continue his own plan, the move against the Gray capital, already well under way; they will wish to modify it for the greater security of Washington.

(3) These factors will inevitably operate to disintegrate the unity of Blue command. The President and Secretary of War will be unable to resist interfering directly with military operations.

(4) A bold attack will prey on the cautiousness of the Blue commanders. They will not understand it and the uncertainty will paralyze their initiative.

(5) His force is small, but it is all he has and all he can expect. While confronted with superior numbers, the enemy is scattered, he is concentrated. If he is to strike at all, now is the time. His faith in the mobility of his troops and their fighting spirit leads him to believe that he can risk an encounter and retain the initiative even if Blue concentrates on him.

(6) His faith in the morale of his troops and in his own will to conquer is based on confidence in himself and his cause, aided by Divine Providence.

There are certain disadvantages:

(1) If the Blue commanders act with resolution, he will shortly be confronted with superior numbers.

If the Blue administration penetrates his design and realizes how few the numbers are at his disposal, it may allow the plans of its general to proceed without interference. In that case, General "Army of the Valley" might win a local victory which would be too dearly purchased at the price of casualties without any corresponding benefit to the Gray cause. A mere tactical advantage, unless it affected the strategical situation, would be a barren victory.

(2) He may be defeated and open up the Valley to a Blue penetration, a contingency that might require detachments from the main Gray army, which they cannot spare, but might be obliged to dispatch to extricate him from the difficulty. He would then probably be blamed by the public for disobedience of orders.

We will not enter into the tactical Estimate of the Situation dealing with the factors which General "Army of the Valley" believe favor a tactical victory for his army. Suffice it to say that the enemy to his front was reported in but slightly superior numbers and that an envelopment of the hostile right, promised success.

General "Army of the Valley's" Decision:

"To attack the hostile force at Winchester enveloping its right flank and drive it north with the purpose of making a threat at Washington, drawing toward the Shenandoah Valley and to the defense of the Blue capitol troops destined for the main Blue effort."

* * *

In conformity with this decision on 23 March 1862, Stonewall Jackson attacked the Union forces at Kernstown. He found the enemy in greater strength and better handled than he had expected and, after a bitterly contested action, Jackson was defeated. But he had pressed the attack with great resolution and handled the Union forces roughly. Under the cover of darkness he drew off his army in good order and retired unmolested by the enemy.

He had suffered a tactical defeat where he sought a victory, but his aggressive boldness and his appreciation of the Imponderables had set mighty forces in motion. That night a Confederate soldier with the easy familiarity of that army and in that atmosphere of danger which, short of death, is the greatest leveler of rank, approached "Old Jack" who was warming his hands at a camp fire.

"General," he said, "the Yankees are in Winchester tonight."

"Winchester is a very fine place to be in," returned the General.

Nothing abashed, his visitor went on, "General, it was reported that the Yankees were retreating but I reckon they were retreating after us."

With his eyes fixed on the burning logs, Jackson replied slowly and impressively, "I think I may say I am satisfied, Sir."

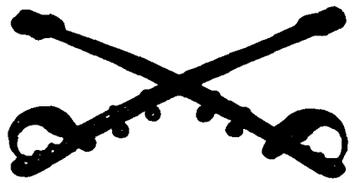
There has been some doubt whether Stonewall Jackson realized the extent of his success at the time, but when he expressed himself as "satisfied" in the midst of defeat, he must surely have been looking beyond the affairs of the moment. He knew what he had done. He knew his carefully laid plans would develop. He knew that the Imponderables he had set in motion would reach out and close like a vise on the will of the authorities at Washington and paralyze the initiative of the Union commanders. And he was right. His aggressive move, so well timed, upset the whole Union plan of campaign. They could not conceive that his attack at Kernstown was simply the bold move of a small force. To them it was an advance guard action, the prelude to an invasion of northern territory with Washington as its objective.

As Jackson had anticipated, Lincoln and Stanton took over the direction of the Union armies, thus destroying unity of command. They ordered back to the Valley all troops detached to aid McClellan in the Peninsula; they diverted McDowell and his corps which was McClellan's right wing and placed him covering Washington, violating the principles of cooperation and mass.

By the battle of Kernstown and subsequent moves, known as the Valley Campaign, Jackson paralyzed the initiative of the Federal command and had Stanton ordering troops over all northern Virginia. So, McClellan's army, deprived of McDowell's corps, was defeated by Lee, reinforced by Jackson, while it was astride the Chickahominy, and enough Union troops to crush Lee were searching vainly for Jackson over a hundred miles away and protecting a capitol which was not in danger. The Imponderables were working hard.

With a hostile force three times his own strength in the theatre of operations, Lee, with Jackson's aid, concentrated a superior force on the critical wing of the enemy and defeated him. Certainly strategy could do no more. It was not the heaviest battalions but the Imponderables rightly appreciated and properly applied, which won the victory.

The field of strategy is not the sole place the Imponderables work. They exist, not only in the rarified air of the high command, but in the more restricted spheres of the regiment, battalion, company and platoon. Those who command armies are few but any officer, no matter what his grade, is an important link in the military chain, and in campaign a junior may suddenly be confronted with a tremendous responsibility which no one can handle but himself. Often important issues hang on the decision of the man on the spot. A proper appreciation of the Imponderables by a subordinate officer may well be the deciding factor in a situation momentous in its consequences.



The Russian Plan of Campaign in the World War (1914)

*By A. M. Nikolaieff**

THE importance of the initial military operations in a war, and especially in a modern war, can hardly be over-emphasized. A well-known military aphorism says: Mistakes made in the deployment of troops at the start of operations can not be righted in the course of the whole campaign.

In the World War a mistake made by the authors of the Russian plan of campaign made it impossible to reach a strategic decision on the Eastern front in the first year of the War, despite the victory over the Austro-Hungarian army in Galicia. The struggle had to go on, and this faulty plan of campaign was one of the causes which made its continuation inevitable.

In what did the mistake in the Russian plan consist, and why was this mistake made? In all the vast literature now available in English on the history of the War, no comprehensive answer to these questions is to be found; yet the subject is one of general interest, for the reason that a different plan of campaign might not only have brought an earlier victory to the Allies, but might have changed the whole subsequent history of Europe.

The obligations of Russia as an ally of France were defined by a military convention concluded by the governments of the two countries in 1892. The convention was signed three years after the Triple Alliance of Germany, Austria-Hungary and Italy came into being. The signing of the convention was prompted by the desire to oppose to the powerful Triple Alliance, which had replaced the so-called "Alliance of the three emperors" (Germany, Austria-Hungary and Russia), a political combination which would counterbalance the powers of Central Europe and prevent them, should they act offensively, from inflicting a separate defeat either upon France or upon Russia.

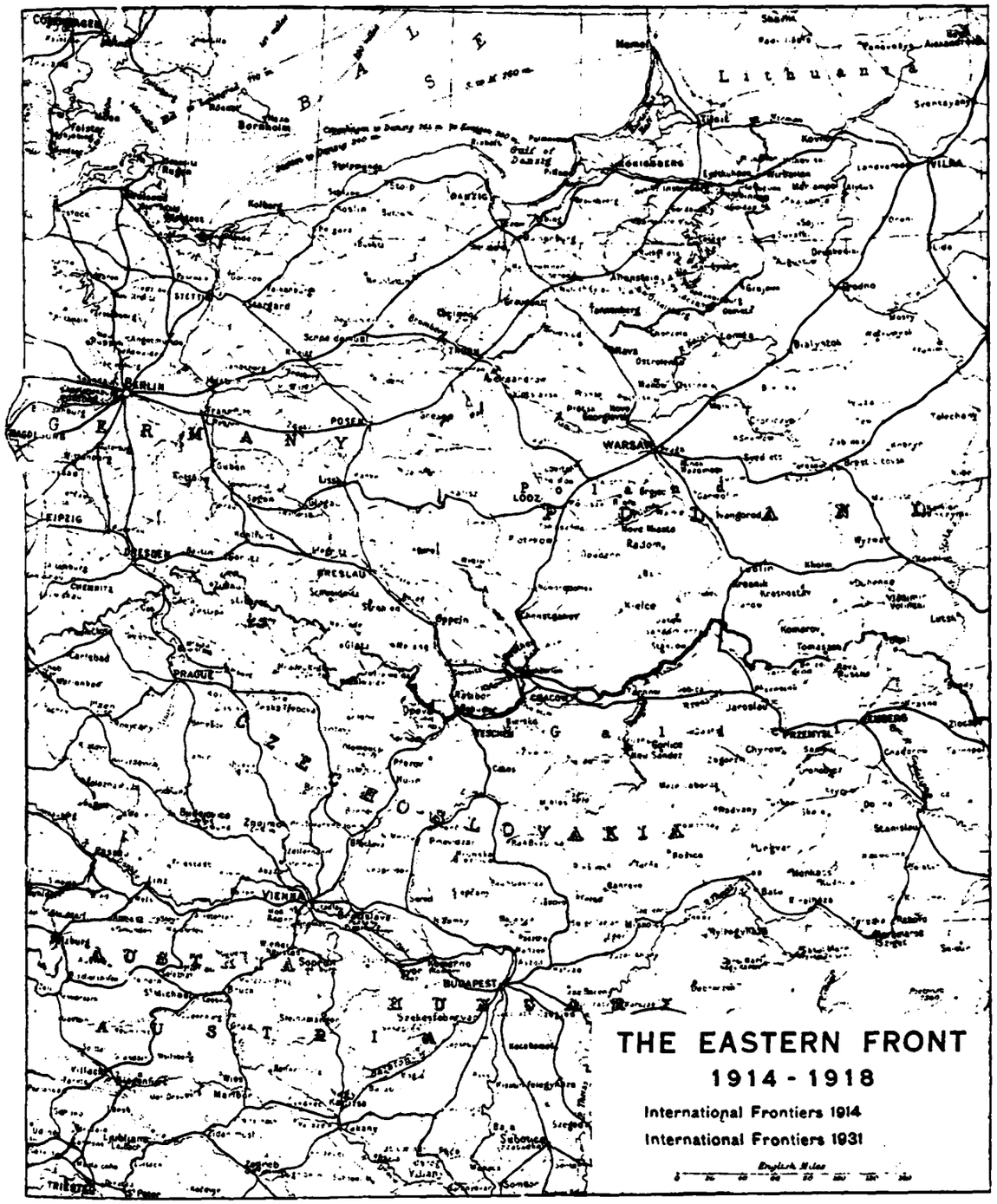
Although the military convention, as an insurance against separate defeat, was of equal importance to both Russia and France, the political attitude of the two countries toward the powers of the Triple Alliance was not identical, nor could their strategic plans for joint military action in case of a war with Germany and Austria-Hungary be easily reconciled and harmonized. France, fearing Germany, was anxious that Russia should direct her plans against that country, but Russia, on the other hand, had little expectation of finding herself at war with Germany alone. Had there been no alliance between Russia and France, a war between Germany and Russia might have come only as a result of a war between Austria-Hungary and Russia in connection with the Balkan question, in which both those powers were vitally interested. This actually happened in 1914: the decision of Russia to stand by Serbia and to protect her independence caused Germany to give unconditional support (a "blank check") to Austria-Hungary and eventually to declare war on Russia, that is, to start the World War.

But neither the political nor the economic interests of France conflicted with those of Austria-Hungary, and the importance of helping Russia in a war against Austria-Hungary, was not given much attention by France, though such a war was more likely to occur than a war between Russia and Germany. According to the first French project for a military convention, no help was to be given to Russia by France in case of an attack on Russia by Austria-Hungary, while, on the other hand, Russia was to direct almost one half of her armed forces against Germany in the case that country should attack France. It was with no little difficulty that General Obrucheff, chief of the General Staff of the Russian army under Emperor Alexander III, succeeded in amending the French project so that the draft of the military convention became acceptable to both parties. The agreement signed in 1892 provided that France would help Russia by directing all her available (*"disponibles"*) forces against Germany, not only in case of an attack on Russia by Germany, but also in case of such an attack by Austria-Hungary supported by Germany. Russia, on her part, in the case of an attack on France, was to direct all her available forces against Germany as soon as possible, in order to compel Germany to fight at the same time in the West and in the East. The great advantage of the agreement, in its modified form, was that it did not restrict the freedom of Russia's choice of a plan of military operations or of a date of starting the offensive.

The military convention between Russia and France remained in force throughout the whole period from 1892, when it was signed, down to the outbreak of the World War in 1914. But, as a result of supplementary agreements, worked out at conferences which were held periodically by the Chiefs of the two General Staffs, Russian and French, and recorded in special "protocols", Russia took upon herself additional obligations which not only tended to bind her freedom of strategic action but, under the circumstances, were not even capable of being accomplished. According to those protocols "the defeat of the German troops remained under all circumstances the first and fundamental goal of the Allied troops"†; and accordingly it was provided that Russia, concentrating 800,000 men against Germany, was to start an offensive either in East Prussia or in the direction of Berlin on the 15th day of mobilization. Now, by the 15th day of mobilization only one third of the Russian army in the field could be concentrated on the Western frontier of the Empire, and less than one half (350,000) of the Russian forces destined for action against Germany

*Colonel of the General Staff, former Russian Army, Russian Military Attache to the United States during the War (since 1916).

† Protocol of August 31, 1911.



under the protocol could be deployed by that time, with the organization of their rear still incomplete. Yet on that day the Russian troops facing Germany were to start their march with the purpose of invading that country.

The new obligations of Russia were a concession made by her under the influence of the insistent requests of the French representatives, who feared above all that Germany, taking advantage of the slow progress of the Russian mobilization, might throw all her forces against France and defeat her army before the Russian army would move forward. The French representatives were therefore anxious that Russia, upon the declaration of war by Germany, should expedite her mobilization, and begin action at the same time as the French army. With that end in view the French even promised their support in the matter of arranging a French loan to be used by Russia in constructing strategic railways which would make possible the mobilization and concentration of the Russian army within a shorter time. In 1912 special funds for that purpose were granted Russia in the form of an annual loan of 500 million francs, and President Poincaré informed Emperor Nicholas II of the fact by a personal letter.

The Russian plan of campaign, formed under the influence of the French requests and known as the plan of 1910, was severely criticized by the commanders-in-chief and the chiefs of staff of the several military areas into which the territory of the Empire was divided. A conference of the chiefs of staff of the military areas was therefore called in 1912 in Moscow, and at that conference a project for a new plan was worked out. The project was based on fundamentals set forth by General M. V. Alexeieff, chief of staff of the Kieff military area and later, during the World War, chief of staff of the Emperor after the latter assumed the command of the Russian army in the field. These fundamentals, serving as points of departure for the new plan, may be summarized as follows: First, Germany will direct her main forces in the beginning against France, and will confine herself to defensive action against Russia; accordingly Germany will have the advantage of the topographical obstacles and the strong fortifications of East Prussia and will be able to resist even a numerous Russian army of invasion in that quarter; moreover, because of the flanking position of the fortified East Prussian territory, no advance from Western Poland (from Warsaw) in the direction of Berlin may be undertaken so long as East Prussia is held by the Germans; second, Austria-Hungary is the real enemy of Russia, and, if account be taken of the number of troops which she will bring into action against Russia in the initial period of war, then she is the most dangerous enemy as well: the defeat of Austria-Hungary is of the greatest importance, inasmuch as it may result in the disintegration of the Dual Monarchy and the solution of the Slav problem. Upon the ground of the above considerations General Alexeieff maintained that the fundamental idea of the plan of 1910 should be changed, and he proposed that in the beginning the main attack should be made on Austria-Hungary and that there should be directed against that country as many forces as possible; as to Germany, military operations against her should be confined in the beginning to the protection of the Russian frontier and to a limited action against the German troops left in East Prussia; only six army corps were to be assigned for the latter purpose, according to Alexieff's plan.

The project of the Moscow conference did not receive the approval of the Chief of the General Staff, but it could not possibly be disregarded. A new plan, known as plan of 1912, was therefore worked out by the General Staff. That plan, with the revisions made prior to the outbreak of war in 1914, may be regarded as a compromise between the ideas on which the plan of 1910 had been founded and those set forth at the Moscow conference.

The plan of 1912 was prepared in two versions: version "A", to be put into effect in case the greater part of the forces were to be directed against Austria-Hungary, and version "G" for use in case the major forces were to be directed against Germany. Version "A" was the one actually put into operation in 1914. According to that version, 33.52 per cent of the forces deploying in the initial period of the campaign (that is, 19 regular divisions and 11 of the second line,—30 infantry divisions altogether, out of a grand total of 89½)* were to form the North-Western group of armies (or the North-Western front) with the object of invading East Prussia; 50.84 per cent of the forces (45½ infantry divisions, including 32½ regular divisions and 13 of the second line) were to form the South-Western group of armies (or the South-Western front) and were to advance against Austria-Hungary; the remaining 15.64 per cent (7 regular divisions and 7 of the second line) were to remain in Finland, the Baltic provinces and Bessarabia with the object of protecting the flanks of the two groups of armies destined for active military operations.

That distribution of forces clearly shows that the plan of campaign had two objects in view, both to be achieved at the same time: one, to undertake decisive action against the German troops in East Prussia; another, to inflict a crushing defeat upon the Austro-Hungarian army in Galicia. Now, the fundamental principle of strategy demands that a strategic plan shall have at a given time only one main objective, and that as many forces as possible should be concentrated for the achievement of that aim; as to all the other objectives, they should be considered of secondary importance, and only a minimum of forces should be assigned for their execution. Contrary to that fundamental demand of military art, the Russian forces, according to the plan, were to be split into two major groups. Which then of the *two* objectives was considered the main one? Judging from the larger per cent of troops assigned to the South-Western front (50.84), one would be led to conclude that of the two objectives set by the Russian plan, the defeat of the Austro-Hungarian army was considered of greater importance than the invasion of East Prussia. General Y. N. Daniloff, who was the Quartermaster General of the Russian General Staff throughout the five years preceding the War, and in that capacity was responsible for the working out of plans of operations, appears to support this conclusion when he says* that the Austro-Hungarian army represented, under conditions existing during the years immediately before the War, the chief active enemy force on the Russian front, and could deprive the Russian army of liberty of action; yet on the other hand plainly states** that "the guiding idea of the strategic deployment of the Russian army was the desire to insure the most favorable conditions with respect to (numerical) strength for the combats in East Prussia". In trying to explain the splitting of the Russian forces, he further states that the Austro-Hungarian theatre of operations "from the point of view of the coalition of powers (the Entente)" was one of "secondary importance", and that "it began to assume the rôle of the main theatre on our (the Russian) front only when the failure of the North-Western group (the Russian armies in East Prussia) became clear".** Thus, by showing that Germany could not be defeated at this stage of the War, in East Prussia, events had shown that the defeat of the Austro-Hungarian army, not the invasion of East Prussia, should have been the main objective, and that, to insure its attainment, the forces diverted for action against Germany in the initial period of the War should have been limited as closely as possible.

Fifty per cent of the Russian forces which would be deployed in the European theatre of war did not present a power sufficiently strong to inflict upon the Austro-Hungarian army a crushing defeat. This General Daniloff fully admits as he says† that the plan in relation to Austria-Hungary was a "daring" one—that is, a risky undertaking, and that "the task set for the (Russian) troops of the South-Western front had been formulated not in accordance with their numerical strength, but in the expectation that their spirit would be superior" to that of the Austro-Hungarian troops, made up as the latter were of elements belonging to many nationalities, among them Slavs whose sympathy might be on the side of a related nationality, the Russians. The war showed that that expectation was not well founded, the Austro-Hungarian troops having proved that, although not the equal of the German troops, they were an enemy who could not be put easily to rout.

The 33 per cent of the Russian forces assigned to the North-Western front (making up 9 army corps, instead of the 6 corps assigned to that front in General Alexeieff's plan), likewise could not be considered an adequate force for achieving decisive results in East Prussia, although their numerical strength exceeded that of the German troops which were expected to be left in the Eastern theatre. It is known that a heavy reverse (the defeat of Samsonoff's army at Soldau-Tannenberg in August, 1914) was suffered by the Russian troops on the North-Western front in the beginning of operations. But even if this reverse could not have been foreseen, it should have been evident in advance that the occupation of such a stronghold as East Prussia by the Russian forces assigned for that purpose would hardly be possible at a time when one half of the Russian army in the field would be engaged in a decisive battle with the Austro-Hungarian army. Yet it was also true that no invasion of Germany on a grand scale could be undertaken prior to a complete and secure occupation of East Prussia.

Finally, consideration should be given to the dates on which it had been planned the Russian forces would be ready to begin active operations on the two fronts. They were as follows: the regular troops of the North-Western front were scheduled to complete their concentration on the 20th day of mobilization, those of the second line—on the 36th day; the regular troops of the South-Western front were scheduled to be in complete readiness on the 29th day of mobilization, those of the second line—on the 35th day. Now, the Russian army, as has been already said, was to start an offensive against Germany on the 15th day of mobilization, according to a promise given by the Chief of the Russian General Staff, General Zhilinsky, to the Chief of the French General Staff, General (later Marshal) Joffre.‡ It follows that the offensive was to be launched before the concentration of the Russian army had been carried out. This actually happened in 1914; the Russian forces started the offensive on August 14th, which was the 15th day of mobilization, and crossed the frontier of East Prussia: the 1st army on August 17th, the 2d army on August 21, at a time when the formation of the supply columns and the organization of the rear establishments of these armies required seven more days to be completed and no division of the second line was ready to advance. The fact that the offensive was undertaken prematurely was one of the main causes of the reverses suffered by the Russian army in East Prussia in 1914.

The question arises how did it come to pass that a plan of campaign the basic conception of which was faulty, inasmuch as it was a violation of the fundamental principles of strategy, was actually adopted. An answer may be found in the statement made by General Daniloff, himself one of the authors of the plan, in his book, "Russia in the World War." He writes as follows:§ "Russia, having become an ally of France, took upon herself a serious and heavy obligation; she had to bear in mind, as she considered measures of preparedness for war, the necessity of a swift and energetic offensive against Germany..... In order to accelerate our offensive against Germany,

*At the time of the mobilization in 1914 there were in the Russian Army 70 regular infantry divisions, and 18 regular infantry brigades, forming the equivalent of 9 infantry divisions, or a grand total of 79 regular infantry divisions. Out of that total 58½ divisions in the initial period of war were to be deployed in the European theatre of war, and the remaining 11½ divisions were to protect the frontier of Asiatic Russia in Siberia, Turkestan and the Caucasus. The formation of the 31 infantry divisions of the second line to reinforce the regular troops was to be started at the beginning of mobilization.

* Daniloff, Y. *Russia's Part in the Initial Period of the World War.* ("The Marine Corps Gazette", Washington, D. C., 1923, v. 8, no. 2, p. 56.)
** Daniloff, Y. *Sushdenya Posle Sobytii.* ("Vozrozhdemie," a Russian daily, Paris, 1930, no. of March 21.)
† Daniloff, Y. *Sushdeniya Posle Sobytii.*
‡ Daniloff, Y. *Rossiya v. Mirovoi Voine* (Russia in the World War). Berlin, 1924, p. 80.
§ Daniloff, op. cit., p. 81, 80, 78.

—our ally, France, had opened a large credit in favor of our Government for the purpose of constructing railways of strategic importance. This financial assistance....was a heavy burden weighing upon the free creative power of the Russian strategy.....In point of fact at the conferences (which were held periodically by the Russian and French representatives) it always came to this: France would express her wishes, and Russia would consider to what degree and in what ways they could be accomplished. There is no doubt that such a state of things necessarily fettered our strategy and the free use of our forces in the initial period of war."

Thus it is clear that had not the Russian strategy been hampered by the requests of France, a different use of the Russian forces might have been made, in other words, it is probable that no splitting of them would have taken place. The only reason for dividing the Russian active forces into two large groups was the anxiety of France that Russia, from the very beginning of military operations, should keep engaged on the Eastern front as many German troops as possible (five or six army corps at least), with a view to preventing Germany from directing and using all her forces against France; and in order to achieve that purpose, an attack on Germany (in East Prussia) was decided upon as the best way of action, Austria-Hungary being looked upon by France as a secondary theatre.

Would it not have been possible to devise a plan which would serve the needs of France and yet avoid the splitting of the Russian forces? It seems that the working out of such a plan would have been possible, if instead of regarding the actions against Germany and Austria-Hungary as two different, semi-independent campaigns, France and Russia had looked upon their two enemies as one armed force (which they really were) fighting in the beginning of the war on two fronts, directly opposite to one another—in the West against France, and in the East against Russia. Now, an attack with the great majority of her forces on one of the fronts (the Western as it was in 1914) could be undertaken by Germany only on condition that her rear (the Eastern front) be protected not only by the few army corps left in East Prussia but by the entire Austro-Hungarian army as well. It is obvious that Germany could not possibly take the risk of leaving her Eastern frontier open to invasion, if the whole Russian army were free to act against her alone. Germany could take this risk only because the Austro-Hungarian army, by attacking and engaging the greater part of the Russian army, would serve as a protection of Germany's rear. Consequently, the destruction of the Austro-Hungarian army in the beginning of the war would have constituted destruction of those very forces which, making the rear of Germany secure, enabled her to use nearly all her own regular forces against France. As a result a considerable fraction, if not the greater part of the German troops in the West would have of necessity been shifted immediately to the East in order to bar the advance of the Russian army on Berlin. Having disposed of the Austro-Hungarian army, it would have been possible for the Russian forces to undertake such an advance, using the shortest routes (by way of Silesia).

How sensitive Germany was to the security of her rear (in the East) the following fact may show: The initial success of one of the Russian armies (the 1st) in East Prussia (the battle at Gumbinen on August 20th), at the very time when the greater part of the Russian force was to engage in a decisive battle with the Austro-Hungarian army, caused the German General Headquarters to withdraw two army corps (the Guard Reserve and the XI corps) from the Western front and rush them to the East.

It would naturally be asked whether a concentrated attack by Russia on Austria-Hungary would have brought pressure to bear on Germany quickly enough to enable France (with no assistance from a Russian invasion of East Prussia) to withstand the German onslaught? The answer is, yes—if in the beginning of the war France had acted only defensively.

In 1914 the Austro-Hungarian army was defeated by the Russians by September 12th. On that day, which was also the date of the telegram from the French General Headquarters informing the Russian Commander-in-Chief of the victory on the Marne, the Austro-Hungarian army was in full and disorderly retreat toward Cracow, its base. It may therefore be assumed that had the Russian force which fought against the Austrians been materially stronger (and the force assigned to face Germany therefore considerably weaker) the Russian armies on the South-Western front might not only have defeated the Austro-Hungarian army by September 12th, but might have prevented it from retreating toward Cracow; that is, the Russians might have cut off the Austro-Hungarian army from its base. And this would have put an end to the fighting of Germany's ally.

If the plan here suggested had been followed, the French army would have of necessity been limited to defensive action during the period of the decisive battle between Russia and Austria-Hungary. The object of this action by the French would have been to hold out against the invading army until a decision had been reached in the East. The well-known slowness of the Russian mobilization made it essential that during the initial period of war France should be on the defensive. Had the French remained on the defensive, they would have had on their side the two following advantages: first, the possibility of making full use of the barrier of fortresses between the Swiss frontier and Luxemburg (Belfort, Epinal, Toul, Verdun), and, second, the possibility of assigning a large part of their forces to the strategic reserve to be moved against the invading enemy according to circumstances.

Now, the French plan in 1914 was just the opposite to what it should have been. In complete disregard of the slowness of the Russian mobilization, the French scheme was based on the idea of an immediate and decisive offensive. Its central idea was that all the concentrated forces of France should be moved forward for an attack upon the advancing Germans who, it was expected, would concentrate along the Franco-German

frontier and attack from the East; the French forces therefore were to meet the enemy attack by an advance between the Vosges and the Moselle river on the French right flank and to the north of the line Verdun-Metz on their left. The concentration of the French army was actually planned and carried out with this purpose in view. The attack of the Germans through Belgium, aimed at Paris from the North, came to the French as a complete surprise.* If despite its extremely unfavorable position, the French army was able to win the victory of the Marne—it stopped the German attack on September 6th and forced the enemy to retreat on September 8th—it may be safely assumed that, if they had avoided the great disadvantage of concentrating their forces in a wrong zone and had kept at their disposal a strong strategic reserve, the French would have been able to hold their own until September 12th, or even longer—that is, until the Russians had put an end to the Austro-Hungarian army.

Under the plan proposed the German forces facing the French would not have been reduced by the two army corps (the XIth and Guard Reserve) which as a result of the Russian invasion of East Prussia were rushed by the German General Headquarters on August 25th to the Eastern front, but this would not have changed the situation materially if France had acted on the defensive, inasmuch as the French General Headquarters might have opposed to the 78 German divisions** which had invaded France a force of an almost equal strength. In point of fact in 1914, at the time of the German invasion, the French had 84 divisions,† not counting the 6 Belgian and 4 British divisions; that is, the French had a superiority over the Germans in the number of divisions, but because the German artillery was the more powerful,§ the opposing forces might have been considered as almost equal in strength.

In the opinion of the German General who was in 1914 the Chief of the Military Operations Section of the German General Staff‡ the cause of the German reverse on the Marne was the absence of the two army corps which had been withdrawn to face the Russian front on August 25th. Yet this officer also maintains that "had the battle on the Marne ended without any favorable (*positifs*) results for the French and the British," even then "the war itself would have continued." With this opinion of the German General, no military expert of the opposite side is likely to disagree. On the other hand, it seems equally certain that had the Austro-Hungarian army met its "Sedan" in Galicia, Germany, left alone, would hardly have gone on fighting, and the War might thus have ended in the year in which it began.

* A study in peacetime of the net of German railways leading to the Belgian frontier and of the fortifications of Thionville and Strasbourg might have shown that it was the German plan to invade France from the North.

** 45 regular divisions, 27 reserve divisions and 6 ersatz-reserve divisions.

† 47 regular divisions, 25 reserve divisions and 12 territorial divisons.

§ 14 batteries to a German division including 3 batteries of light howitzers and 2 batteries of heavy guns against 12 light batteries to a French division.

‡ General Tappen. *Jusque a la Marne en 1914.* In: *Documents allemands sur la bataille de la Marne.* Paris, 1930, p. 119-111, 124-126. General Tappen was the Chief of the Military Operations Section from the beginning of the War to the autumn of 1916.

A Decade of Army Schools

By Lieutenant Colonel Bernard Lentz, Infantry

ABOUT ten years ago our army schools began to flourish in a manner undreamed of before the World War. This war having brought out the necessity for a broader program of training and education, especially for officers, we went at it with a will and soon the officer who wasn't either preparing to go to a school or coming from one became quite the exception.

At that time, having the firm conviction that our schooling was being overdone, I wrote an article entitled "Who is going to soldier when everybody is going to School?" This article brought forth "brickbats," particularly from those who had been through our pre-war schools, and "bouquets" especially from

Army War College

those who sensed the necessity for becoming educated but who lacked, perhaps, the enthusiasm for doing so.

I have since gone through the schools and now, after more than ten years have passed during which our schools have undergone changes and have been placed on a more permanent basis, I feel that an article on the present subject will not be out of place.

Jonathan Swift, the English satirist has told us: "If a man would register all his opinions upon love, politics, religion, learning etc. beginning from his youth and so go on to old age, what a bunch of inconsistences and contradictions would appear at last." It is with Swift's idea in mind that I undertake my present task.

I sometimes wonder if we fully appreciate the extent to which our schools have contributed to the up-building of our national defense. We are wont to speak of national defense in terms of man power, trained and untrained and supplies either on hand or planned for and often fail, because we lack a definite yardstick, to measure adequately the great national defense asset we possess in our corps of schooled officers.

No study of our state of preparedness can be complete without entering on the credit side of the ledger this large item of military education which, when taken at its full value, goes far to make a good showing when the ledger is balanced.

Our schools have been worth all the money and all the efforts we have expended. This was forceably brought to my attention sometime ago when I participated in a tactical inspection of an infantry regiment. After the inspection the general—one of the best known tacticians in the army—pronounced the organization fit, in every way, to take the field, and yet the organization had had practically no field training for many months prior to the inspection. The regiment, snow bound for months in winter and conducting camps of every description during the summer, simply hadn't found the time for tactical training.

The commanding officer, all the battalion commanders and a large majority of company commanders and staff officers had recently joined the organization. The inspection being imminent, some tactical exercises had been planned but had to be mostly omitted because of inclement weather. And when, in spite of an almost total absence of field training coupled with the fact that a majority of the officers were new to the organization, the regiment was pronounced fit for the field there could be but one conclusion. It was this: While the officers had not played their respective parts in the team prior to the inspection, they did show up well during the inspection because at school they had learned among other things, two very important ones viz. a uniform technique and a knowledge of their respective roles in relation to the regiment as a team.

Not only in the Regular Army but also in the National Guard and Organized Reserves, the influence of our schools has spread; directly, through the hundreds of National Guard and Reserve officers who have passed through the schools and indirectly, through the teachings of our regulars who serve with these components.

The objections to our greatly enlarged school program, which were quite violent ten years ago, have gradually disappeared, "and fools who came to scoff remained to pray," now aptly describes the change of sentiment that has taken place.

It is interesting to note the changes that have taken place in the conduct of our schools since the close of the world war. Foremost among these changes is a broader definition of education on which, more and more, our school methods of instruction are being based. I feel that those in charge of our schools are recognizing, while military training and military education must go hand in hand, that there is a distinct difference between training and education; that there is a proper place for both and that both must be fostered if our schools are to achieve the best possible results.

In this connection, let me quote from an article by Dr. A. Flexner, Director of the Institute for Advanced Study, published in May 1932 number of the *North American Review* and entitled, "The University in American Life:" "Training is, let me repeat, concerned with skills, technique and devices. One trains cooks, one trains plumbers, one trains bookkeepers, one trains business men; but one educates scholars, one educates philosophers, one educates economists, one educates physicians." Applying this line of reasoning to the military we might say that one trains army officers for general utility and one educates army officers for leadership and responsibility.

Without in any way belittling its importance, training as Dr. Flexner observes "is on a distinctly lower intellectual level and aims at a distinctly lower, because an immediate, goal than does education."

The end to be gained through military education (bearing in mind the distinction that has been made above between training and education) is, a liberal outlook on the part of those who are to hold important positions in our military set-up.

An English writer—Wickam Steed—has given us a good definition of a liberal outlook. He says "A liberal outlook is a matter of mental and moral poise. It is compounded of tolerance: of a belief in individual freedom; of a conviction that all things human are relative and that the tyranny of fixed absolutes cramps men's minds. It recognizes that within given limits of space and time, certain principles may be accepted as rules of unquestioned expediency, subject always to deterioration when circumstances change."

Unless we study this definition of a liberal outlook rather carefully and at the same time bear in mind

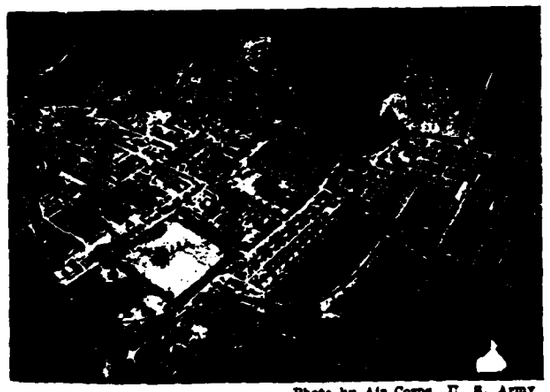


Photo by Air Corps, U. S. Army
Command and General Staff School, Fort Leavenworth, Kansas

the conception of education, as distinct from training, we are likely to come to the snap conclusion that here we have ideas that may be appropriate for use at Harvard or Oxford but have absolutely no application in the military service. Search as we will through the pages of history, we find that all real leaders, military or otherwise, have been made of the same stuff. They were men of character; they were trained, yes, but last and not least they were educated.

In this connection let me give two quotations. The first is from General Von Seeckt who in his book, "Thoughts of a Soldier"—a book well worth reading—tells us: "The value of the knowledge acquired by study must not be over-estimated. The soldier faced

Photo by Signal Corps, U. S. Army
The Infantry School, Fort Benning, Ga.

with the necessity for independent decision must not mentally search the pages of his professional encyclopaedia nor seek to remember how the great generals of history, from Alexander to Zieten, would have acted in a similar case. Such knowledge as that derived from the study of the history of war is only of living practical value when the wealth of detail has been incorporated with a man's own mental resources."

The second quotation is taken from York von Wartemberg's "Napoleon as a General": "The rational employment of general principles marks the difference between the genius of the true artist and the lack of freedom of the mechanic who is dominated by rigid rules, and the bungler who despises all the rules and denies their justification."

Undeniably, the authors of both the aforesaid quotations had in mind the educated man and not simply the trained man. The conception of education brought out by these military writers is the same as that enunciated by Dr. Flexner. In other words to develop leaders military or otherwise, we must have more than training, we must insist on education.

We should recognize that among our army officers we shall always have first, those who can be trained and no more, second those who can be trained and educated and third, those who can neither be trained nor educated. For the first class there will always be sufficient jobs in our army because as everywhere else much important work must always be done by the dependable trained man. The officer who shows by his work, not only in school but year in and year out, that he belongs in the second class should be encouraged to go to our higher schools to become educated. The third class which I am happy to feel is quite small, should be eliminated.

Our system of schools is intended to do just these things. We shall succeed, more and more, in accomplishing the desired results as we understand, better and better, the relationship between training and education.

If we linger too long in the field of training for those who are capable of being educated we shall find that the student, when he reaches the higher schools will have difficulty in learning to think for himself, to acquire the liberal outlook, to become educated. The idea of education should go hand in hand with training in our lower schools so that the young student will learn to appreciate early in his career that if and when he goes on to the higher schools he will more and more be expected to stand on his own intellectual feet.

I have always thought that hitching our general staff eligibility to our schools was a mistake for the simple reason that the student is likely to feel that he had better accept what is given out as doctrine or he may find himself not on the eligible list when the course is over. The measure of a school is not in what the student does in school so much as what he does after he leaves the school—the result of the stimulation of his thinking machinery received while a student. To my way of thinking the general staff eligibility law should be repealed if for no other reason than it will encourage true education in our higher schools.

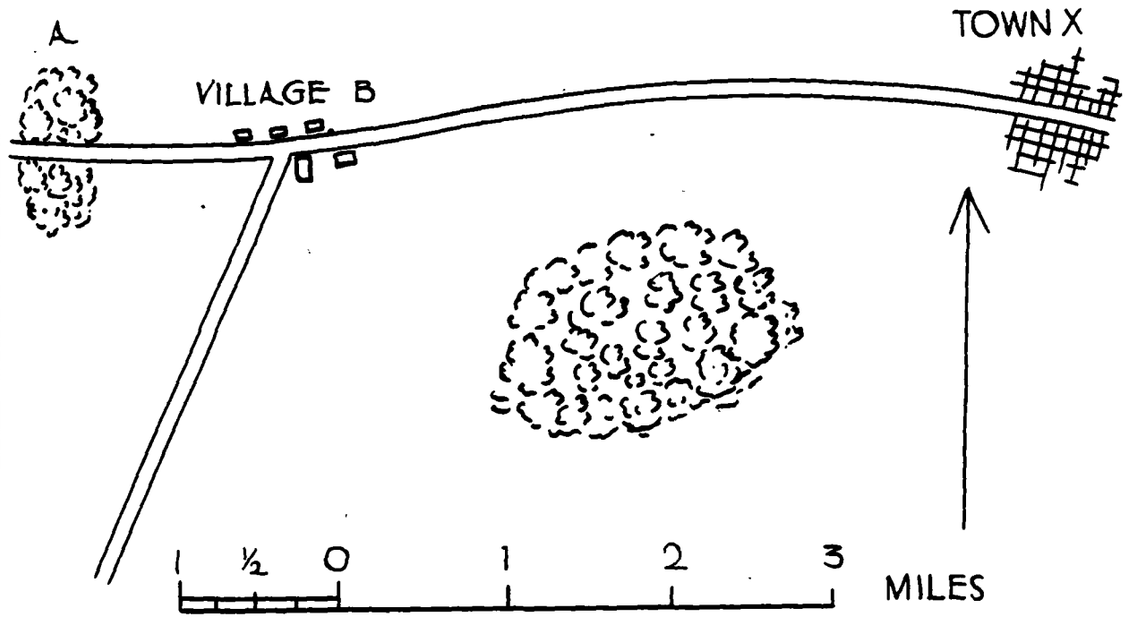
We know that in Europe, for years prior to the World War, general staff eligibility depended largely on school achievement and we may have gotten the idea from Europe. But Europe may have been wrong. I inject a remark by General von Seeckt in speaking of the German army: "Perhaps in an age when so much was done to develop the general staff, too little was done to extend the training of commanding officers". Our schools train for both but do we not give the general staff a special halo through the eligibility law?

Our general staff officers should be trained but what is more important they must be educated—they must possess the liberal outlook—if our present logical general staff system is to function in time of great stress.

To sum up: Our schools have made wonderful progress during the past decade. They leave little to be desired by way of training which is important, but what is really significant, our schools have grasped the idea that education is not so much the acquisition of knowledge but deals largely with the process of stimulating the student to think for himself. This is indeed an auspicious trend for if we continue to follow it, our officers' schools will turn out to an increasing extent—not an over-trained and under-educated product—but a corps of officers who fully understand the proper balance that should always be maintained between training and education.

NOTES FROM THE CHIEF OF CAVALRY

What Would You Do in a Situation Like This?



2d Lieutenant Horatio Bottomley, halting his command at point "A," wiped the sweat and grime from a brow which six months before was first introduced to an army campaign hat. The O. D. handkerchief with which he performed this office removed much of the grime but failed to remove the worried look from Mr. Bottomley's youthful forehead. Once more he was faced with problems, the answers to which he could not recall having been taught in his three months' course of instruction prior to being commissioned for this war.

Briefly, his situation was this. . . . His platoon of Cavalry, now reduced to two squads through march casualties and unreplaced messengers, was on a two days' reconnaissance mission in hostile territory. It was sunset of the first day, with a clear moonlight night in prospect. Due to the dryness of the country, no water suitable for either man or horse had been encountered since 10:00 AM. It was about ten miles to the nearest friendly troops and probably about the same distance to the nearest Red forces, although the inhabitants were actively hostile.

As shown on the sketch, immediately ahead was the village "B", where water might reasonably be expected. To the southeast of village "B" was a woods. Farther on down the road was the sizeable town "X". There should be plenty of water there. Town "X", by the way, was one of the points the platoon had been directed to reconnoiter.

Acting on an impulse which had proved profitable in solving previous problems, Lieutenant Bottomley called Sergeant McMiffin, his platoon sergeant, and asked this worthy for his recommendations.

Sergeant McMiffin rolled his quid into a more convenient recess of his mouth and spoke:

"Lieutenant, these horses need water. Probably the best place to water around here is in the town "X". I know there may likely be water at "B", too, but it will only be wells. We've got to reconnoiter town "X" anyway before we get back, so we could go on to town "X" for water, and then we can take a look around and see what to do next. Of course, we may hit trouble in "X", and in that case it might be better to water at "B", halt around here somewhere for the night and look over "X" in the morning. On the other hand we may strike trouble at "B" and then we might never get to "X". Lieutenant, I don't know what is best to do."

The furrows of care on Mr. Bottomley's brow were seen to grow deeper as he tried to decide what to do.

What would you do?

For Solution Turn to Next Page.

Lieutenant Bottomley's Solution

Lieutenant Bottomley marched the platoon, with two men acting as a point, to the village "B", where the horses were watered and canteens filled at the well. Pails and tubs were commandeered in the village to facilitate watering. A small march outpost covered the platoon during watering.

By this time it was growing dark, with a clear moonlight night coming on. The platoon then resumed the road toward the town "X" until nightfall and, when about opposite the woods south of the road, it left the road and moved into the woods to bivouac for the night.

Discussion

To maintain the condition of the personnel and mounts of his platoon, Lieutenant Bottomley must get them watered. The village "B" is nearby and should prove adequate as a watering point.

While watering, cavalry is very vulnerable to surprise attacks. The village "B" being small offers less probability of such an attack by hostile civilians than does town "X". To attempt to water after dark increases this danger at either town.

It would be a mistake to go into "X" at this time, particularly as it will be but a short time until dark.

After watering, to remain in the village "B" or the town "X" for the night might be disastrous; to bivouac in the open within sight of the village "B" or the town "X" might be equally dangerous. Many small commands have been surprised and destroyed under such circumstances.

A covey of quail will water in the evening and at dusk will fly to a field for the night. Upon alighting they will run for some distance to a spot where night will be passed. Bobwhite knows that owls, cats and foxes may have marked his return flight from water, and *he* does not stay for the night in the spot where his enemies may have located him at dusk; neither should Lieutenant Bottomley's patrol.

The best place for a small cavalry command in hostile territory at night is in a location not definitely known to the enemy, in woods with some adjacent high ground on which to place some observation. Its security comes from its concealment, not from a large outpost. The command needs all the rest it can get consistent with its safety and mission. (Department of Tactics, The Cavalry School)

An Appreciation

September 16, 1932.

Colonel Pierre Lorillard, Jr., Q. M. C. Remount,
Tuxedo Park, New York.

My dear Colonel Lorillard:

In the name of the United States Cavalry Association, as well as personally, I wish to thank you for your assistance to that Association in its responsibility for conducting the Equestrian Events and the Riding Phase of the Modern Pentathlon Event in the Games of the Xth Olympiad recently held in Los Angeles, California.

Singlehanded and in a time of financial depression you collected the sum of $5,000.00, thus materially aiding that Association in caring for its large responsibilities in the Games. Without this aid on your part it is very doubtful if there would have been any Equestrian Events in the Olympic Games.

In addition to the above your personal advice and assistance prior to and during the Games were most valuable.

The United States Cavalry Association and the horse world in general owe you a debt of gratitude.

Most sincerely yours,
Guy V. Henry,
Major General, U. S. A.,
Chief of Cavalry,
President, U. S. Cavalry Association.

Cavalry Leadership Tests for Small Units, 1932

AT a review given by the 11th Cavalry, Presidio of Monterey, California, August 29, 1932, the Chief of Cavalry presented the members of the Composite Platoon, Troop A, 11th Cavalry, their prizes earned as members of a winning platoon in the 1932 Cavalry Leadership Test for Small Units. These prizes consisted of a piece of silver to the platoon leader, 1st Lieutenant Harry C. Mewshaw, 11th Cavalry, and $425.00 in cash to the enlisted members of the platoon. The prizes are donated annually by "A friend of the Cavalry."

Major General Guy V. Henry, Chief of Cavalry, Presenting to 1st Lieutenant Harry C. Mewshaw, 11th Cavalry, a Silver Trophy won as Platoon Leader of the Composite Platoon, Troop A, 11th Cavalry a winner in the 1932 Cavalry Leadership test for small units.

Tables of Organization

THE Cavalry School has recently published "Tables of Organization. Reference Data. 1931-32—Peace Strength."

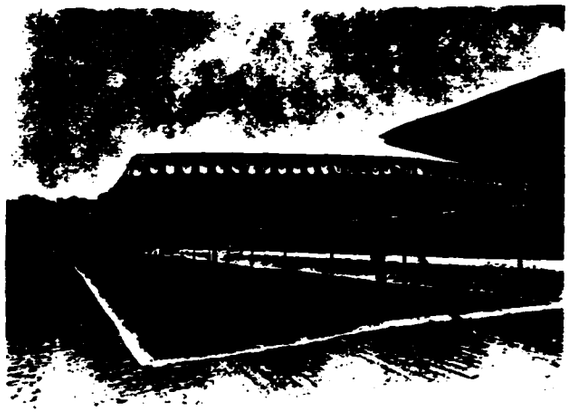
The "Introduction" states:

"This pamphlet, compiled by the Department of Tactics, assembles in convenient form certain reference data relative to organization, movement, supply, and designation of units for authorized peace strength.

"The figures shown in the tables contained herein are based upon tables of basic allowances, peace strength, and authorized tables of organization, peace strength, except as indicated in the individual table, and are authoritative in the preparation and solution of all problems and exercises at The Cavalry School. Under actual conditions in the field these figures will vary depending upon the existing strength, number of absentees, terrain, weather, hostile fire, and other conditions, since the organic transportation and the tables of basic allowances as shown in tables herein, are constant for authorized peace strength, reduced peace or recruiting strength. For organizations taking the field on mobilization, the supplies, road distances, etc., required by an organization, are in the nature of the actual strength to authorized strength as shown herein, and may prove of value throughout the cavalry service in the several components of the United States Army."

The table of contents is most complete and covers Organization, Troop Movements, Trains, Class I Supply, Ammunitions, and Miscellaneous.

The pamphlet would be most useful in all squadron and higher headquarters.



COVERED PICKET LINE, TROOP F, 3rd CAVALRY FORT MYER, VIRGINIA. (Winner—1926 GOODRICH TROPHY)

This cover was made from salvaged material. It has been in use for two seasons. Its construction was largely due to the perseverance and initiative of 1st Sergeant Thomas Moffett.

A TRIBUTE TO A GALLANT CAVALRYMAN Signal Corps Photo.

Colonel William K. Naylor, Chief of Staff of the 2d Corps Area, makes the principal address at the dedication of Morris Memorial Field, the polo field at Governors Island, New York, Sept. 15, 1932. This field is dedicated to Colonel Willis V. Morris, Cavalry, who did much to promote the game of polo in the United States Army. Colonel Morris died, while serving as Assistant Chief of Staff, G-3, Headquarters, 2d Corps Area, as a result of injuries received while playing polo on Long Island, N. Y., in 1931. In polo costume is Major Paul R. Davison, G. S. C. (Cav.), A. C. of S., G-1, and Polo Representative, Hdqrs 2d Corps Area. (Troops and colors of the 16th Infantry in background).

BOOK REVIEWS

THE NATION AT WAR, by General Peyton C. March. Doubleday, Doran & Company, Inc., Garden City, New York. 376 pages—Illustrated; Indexed. Price $3.00.

This book is so well known and has been so much discussed throughout the military service, it scarcely needs a review in these columns. Extracts from the book have already appeared in the press and have undoubtedly been read avidly by all students of military lore. However, these extracts are those which would be most likely to catch the public eye and, it should be stated, fail to do ustice to the book as a souree of military study.

General March has not trusted his memory completely in the writing of his book, but has made extensive use of the files of the War Department. As these files were compiled while he was at the head of the great war machine of 1918, they are really his own, but are the official records nevertheless.

The book is not a chronological account of the activities of the War Department but treats each of its activities under a separate head.

After a brief discussion of the Army as it was when the United States entered the World War and of the grand strategy of the Central Powers, and the military situation at that time, General March tells of the War Department as he found it when he returned from France in March, 1918, and of how it was reorganized after that time. In three chapters entitled The Great Shipping Saga he tells of how ships were obtained and men shipped to France, of how ships were obtained and cargo was shipped to France and finally of how the A. E. F. was returned to home shores for demobilization. He tells how the Siberian and the Archangel Expeditions came about. The chapters on Industrial Mobilization and Demobilization should be studied assiduously by all who entertain hopes of being "the man of the hour" should his nation ever become engaged in a struggle calling for maximum effort. The chapters on the organization and activities of the Supply Service, the Air Service, Welfare Organizations, Censorship, and the Draft Law are valuable sources for War College studies on these subjects.

These are the chapters which the military student, striving to equip himself to take his place in a great war machine, will find the value. There are other chapters dealing more with personalities which, while not detracting from the military value of the book, give it a human interest touch which makes it absorbing to all—the military historian, the patriot, and the idle reader. These are the chapters on why General Wood was not sent to France; President Wilson as a war Commander-in-Chief; Mr. Lloyd George; General Bliss; Congress and the War Department; and the A. E. F. from the War Department records.

The Nation at War is a book which should be found in every thinking man's library. It will be quoted in World War controversies for years to come. It will be referred to in many studies on the planning and conduct of war. It will be the basis for much of the history of the American participation in the World War.

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WORLD STATES OF THE MACHINE AGE, Capt. Woodbern E. Remington, Infantry. Gilbert Printing Company, Columbus, Georgia, 1932.

"World States of the Machine Age," a brilliant discussion of conditions of the present day, by Captain Woodbern E. Remington, and released by a local printing company a few days ago, has a triple claim to interest of Columbus people. As the most ambitious undertaking of the Columbus printing company, it would alone attract favorable attention; as the work of a Fort Benning officer who this winter made his home in Columbus, it will create further interest; for its clear cut analysis of world conditions of today, it will challenge the thought of thinking people.

"World States of the Machine Age" carries a foreword by Major General Campbell King, commandant of Fort Benning, in which he says, "The subject matter is one which vitally concerns the future economic and political status of mankind. The discussion is predicated upon a broad background and shows an extraordinary degree of scholarly research. It is a book which should be carefully read and seriously pondered by all those who are concerned with the amelioration of the present conditions which confront the civilized world. I congratulate the writer heartily on the brilliant analysis he has made of these conditions and the remedies, both political and economic which he discusses as necessary to cope with the complications incident to the development of the Machine Age."

In his preface Captain Remington lifts the guilt for the present international chaos from the Great War, which he says was but "a phase of a tremendous world-wide social upheaval—the attempt of humanity to adjust itself to the Machine. Those extensive organizations of humanity, necessitated by the Machine Age, will be shaped on racial lines. It is with these new social organizations which we have termed 'World States,' that we are now concerned. Until they are finally consummated, we must continue to undergo such periods of industrial depression and political unrest as we are now experiencing."

In a scholarly review of Captain Remington's book which for lack of space we cannot publish in full, Major Truman Smith says:

"Captain Woodbern E. Remington, Infantry, U. S. A., a Harvard man and a soldier by choice, has recently published a book of unusual significance for our changing World, and which will be of equal interest to soldiers, scientists and scholars.

"Captain Remington urges, as a preliminary step toward World unity, the coalescence of those nations, akin by custom, ideals and blood relationship, into super states; for instance a Latin America, a Slavia, a Mediterranean empire, a Far Eastern Mongol state. Such coalescences in addition to serving a distinct purpose in this machine age would constitute definite progress towards world unity.

"Remington is conservative in his program for the future. Rejecting visions of leagues and world super states all at once as the dreams of impractical idealists, he urges the creation of tariff unions by blood related states. For America and England, he demands an economic alliance into which will also be admitted the Scandinavian and Teutonic countries. Such an economic alliance, Remington suggests, should be based on a system of tariff preferences and trade agreements, much along the lines which the British empire proposes to discuss at the coming Ottawa conference. If Dutch South Africa, French Canada and Anglo-Scotch New Zealand can come to an economic agreement, Remington sees no insuperable obstacles to a similar agreement among racially allied English, Swedes, Teutons and Americans.

"It has already been suggested that racial blood kinship is to be the cementing tie in these race-nations of the future. However, the life flood of these states is to be its internal trade.

"There is no one who has tasted the economic absurdities of the Danubian states as created by the peace treaty, who does not realize how obsolescent the nationalism of small states has become in this machine age. What reason is there, in the efforts of nations such as Denmark and Austria to become economically self-sufficient in an age when the two hemispheres are scarcely a day apart by aeroplanes? Remington believes, and this reviewer shares his belief, that if nationalism is to survive, the small nations must be amalgamated into economically self-sustaining blocks. That feeling which we now understand as patriotism must in the future strictly limit itself to a love of one's locality. Our present feeling of patriotism must be transferred from the 'nation' to the 'racial group.'

"The formation of such superstates, if it can be accomplished, will inevitably lead on to world unity."

"World States of the Machine Age" is written in a clear, readable style. It is to be placed on the shelves of the larger libraries of the country.—*The Ledger-Enquirer*, Columbus, Georgia.

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BETWEEN THE BIG PARADES, by Franklin W. Ward. New York: Frederick M. Waterbury, 1932. 284 pages. $2.50.

One of the most widely known National Guardsmen in the country is the author of this work. He has added a real contribution to the history of the American Expeditionary Forces in France. It is essentially the story of an infantry division's human elements in war, with refreshing individual bisections predominating.

The word pictures are unusually well done many of the events related standing out like snapshots. At times the reader becomes, as the author indicates, an imaginary wayfarer on the road to Ronssoy in France, who will watch that which as a fanciful observer he is to witness.

Replete with exploits, adventures and misadventures in which wit and humor dominate, there is closely woven into the fabric many incidents that pierce the depths of pathos and tragedy. The descriptions of the minutia of long fatiguing marches of infantry through rain and mud; building up a combat line, long battle action, and in the end practical exhaustion; are comparable with the very best that military literature has produced.

The author deals with the abstract and withal philosophic atmosphere of fighting men, and sounds notes that come only from the hands of men of observation who have served and marched and lived amongst them.

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THE COMING OF SOUTH AMERICA, by Henry Kittredge Norton. Published by the John Day Company, New York, 1932. 300 pages. Price $3.50.

It would probably be safe to make the statement that the average citizen of the United States says. "Latin America"—and immediately visualizes revolutions, bananas, Sandino and our own U. S. Marines, the entire conglomeration being somewhere south of the Rio Grande River and Tia Juana! In this volume Mr. Norton dissipates the fog. As a representative of the Carnegie Endowment for International Peace, the distinguished author has recently spent many months in South America studying political and economic developments in the leading South American countries, and here records his "reflections and analyses."

Argentina, Bolivia, Brazil, Chile and Peru are all great countries, each one with an individuality of its own, and all resentful at being classed simply as "Latin America." Each one has a different internal problem and maintains different relations with each other and with the United States. The author notes that at present there is considerable ill-will shown towards the United States, due to the more or less crude manner in which our financiers handled the numerous postwar loans made with them. Mr. Norton records briefly the revolutions of the past two years and discusses the internal political, social and economic problems. He makes an estimate of the trends of development in each country, and forecasts their political, cultural and economic relations with the United States.

It is plainly apparent to all students of international affairs that eventually there will be much closer union between the countries of the Americas, North and South, than exists today, and for tha reason Mr. Norton's book is most appropriate at this time. It is recommended to all officers.

The Foreign Military Press

Reviewed by Major Alexander L. P. Johnson, Infantry

COLOMBIA—*Revista Militar del Ejercito*—January-February, 1932.

In honor of the Bicentennial of the birth of George Washington the *Revista Militar del Ejercito* of Colombia dedicates the opening pages of this issue to the Father of Our Country whose likeness adorns this ably edited military periodical as a frontispiece. The editors reproduce on this occasion the correspondence that passed between the great Liberator, Simón Bolívar, George Washington, P. Custis, Lafayette and others regarding the George Washington portrait and relic presented by the Washington family, in 1825, to General Bolívar through Lafayette. A thumbnail sketch of the life of Washington appropriately completes the tribute of our comrades in arms of the Colombian Republic. May the ideals and precepts of Bolívar and Washington ever cement the friendship that happily prevails between the nations which owe their existence to the genius of these great Liberators of the North and South

CANADA—*Canadian Defense Quarterly*—April, 1932.

"An Unsubstantial Frontier of Europe," by An Observer.

"One of the many territorial problems," writes the author, "which had to be dealt with by the Allied Powers at the close of the Great War was that of the frontier between the resurrected countries of Poland and Lithuania." That frontier, fourteen years after, is still one of the unsettled and constantly irritating problems of Europe. For several centuries the two countries were more or less united. Although the golden age of Poland coincides with the reign of the Jagellones, her Lithuanian dynasty, it was Polish culture that bid fair to cement the two nations firmly together. The partition of Poland interrupted this peaceful evolution. With the collapse of Russia and Germany, Poland and Lithuania came back into existence as independent but separate states. There was keen controversy as to the national frontier. In the disputed areas the populations were thoroughly mixed. The main area in dispute was the district of Vilna including the city of Vilna claimed by the Lithuanians as their national capital. The League of Nations awarded the district to Lithuania. A Polish general—ostensibly disowned by the Polish government—seized Vilna by force and defied Lithuania and the League of Nations to dislodge him. The League of Nations, following the advice of the Council of Ambassadors, reversed its decision and awarded the district to Poland. Lithuania broke off relations with her neighbor and refused to recognize the League's decision. Along the frontier which now separates these nations, Poland maintains a chain of guardhouses placed at intervals from 6 to 10 km and Polish frontier guards keep a vigilant watch over Lithuanian approaches. The Lithuanians, on the other hand, with significant consistency refuse to establish any sort of guardhouses or watch towers along a frontier which they decline to recognize. As might be expected, frontier clashes between sentries of the two states are rather of common occurrence. On dark, stormy nights Lithuanian patrols have a trick of moving frontier markers farther back into Polish territory. The Poles of course move them back as soon as they detect the trick, perhaps adding here and there a few yards to their territory. There are neither roads nor railroads across this troubled frontier.

Although Lithuania alone cannot hope to do anything to change the situation, serious danger lurks in the circumstance that behind Lithuania are Germany and Russia, neither of whom is likely to remain satisfied with the present territorial arrangements. Whenever either of them regards the time ripe for action, the Lithuanian frontier with its constantly recurring incidents and atmosphere of permanent friction may offer a convenient place for the striking of the spark which will set the powder magazine ablaze.

AUSTRIA—*Militarwissentschaftliche Mitteilungen*—January-February, 1932.

"Did Armaments Cause the World War?," by Major General Franz Schubert.

"The members of the League of Nations subscribe to the principle that the preservation of the peace demands the reduction of armaments," thus quotes the author from an official pronouncement of the League. The author goes on to show that in 1912, France appropriated for her military and naval establishments about 30, Germany 23 and Austria-Hungary 10½ gold crowns per capita of population. The gold crown was worth about 23 cents, U. S. currency. In 1913, the author states, there were with the colors in France one soldier for every 65 inhabitants. The ratio in Germany was one for every 98 and in Austria-Hungary one for every 128. At the outbreak of the war France mobilized 8 per cent of her population. Germany 5½ per cent and Austria-Hungary only 2¾ per cent. Thus, the author observes, "if armaments were actually responsible for bringing on the World War, the blame certainly cannot rest with the Central Powers. Notwithstanding these facts, the author continues, the Central Powers were charged with war guilt and were as a punishment disarmed, while France and her allies continued to arm to a point where their present armament far exceeds that of the pre-war period.

The author does not answer the query he chose as a title for his thesis, except by implication, that the armaments of the Entente, notably of France rather than those of the Central Powers brought on the war. The arguments advanced are not convincing

for, unfortunately, statistical figures can be used to prove anything.

FRANCE—*Revue d'Artillerie*—February, 1932.

"The 155 mm Schneider Gun."

The new platform mounted 155 mm Schneider gun with an all-around field of fire is characterized by its ease of manoeuvre, rapidity of fire and great mobility. These qualities are essential considering that this gun

The 155 mm Schneider Gun in Firing Position.

is intended for use against aerial as well as ground targets. The gun, set at an angle of 45 degrees, will fire a 50 kilogram projectile a distance of 26 kilometers with an initial velocity of 900 meters. Mounted upon a platform with a semi-circular track, the gun is capable of firing in any direction at elevations from —8 to —45 degrees. The breechblock is easily operated at any angle of elevation. The rate of fire is four to five rounds per minute at angles of elevation between zero and 25 degrees, and three to four rounds per minute at elevations above 25 degrees.

The gun is normally transported in three loads, the gun, the carriage and the platform. It can be transported in a single load. The gun can be put into action in a very short space of time without the necessity of excavation. The projectile, weighing 50 kilograms, contains 5.580 kg of explosives. The powder charge weighs 19.500 kg. The maximum range is 26 kilometers. The field of fire is 160 degrees which by a simple shifting of the semi-circular track is increased to 360 degrees.

The gun in battery, including platform and track, weighs 16,400 kg.

—*Revue Militaire Francaise*—February, 1932.

"Yorktown (1781)," by General de Cugnac.

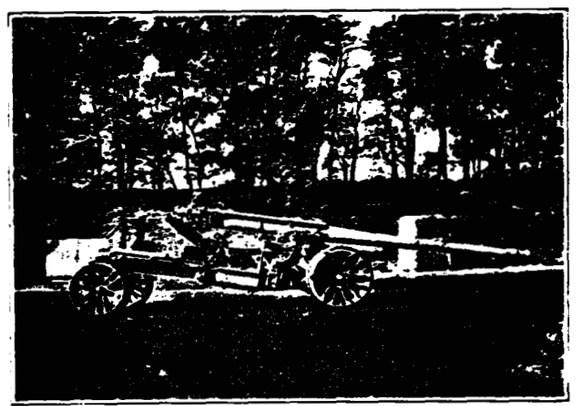
The Sesqui-Centennial of Cornwallis' surrender at Yorktown, at the commemoration of which, in October, 1931, Marshall Pétain participated as the official representative of France, furnished the motive for General de Cugnac's very interesting and able monograph of that memorable campaign. "This short and brilliant campaign," writes the distinguished author, "is largely ignored by the French public. It well deserves to be known. Remarkable for its strategic conception and for the perfect cooperation between the land and sea forces, it was a small affair from the point of view of actual numbers involved, but most important from the point of view of actual results. The Franco-American victory at Yorktown assured the independence of the United States, changed the map of the world, and for these reasons is the greatest event in modern history."

Tracing in detail the events of that truly remarkable campaign on land and sea, which, after three months, culminated in the capitulation of the British at Yorktown, the author concludes that it is difficult to find in history another campaign as perfectly conducted. "Everything merits admiration; the perfect collaboration of France and America, as well as the excellent relations which existed between the allied general staffs; the correct strategic plans; perfect tactical disposition of troops and naval forces; the skill of the artillery on land and sea; the valor and endurance of French sailors, and both French and American troops." The most important factor, however, which made that victory possible was, the author points out, the mastery of the sea which de Grasse was able to secure. "The arrival of the allied siege artillery, the transport of infantry, the naval blockade and the inability of the British to bring up reenforcements, were all corrollaries of French naval superiority."

GREAT BRITAIN—*The Army Quarterly*—January, 1932.

"Yorktown, 1781," by Captain M. E. S. Laws, M.C., R.A.

"At the present time, when popular clamor for disarmament may be expected to sway the judgment of



The 155 mm Schneider Gun, Traveling Position.

those who are responsible for the efficient maintenance of the country's fighting services," writes the author, "the unveiling of a tablet at Yorktown, Virginia, to commemorate the surrender of Lord Cornwallis' army to George Washington....teaches a lesson which we cannot afford to forget, namely our dependence on sea-power in war." The author believes, that the capitulation which lost the American colonies to England was the direct result of the temporary failure to retain command of the sea. He points out, that

after five years of war the situation was by no means unsatisfactory for England. The colonists, in spite of French aid, were disorganized and their enthusiasm for the war was on the wane. The British troops were, however, numerically weak and their operations were, in the author's opinion, hampered by friction between their commanders. Giving a brief outline of the progress of the campaign which ended with the surrender of the British at Yorktown, the author concludes that "the campaign had been badly mismanaged partly *owing to personal jealousies between Clinton, Cornwallis and Germaine, the Secretary of State in London,* and partly owing to ineffective cooperation between the naval and military commanders, but the immediate cause of the disaster was the unexpected arrival of de Grasse in overwhelming strength which gave to the enemy command of the sea." He believes, that without the assistance of the French fleet, Yorktown could not have been completely invested, and the British army could have been transferred either to Charleston or to New York.

The loss of the command of the sea by the British for a period of six weeks was, in the author's opinion, sufficient to finish at a blow the war, which had dragged on for six years. "The vital necessity for *England to retain command of the sea in war,*" writes the author, "is so obvious, that the lesson of the Yorktown campaign must not be overlooked when the time comes to discuss further reductions in naval armaments." One cannot help to agree with the author when he concludes that "the cost of a powerful navy may be heavy to a nation already embarrassed by financial difficulties, but the inevitable penalty of weakness at sea will certainly be no less disastrous in the future than it was....at Yorktown."

GERMANY—*Militar-Wochenblatt*—January 11, 1932.
"The Last 200 Meters," by Lieut. Col. Dr. Lothar Rendulić.

The difficulties involved in delivering a daylight attack under modern conditions of warfare will necessarily compel the attacker to launch his offensive as far as practicable under cover of darkness or to take advantage of poor visibility, natural or artificial. Even under the most favorable conditions the attacker will have to be content if he can come within 200 meters of the hostile main line of resistance. Whatever the time or conditions of the attack, the moment the infantry assault waves arrive within 200 meters of the enemy's line, supporting artillery fires must necessarily cease. During the most critical stage of the attack, the final assault, the attacking infantry is thrown completely upon its own resources.

In the light of war experiences, infantry on the defensive can recover its striking power quickly after the hostile artillery lifts its fire. The last 200 meters present a formidable problem to the attacker. The author seeks the solution in a proper employment of infantry weapons. Among these, he believes, the heavy machine gun is the most important. It should give uninterrupted support to the advancing skirmish line under all circumstances but more particularly so during the last 200 meters. This will frequently necessitate the emplacement of heavy machine guns far to the front. The light machine gun plays an equally important part in the tactics of the final assault. The infantry mortar as the battalion commander's weapon should be used in advanced positions only under favorable conditions. The author observes that there is a growing demand for a light type mortar in the rifle company. These mortars would go into action within the combat zone of the rifle company. In the case of light mortars single bursts are more important than effective range, hence reduction of weight must not be sought by means of reducing the calibre. Moreover, a single calibre for both types of weapons would considerably simplify the ammunition supply. The author believes that the mortar is an indispensable weapon in that stage of the attack when the infantry no longer can receive the support of artillery.

Another very effective but somewhat neglected weapon is, in the author's opinion, the rifle grenade. It has, however, the serious drawback that only a small proportion of riflemen can be equipped with the rifle grenade, hence it is always a question whether or not the men so equipped will actually reach the point whence they may fire with the maximum effect. It would be difficult indeed to hold out initially rifle grenadiers with a view of bringing them forward at the critical time and place.

Different armies conceive differently the tactics of the final phase of the attack which begins approximately 200 meters from the enemy's line. The French favor a coordinated attack behind a rolling barrage. The line of departure may thus be several hundreds of meters from the enemy. The infantry advances to its objective without halt. Platoons and squads drive home the assault independently. The charging distance is about 10 meters. This plan of action, in the author's opinion, represents a purely infantry point of view. It fails to utilize fully the fire power of the artillery and of the heavy infantry weapons. In marked contrast to the French plan of action, Austrian combat regulations provide for heavy artillery concentrations either upon request of the infantry commander or upon the initiative of the artillery commander. The infantry must be in position to deliver the assault the moment the artillery lifts its fire. During the charge infantry weapons, notably hand-grenades supply the necessary support to pin down the enemy. The Austrian plan of action does not admit a rigidly meticulous organization of the attack except in zone warfare. The impulse to the charge germinates in the most advanced line. The artillery must keep itself thoroughly informed as to the progress of the attack and render the necessary support. Coordination is largely left to the respective commanders of the infantry-artillery team.

Tanks and attack aviation, in the author's opinion, will necessarily support the main effort. Their employment requires elaborate preparation, hence their usefulness, the author thinks, is largely restricted to position warfare.

Within the enemy's lines the action becomes a series of isolated combats of small groups. Control by the higher echelons of necessity must give way to the initiative of subordinate leaders. A prearranged plan of coordination of supporting weapons is practically out of the question. In this situation infantry must be wholly independent of the artillery, hence heavy machine guns in close support assume particular importance.

The advance over the last 200 meters and the ensuing combat within the hostile position represent the decisive phase of the attack. They present such a variety of situations that, in the author's opinion, it is quite futile to lay down rules to cover all possible contingencies. It is, therefore, important that the peace-time training of leaders and troops take full cognizance of this fact, and provide the practical means of inculcating initiative and resourcefulness in subordinate leaders in order to enable them to meet situations effectively and efficiently as they arise.

—*Wissen und Wehr*—April, 1923.
"The Concentration of the Cavalry," by Konrad Lepia.

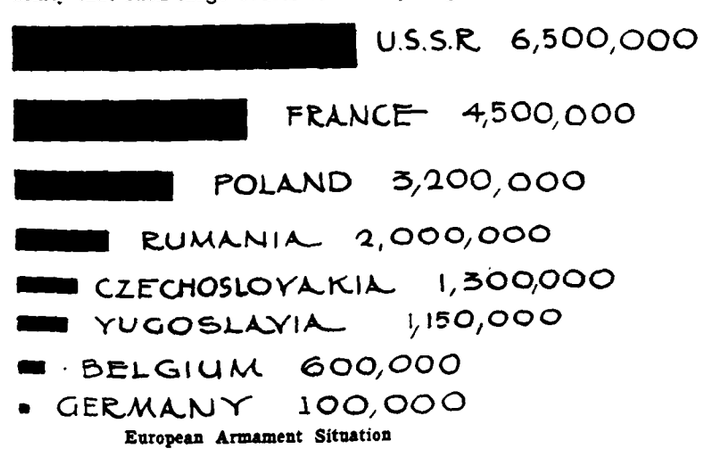
An interesting study and discussion of the strategic concentration and employment of cavalry by the various belligerents during the early stages of the World War. The author, a general staff officer with the Austro-Hungarian First Army during the war and a noted writer on military subjects, reaches the conclusion, that nowhere was the employment of the cavalry correctly conceived either strategically or tactically. In the West as well as in the East, cavalry divisions rode practically side by side, but there was never an attempt to assemble under a single leader a cavalry force of several divisions for the purpose of seeking a decision. The great lessons of the campaigns of Napoleon and Frederick the Great seem to have been forgotten. Both of these great generals consistently used the cavalry in large bodies. The high commands and general staffs of the World War apparently did not think in terms larger than the division. Russia, France and Austria-Hungary, according to the author, even neglected to create the necessary cadres for the command and general staff of cavalry corps. No thought was apparently given to the possibility that such large bodies of cavalry might be entrusted with important missions during the period of concentration. The consequence of the erroneous views which prevailed regarding the employment of cavalry, the author believes, was its faulty concentration, and this inevitably led to a gradual dissipation of that arm during the progress of the war. "It is not easy to lead cavalry," writes the author. "The best cavalry can prove its worth and mettle only when led by a great cavalry leader. Great generals are born and not appointed. This applies with equal if not greater force to cavalry generals."

HUNGARY—*Magyar Katonai Szemle*—June, 1932.
"French or Italian Orientation," by Ladislas Nyíri.

The author discusses Hungary's foreign policy as to whether it ought to follow a French or Italian orientation. Although, in the author's opinion, the peace treaties which terminated the Great War bear the stamp of French imperialism, the treaty of Trianon would not have been as severe had it not been for France's bitter hostility towards Germany. The German people, he states, were misled at the peace conference by assurances to the effect that Germany's disarmament was not a punishment but merely a prelude to universal disarmament. He presents graphically the European armament situation as shown below.

A glance at the map of post-war Europe shows that Germany is encircled by the armies of France, Belgium, Czechoslovakia and Poland aggregating nine million men. France, reenforced by the states of the Little Entente and Poland succeeded in securing the balance of power against the Anglo-Italian-German group. The author raises the serious question, whether or not France might in time be tempted to pursue a policy which is bound to lead to war.

The author believes that Germany will not consent to perpetual isolation. It is natural that she should turn towards Russia for assistance. Although much is said about the Red Army one way and the other, it is certain that Soviet Russia possesses an excellently equipped military establishment which as far back as 1920 was able to overpower the Poles. In order to counter the Russo-German menace, France sponsored the Polish-Rumanian military accord which places the combined forces of those nations under Marshal Pil-



European Armament Situation

Post-War Europe

sudski's command in the case of a war. If however, the Polish-Rumanian army of five million men facing Russia's six and a half million were attacked in the rear, conceivably their front might collapse. Thus, the creation of a second strategic grouping becomes a necessity. In this connection Czechoslovakia, Hungary and Jugoslavia might come into consideration. So far, Hungary has been left out of all reckoning partly because of the disinclination of France and her allies to grant Hungary any concessions, and partly, because Hungary in her present mutilated condition would be of little value to France. Hence, Czechoslovakia and Jugoslavia may be regarded as France's strategic reserves. Czechoslovakia is in a particularly favorable position to menace Berlin. The author concludes, that Poland, Rumania, Czechoslovakia and Jugoslavia are important bulwarks of French capitalism against any possible soviet assault and at the same time are valuable supports in any anti-German action. Thus, France's vital interests demand the preservation of these states, and it follows, that any revision of the treaty of Trianon in favor of Hungary is contrary to the interests of France.

On the other hand, Italy's renunciation of the eastern shore of the Adriatic in favor of Jugoslavia was a genuine sacrifice, the author believes, for as long as another flag flies on that sea, Italy's eastern coast must be provided with adequate defenses, It is one of the motives behind the Italian policy of expansion eastwards, which quite conceivably may lead to a conflict with Jugoslavia. Although Italy's army is numerically superior to that of Jugoslavia, the narrow frontier, which separates the two kingdoms, is ill-adapted to elaborate military operations. It is for this reason that Italy has a peculiar interest in Albania. An invasion of Jugoslavian territory across the Albanian frontier would, however, likewise prove difficult, the author believes, unless Italy is able to secure certain strategic points in Albania before the outbreak of hostilities. Necessarily Italy must pursue a foreign policy which will be helpful to her in her quest for the mastery over the Adriatic. Hungary, by her geographic position, might seriously menace Jugoslavia, but only if Hungary could recover her former strength. It follows, the author concludes, that it is in the interest of Italy that Hungary should recover her former frontiers. On the other hand, the author adds, the best interests of Jugoslavia dictate that she secure Hungary's benevolent neutrality by offering some territorial concessions.

POLAND—*Bellona*—February, 1932.

"Operations of Major Units," by Colonel I. Rowecki.

This valuable study of the fundamental principles of military operations of major units and their practical application in manoeuvres for the training of troops in time of peace, furnishes some very interesting information regarding Soviet Russia's preparations for winter warfare. As is well known, no special provisions had been made for winter operations by any of the powers before the Great War. When the problem became acute, as in the campaign in the Carpathian Mountains, situations were met as they arose. Since the war only France, Italy, Germany and Soviet Russia have undertaken specific measures to solve the problems presented by winter warfare.

The Soviet Army, as a result of its experiences in the Polish-Soviet war, in Karelia and the Murmansk Coast, attributes such importance to adequate preparation against the contingency of a winter campaign that it adopted as its slogan the doctrine: "The colder the weather, the deeper the snow, the greater will be the activity of the Red Army." Elaborate preparations have been undertaken since 1925 in that direction, and the last three years show some very concrete results. The time of planning and experimentation is over. They have succeeded in solving the problem of transportation of personnel and material. Infantry and artillery as well as the other arms and services, the author states, have been trained in the operation of "aero-sleighs." Winter manoeuvres have taken the place of the traditional summer exercises.

It is noteworthy, the author observes, that military and technical writings on this subject are very popular in Russia, and they are being published on an unprecedented scale. Whole editions are sold out as soon as they get off the press.

SWITZERLAND—*Allgemeine Schweizerische Militarzeitung*—October 15, 1931.

"Camouflage as a Full-Fledged Arm." by Major Kaiser.

"Camouflage" or "tarning," as the author calls it, is the means of making invisible persons and objects. Although it is not a new discovery, it really gained full military recognition only in course of the World War. Conditions of modern warfare make effective camouflage an indispensable adjunct to military operations. To render our own troops invisible —of course assuming their correct tactical employment—is absolutely necessary to secure victory at a minimum of cost. It follows, that means of tarning must be provided for each man, beast and weapon. Effective tarning or camouflage must render the individual and his equipment invisible at a distance of 100 meters even in an open field. A machine gun crew must be invisible to an observer with binoculars at a distance of several hundred meters. In any event camouflage must provide invisibility against aerial observation.

The author discusses a system of tarning invented by the Bavarian painter Linnekugel. It provides equally effective camouflage in bright and dull weather as well as under the varying conditions incidental to seasonal changes. In actual field tests skirmishers and machine guns were deployed in an open field. Although the occupied area was definitely marked, observers using field glasses could see nothing at distances from 400 to 500 meters. Advancing slowly while making a careful search of the terrain, the observers were unable to discover anything even at 50 meters. Numerous suspicious spots were pointed out by them, but none of them harbored tarned troops. In course of the test observers were asked to face about. While doing so the tarning was removed and "objects" became visible. Another "about face" while

tarning was restored. and objects became as invisible as before defying discovery once more. The tests demonstrated the mobility and ease of manipulation of the camouflage. In a further test with troops advancing as in an attack, the camouflaged troops actually fired a number of rounds at 400-500 meters. Neither observers nor the advancing troops were able to locate the point of origin of the shots. Advancing under cover under simulated battle conditions the "attackers" soon began to disclose a degree of nervous tension which became quite acute when, at 100 meters, the camouflaged "enemy" opened a brisk rapid fire. In battle the situation would no doubt have developed into a serious panic.

It was noted, writes the author, that where the terrain offered natural concealment, such as bushes, grass, humps of soil, etc., the "attacker" invariably directed his fire against such natural objects. He concludes, that well camouflaged troops possess a tremendous advantage, both moral and tactical. They will suffer fewer casualties and may calmly permit a numerically superior enemy to approach to closest proximity and annihilate him within a few minutes with a well-directed fire. Tarning permits a considerable thinning out of lines and a considerable reduction in the size of the garrison required for a given area. The author is of the opinion, that the war of the future will be fought under the sign of the new system of camouflage called "tarning."

General Military Information

AUSTRIA. The peace army and reserves of European powers are as follows:

	Active Army	Reserves
France	612,000	4,100,000
Italy	250,000	3,500,000
Yugoslavia	110,000	1,500,000
Rumania	186,000	2,000,000
Poland	266,000	3,200,000
Czechoslovakia	130,000	1,000,000
Belgium	67,000	530,000
Russia	1,200,000	6,500,000

Based upon peace strength, France ranks first with 12 soldiers per 1000 population. At war strength, Poland mobilizes most heavily with 117 soldiers per 1000 population. Compared with these figures, the former Austro-Hungarian Monarchy with 31,000 officers and 364,000 men, inclusive of the Austrian Landwehr and the Hungarian Honvéd, actually mobilized in 1914 a total of 1,396,000 men, one-third of the present available man-power of France. (*Oesterreichische Wehrezeitung*, January 22, 1932).

ITALY. According to the "Giornale d'Italia," the Italian division at war strength consists of 534 officers and non-commissioned officers, 9808 men, 681 horses, 150 guns, 54 tanks and 364 motor vehicles. The newspaper observes that the present division bears the stamp of the fascist regime and that, in the matter of equipment, it is fully apace with other modern armies. The principal characteristics of the Italian army are: extensive use of massed offensive weapons, strong artillery and the motorization of all essential elements of a mobile force. The smallest unit is supported by machine guns and artillery to the extent that it can execute far more difficult missions than was the case in the past. (*Deutsche Wehr*, December 15, 1931).

POLAND. The artillery of the Polish army consists of 30 divisional field artillery regiments, one mountain artillery regiment, 13 horse artillery battalions, 10 heavy artillery regiments and six independent anti-aircraft artillery battalions. During the range practice period artillery units are placed under the control of artillery group commanders, but at all other times they are subordinated to the commanders of the higher echelons of which they are an organic part. The artillery group comprises all artillery within a corps area with the exception of the antiaircraft artillery.

The President of the Polish Republic exercises supreme command over all armed forces through the Minister of War and the Inspector General. The War Ministry has charge of all military and naval affairs. The Inspector General is the commander-in-chief designate of all forces in case of war.

Security on the eastern frontiers of Poland is provided by the "Border Guard Corps," a well organized corps d'élite of 1078 officers, 7,153 non-commissioned officers and 19.752 men. Its commander is a general officer. The command is in matters of discipline subject to the Ministry of War, but with reference to its special mission, pay and maintenance it is under the jurisdiction of the Ministry of the Interior.

The German, Czechoslovak and Rumanian borders are guarded by the "Frontier Watch" which, like the preceding, is organized along military lines with a brigadier general in command. The organization comprises five districts (regimental sectors) each of which is under the command of a colonel or lieutenant colonel. Each district consists of 3 to 5 circuits (battalion sectors) commanded by majors. In addition there are a number of separate mounted detachments. The Frontier Watch consists of 275 officers, 1,806 non-commissioned officers and 3.576 men. In matters of discipline this force is under the jurisdiction of the Ministry of War, but as to its special functions, pay and maintenance it pertains to the Ministry of Finance. (*Deutsche Wehr*, December 15, 1931).

SOVIET RUSSIA. *Tchassavoy*, a Russian periodical published in Paris contains an interesting article on the Red Army by the pen of A. Saizov, Russian emigré. Although bitterly hostile to the bolshevik regime, the author notes considerable progress made by the Soviet army during the past few years. In his opinion, the Soviet army no longer lags behind the armies of neighboring countries in matters of organization and training. In some respects, notably in the matter of aviation, the Red Army actually surpasses them. The militarization of Russia is complete. There are no difficulties in the matter of replacements. Regulations are up to date. War industries have been placed upon an effective basis. The "Achilles heel" appears to be in the command. The author does not believe that commanders are qualified to meet the exigencies of

modern warfare. The antipathy which exists between soldiers and politicians is likewise a fruitful source of possible difficulties. The army is apparently striving for its emancipation from political tutelage. (*Militar Wochenblatt*, October 18, 1931).

In a copyrighted article published serially in the Budapest daily, "Pesti Napló" Elias Tobenkin, a Russian, gives a graphic account of his observations during a recent sojourn of several months in Soviet Russia. He writes that Soviet propaganda is seeking to convince the masses that the success of the five-year plan is upsetting the equilibrium of the capitalist world. As a consequence class struggle is becoming more and more acute in the bourgeois states where the upper classes are seeking protection under the banner of fascism while the working classes gravitate towards bolshevism. In order to avoid the proletarian revolution, the capitalistic states, according to the leading minds of Moscow, will unite against the Soviet Union. War, they say, is inevitable because the capitalistic governments are determined to wipe out the Soviet state. In Russia, the author states, preparations against such a contingency accord to women a part fully as important as that assigned to men. Not only are the women trained and prepared to replace men in all civilian occupations, but large numbers of them actually receive military training. There are at present 250,000 women in active service with the colors. Of these, 60,000 are in the regular infantry, 55,000 serve in machine gun units, 40,000 are in the supply services, 10,000 in the Chemical Warfare Service, while the remainder belong to the artillery, air force and other arms.

In 1930, fifty women completed the general staff course. Many of the feminine veterans of the wars against White Russians hold important posts of command in the Red Army. In addition to the regular formations there are a number of territorial military organizations of women. The female battalions of Tomsk and Krasnoyarsk enjoy quite a reputation for military prowess. Mohammedan women are said to be splendid soldiers. They receive their military training together with Siberian troops of the line. Women reservists are called to the colors for annual maneuvers and serve side by side with regular troops. These maneuvers extend over a period of two months. After a refresher training course of two weeks women are assigned to male companies so that the proportion of females to males in each unit is about 30 per cent.

Voroshilov, Red generalissimo, in a recent address remarked that "women must serve in the army just as men. They must share with men in the duty of defending the Union of Socialist Soviet Republics." (*Pesti Napló*, July 3, 1932).

"War is inevitable. We must strive to carry the war into the territory of our enemies who plan to assail us. We must achieve victory at a minimum of sacrifices." Thus spoke Voroshilov, according to Tobenkin, at the opening of the IX Congress of the Komsomol (League of Communist Youth) which claims a membership of three million and which is organized and trained along military lines. On that occasion, Tobenkin writes, Voroshilov advocated an intensive campaign of education to familiarize the population with aviation and the nature of aerial warfare.

The rapid growth of aviation in Soviet Russia is significant, Tobenkin states. In 1928, Soviet Russian airways covered 11,971 km. Two years later they had expanded to 26,500 km. In 1931 they increased to 46,412 km., while it is expected that the current year will see the Soviet airways grow to 71,122 km. The five-year plan envisions a total of 110,832 kilometers by the end of 1933. These airlines provide direct connections between Moscow, Turkestan, the Caucasus and Siberia. Russian schools of aviation show this year an enrollment of 15,000 pupils. The number of military airplanes in commission is a secret but according to Kibishev, head of the Soviet Planning Commission, there are enough of them for the defense of the country. There are seven rigid type dirigibles under construction. They will be named: Lenin, Stalin, Old Bolshevik, Pravda, Klim Voroshilov, Osoaviachim and Kolkoznik. They will compose the Lenin squadron.

"Every factory is fortress," has become Soviet Russia's latest slogan. It is to signify that each factory is a bulwark in the Soviet line of defense which will crush the enemies of the Soviet Union. Particular significance is attached to chemical plants. In 1929, there were in Soviet Russia only 4,200 graduate chemists. The Soviet leaders expect to increase their number to 30,000 by October, 1933.

Russia wants war, Tobenkin writes, not to conquer new territories, but to gain new adherents to the Bolshevik creed. In the minds of Soviet leaders, war is the best means for propaganda, and they fully expect that the next clash of arms will bolshevize a string of countries in Europe and elsewhere. With the spirit of the Covenanters of old, Red soldiers enter the trenches carrying the rifle in one hand and the doctrines of Marx in the other. (*Pesti Napló*, July 10, 1932.)

YUGOSLAVIA. The air force of Yugoslavia consists at present of 7 air regiments stationed at Novi Sad, Serajevo, Skoplje, Zagabria, Nish, Zemun and Mostar. Six plants engage in the production of aircraft within the Yugoslav kingdom. The largest of these, "Ikarus Zmaj," with shops at Zemun and Novi Sad, has a capacity of 200 planes per year. The concern operates with French capital. The "Blajkovik" plant at Belgrade is operated by a Czech corporation. Other aircraft plants are the "Rogozharsky" at Belgrade, "Petrovich" at Zemun, the motor works at Raeovitza and finally the state-owned aircraft factory at Krajevo with an annual capacity of 250 planes.

The construction of strategical highways aggregating about 2,800 kilometers is under consideration by the Yugoslav government which is likewise making plans for a general improvement of the rail and river transportation systems of the realm. (*Deutsche Wehr*, January 15, 1932.)

Organization Activities

Fifth Cavalry

Fort Clark, Texas

BASEBALL has been very popular here during the past summer. A Post Baseball team was organized, as well as an intertroop league.

The Post Team has been very successful. Results of games played with Randolph, Kelly and Brooks Fields, and Fort Sam Houston, indicate that we have one of the finest in the Corps Area. The schedule and results indicated show the calibre of baseball played:

May 13—Ft. Clark 6, Pearsall, Texas 2
May 14—Ft. Clark 4, Charlotte 3
May 22—Ft. Clark 2, 8th Engineers 5
June 19—Ft. Clark 6, Eagle Pass 2
July 16—Ft. Clark 2, Randolph Field 4
July 17—Ft. Clark 9, Randolph Field 7
July 23—Ft. Clark 17, D. A. Russell 2
July 24—Ft. Clark 4, D. A. Russell 3
July 30—Ft. Clark 15, Ft. Crockett 0
July 31—Ft. Clark 9, Ft. Crockett 2
Summary: Fort Clark—Won 10—Lost 2.

The Inter-Troop League was won by Headquarters Troop, Fifth Cavalry. Although the schedule is not completed, Headquarters Troop is assured of winning the Post Exchange Cup, because of their unblemished record of 7 victories out of 7 games, which completes their schedule.

Although Polo has been an important activity at this Post during the past year, it was given a decided impetus this summer with the arrival of Capt. C. Lloyd Stafford, Capt. C. Burgess, and Lt. Thos. T. Thornburgh, all expert polo players. With this talent added to that already present, the coming fall and winter are looked forward to with great interest and anticipation. One game has been played this summer: the Fort Sam Houston Second Division Team visited us, and were turned back 6 to 5 in a very fast and interesting game. The line-ups were as follows:

Second Division—5	Fifth Cavalry—6
1. Lt. Hill	1. Lt. Ruffner
2. Lt. Cusark	2. Capt. Burgess
3. Lt. Hensey	3. Lt. Hammond
Lt. Walker	4. Capt. Stafford
4. Capt. J. A. Smith	

However, at present, our energy is concentrated upon developing good Senior and Junior Teams, and our polo is composed mostly of practice games between various pick-up teams of Fort Clark officers. At the present time, Fort Clark can place a 9 goal team on the field, and with the very helpful coaching of experienced players, the younger officers are developing into competent players. Capt. Stafford and Lieut. Thornburgh carry 3 goal handicaps; Capt. Burgess, 2 goal handicap and Lieut. Hammond, 1 goal. Plans are being made for trips to Marfa and San Antonio, Texas, where we hope to make very creditable showings.

The following officers are active polo players: Col. T. L. Sherburne, Fifth Cavalry; Capt. C. L. Stafford, Fifth Cavalry; Capt. C. Burgess, Fifth Cavalry; 1st Lt. T. T. Thornburgh, 1st Cavalry Brigade; 1st Lt. A. K. Hammond, Fifth Cavalry; 1st Lt. C. L. Ruffner, Fifth Cavalry; 2d Lt. C. C. W. Allan, Fifth Cavalry; 2d Lt. Edwin H. J. Carns, Fifth Cavalry; 2d Lt. C. B. McClelland, Jr., Fifth Cavalry; 2d Lt. C. A. Lichirie, Fifth Cavalry and 2d Lt. J. C. Blanning, Fifth Cavalry.

Seventeenth Cavalry at Fort Lewis

ON SUNDAY, July 24th, 15 officers of the 17th Cavalry reported for fourteen days' active duty at Fort Lewis, Washington. Major Paul McCormick, Jr., 17th Cavalry, was in charge. Lieutenant Colonel Hartwell Palmer, Cavalry Reserve, assisted in the instruction.

Major McCormick was unable to finish his tour of duty; therefore Lieutenant Colonel Palmer assumed command and took charge of all instructional work. Major A. C. Searle, F. A., Instructor at 96th Division Headquarters, was liaison officer between the post and reserve officers. The training of the officers of the 17th Cavalry was really practical. Each morning we had a tactical ride which included map reading of the terrain actually covered. The afternoons were devoted to machine gun instruction or lectures on some other arm of the service as applied to cavalry. In the evenings we usually wrote estimates of the situation and the field orders which would be applicable to our day's tactical ride.

The camp was so conducted that each reserve officer felt as if he were receiving the training applicable to his grade.

103d Cavalry

Philadelphia, Penna.

THE results of the Inter-troop .30 cal. Rifle Match, firing the National Match Course (less 1000 yds.), held at the Essington Range, Sunday September 25, 1932, for the Major Edwards Hoopes Trophy, was won by Troop C with the following scores:

Sgt. J. M. Williams	175
Corp. S. W. Rawlins	174
Pvt. J. G. Grigolanus	166
Sgt. H. N. Sailer	164
Corp. W. A. Taylor	164
Pvt. W. L. Stephens	141
Total	984

Troop B was second with a total score of 891, Team members: Corp. H. A. Rule, Sgt. Elwell, Corp. Sangro, Sgt. J. Rule, Pvt. Slipp, Sgt. Weeks.

Troop A was third with a total of 809. Team members: Sgt. O'Brien, Corp. Ruffee, Corp. Jenks, Pvt. Purring, Corp. Ross, Pvt. Linde.

(Extract from Orders No. 10, 1st Squadron. 103rd Cavalry, signed by 1st Lieut. Ralph V. H. Wood. Adjutant.)

104th Cavalry Members of U. S. Cavalry Association

THE following officers of the 104th Cavalry are members of the U. S. Cavalry Association:

Colonel Edward J. Stackpole, Jr.

Lieutenant Colonel George J. Shoemaker.

Majors: Benjamin C. Jones, A. H. Stackpole, Samuel E. Fitting.

Captains: Robert S. Cowan, John E. Shade, Hubert E. Thornber, Robert J. Krepps, Wm. A. E. Leitzinger, Jesse L. Waite, Benjamin I. Levine, Edwin D. Strite, Harris N. Summer, Allen J. Stevens, Clyde E. Fisher, Robert C. Lutz, John T. Bell.

First Lieutenants: James E. Snyder, John H. F. Bittner, Milton E. Koehler, Gay E. Duncan, Paul M. Kienzle, John K. Dufton, Thos. J. Barnhart, Ralph B. Brown, Walter C. Plasterer, Ira D. Cope, Wilbar Halbert, Charles M. Pollock, James C. Williams.

Second Lieutenants: Wayne W. Brame, Harry H. Billett, Lester A. Shull, Walter J. Gipprich, John E. Gray, Harry C. McNew, Chas. G. Sheaffer, Edgar L. Dapp, Rollin M. Brightbill, John E. McCreight.

Warrant Officer Percy A. Swab.

114th Cavalry, Kansas National Guard

Topeka, Kansas

THE CAVALRY JOURNAL acknowledges with gratitude the support of this regiment, every officer of which is a member of the U. S. Cavalry Association. Their names follow:

Colonel: William K. Herndon.

Lieutenant Colonel: Paul A. Cannady.

Majors: Harold J. Bagby, Exie J. Monroe, Charles W. Gordon, Ralph A. Poe.

Captains: Roy N. Hillyer, Monte V. Kistler, Charles H. Kitselman, Harry H. Lowry, Roy L. McConnell, Joseph K. McVicar, Samuel P. Moyer, Clarence A. Nudson, Pete A. Pellegrino, William W. Ringer, Leo A. Swoboda, Chester L. Thomas, Robert L. Thompson, Jr., Francis W. Walden, Jewell K. Watt, Herbert M. Webb.

Lieutenants: Harlan I. Abbey, Braum L. Bentley, William R. Carpenter, Byron S. Cohn, Ward W. Conquest, Herbert L. Crapson, James H. Hetherington, Phillip H. Huffman, Elvin L. Keith, Emerson E. Lynn, Harry L. Lyon, Richard J. Marshall, Leo W. Mills, Francis E. Morawetz, Wendell W. Perham, George O. Reed, Claude N. Shaver, Frank W. Sutton, Albert P. Tustison, Charles O. Wiand, Harry O. Willhite.

Warrant Officer: Harry M. Swartz.

Grouped with the above are the following subscribers:

Unit Instructors: Major Welton M. Modisett, Cavalry; Major Thomas F. Limbocker, Cavalry; Staff Sergeant Claude M. Nash, Staff Sergeant Louis Rosenberg.

57th Cavalry Brigade: Major John B. Smith.

Cavalry Reserve Officers: Captain Harry W. Frazee. Lieutenants: Victor H. Anderson, Wendell M. Broadus, Richard M. Wilson.

305th Cavalry

Philadelphia, Penna.

UNDER the command of Colonel Wm. Innes Forbes Cav.-Res., the 305th Cavalry reported at Fort Myer, Virginia for their 14-day active duty training period on August 7th.

Together with other Reserve Regiments, a number of Cavalry Brigade problems were worked out in the vicinity of Fort Humphreys. From the Reserve point of view these problems were well presented, were the very best instruction and were carried out to a satisfactory conclusion.

A number of new lieutenants received their first training with the Regiment, were favorably impressed with the Regulars at Fort Myer and have only high praise for the hospitality and consideration accorded them.

306th Cavalry

Baltimore, Md.

THE officers of the 306th Cavalry acted as Instructors during the last half of the Citizens' Military Training Camp at Fort Myer, Virginia, during July. Practically all instruction was turned over entirely to the Reserve officers, and they handled it in a highly satisfactory manner.

The work on the target range was particularly gratifying, as only a very few students failed to qualify.

Arrangements for inactive training are now being made, and it is planned to begin instruction in equitation at Fort Hoyle, Maryland, early in October.

Second Squadron and M. G. Troop, 306th Cavalry

Washington, D. C.

TWELVE officers from these units attended active duty training during the summer.

Inactive training begins on Thursday evening, October 6, 1932.

It is hoped that last year's accomplishments will be exceeded, if possible, during the coming year.

The new Extension School Courses have proven to be most attractive and very beneficial, and our last year's enrollment of one hundred and three students may even be increased this year.

307th Cavalry

Richmond, Virginia

EIGHTEEN officers under Lieutenant Colonel William Henry Clifford received active duty training in connection with the C. M. T. C. during the period July 3rd—July 16th, at Fort Myer, Va. Three officers were on duty at Fort Myer, Va., during the period August 7th—August 20th.

Extension School enrollments have increased appreciably during the past month as the result of a drive to enroll 100%.

The following have recently been assigned to the regiment: 2nd Lieut. James G. Earnest, Jr., 2412A Stuart Ave., Richmond, Va., and Private Richard F. Beirne, Jr., Covington, Virginia.

Third Squadron and M. G. Troop, 307th Cavalry

Norfolk, Virginia

THE 307th Cavalry completed an excellent tour of active duty training at Fort Myer, Va., on July 16, 1932. The period of training coincided with the first ten days of the Citizens Military Training Camp, and the regiment received, processed, organized and gave initial instruction to the 250 candidates who attended the camp. The result of this period of training was demonstrated on July 16th, when a mounted review was held for Colonel George T. Bowman, Cavalry, (D.O.L.), Chief of Staff of the 62nd Cavalry Division. The officers of the regiment commanded the CMTC squadron which passed in review at the walk and trot. The showing made would have done credit to any organization of much longer training and, considering the fact that this was only the sixth day that the CMTC squadron had been mounted, was a most remarkable exhibition of training.

Major David H. Blakelock, Cavalry, (D.O.L), was the Unit Instructor of the regiment during the training period, and the following named officers of the 3d Squadron were among the eighteen officers of the regiment who conducted the training: 1st Lieut. Robert B. Batte, 307th Cav.; 1st Lieut. Henry H. Page, 307th Cav.; 1st Lieut. Southgate W. Taylor, 307th Cav.

Two officers from Norfolk attended the tactical training period of the 154th Cavalry Brigade at Fort Myer, Va., during the period August 7 to 20, 1932. Several other officers of the Squadron applied for this training, but shortage of funds prevented their attendance. The officers who attended were: 2nd Lieut. Kenneth W. Chapman, 307th Cav.; 2nd Lieut. William A. Trolan, 322nd Cav.

Colonel George T. Bowman, Cavalry, (D.O.L.), Chief of Staff of the 62nd Cavalry Division and Liaison Officer for Organized Reserves for the Third Corps Area is expected to visit Norfolk, Va., during the week of September 12th, and inspect the Newport News and Norfolk Group Schools, which will hold their first conferences of the winter season during that week. Colonel Bowman has many excellent friends in Tidewater, Virginia who always look forward with much pleasure to his visits.

308th Cavalry

Pittsburgh, Pa.

THE officers of the regiment who attended Active Duty Training this summer were enthusiastic over the Camp. The training consisted to a great extent of a series of problems based on a continuing situation. These problems dealt with reconnaissance, counterreconnaissance, cavalry in the attack and on the defensive and a withdrawal. The presence of an armored car gave a realistic atmosphere to the tactical rides, while on the return trip from Pohick a squadron of planes gave us a demonstration of an air attack against troops on the march.

Two promotions in the regiment have recently taken place. Captain Morehouse took his oath of office as a Captain while at Fort Myer, while Captain Ayres was sworn in shortly after our return to Pittsburgh.

462d Armored Car Squadron

Washington, D. C.

THE following officers of the Squadron under the command of Major William L. Covington, were ordered to active duty August 7th to 20th, at Fort Myer, Va.—First Lieutenants Ralph M. Lockhart, James T. Parkinson, Walter B. Gleason and Second Lieutenants Douglas W. Eiseman and William L. Morris.

The Squadron participated in the Tactical Exercises of the 154th Cavalry Brigade. During the Tactical Exercises, one of the latest type Armored Cars, a T-4 Six Wheeler, was furnished the Squadron from Aberdeen Proving Ground.

The training provided in the operation and employment of Armored Cars by both Cavalry and Ordnance Department Instructors was very interesting and instructive.

Washington, D. C., is the Headquarters of the 462nd Armored Car Squadron. One troop of the Squadron is stationed in each of the following cities: Richmond, Va., Philadelphia, Pa. and Pittsburgh, Pa.

862d Field Artillery (Horse)

Baltimore, Md.

THE regiment has returned from its active duty training at Fort Hoyle, Maryland, where it received its instruction under the guidance of the 2nd Battalion, 16th Field Artillery, and Battery C, 6th Field Artillery. About fifty percent of the officers of the regiment attended camp, and it was necessary to disappoint a number who sought to go. While the training demanded more time than in any previous camp, nevertheless it was well balanced with athletics and recreation.

Under the leadership of its commander, Lt. Colonel Roger S. B. Hartz, the regiment has made substantial and consistent improvement since its organization, and this improvement is especially evident at the end of each active training period.

(Continued from Page 32)

are sharpened. You learn to interpret instantly and accurately the evidence of your senses, you learn to look through the brush rather than at it, you acquire the ability to move swiftly but quietly, you study concealment both of your quarry and yourself, you appreciate the invisibility of a broken outline and immobility. In other words, you are developing a high order of skilled mental alertness, you are qualifying as a truly ideal scout, patrol leader, or reconnaissance car observer.

Then there is that tense moment when game breaks cover. It may be the whir of quail in a wheat field or the crash of horns through the aspens. Line sights, lead and squeeze, all in split seconds! Here we develop true coordination. And incidentally, when it is up to me to face an armed enemy, I'd much prefer to do it boot to boot with men who have conquered their "buck fever" in the hunting field.

Stamina and determination! Have you ever followed a blood trail from dawn to dusk; stayed with it the next day with your feet blistering and your knees wobbly from fatigue, and finally taken that long-range shot despite your pumping heart—and brought in your trophy? Have you ever sat in a duck blind with the sting of sleet in your face, waiting for that "half hour before sunrise" and listening for the whistle of wings on the north wind? It is only common sense that men who do these things for the sport of it will "see it through" in campaign and combat.

Even a very little field shooting will multiply interest many times on the target range. Powder charges, shot patterns, weight of bullets, trajectories, all will be discussed in your day room. A twenty-two and a few squirrels compete favorably with your gallery practice. And the man after mountain goat must learn more about his piece than is required of an Expert Rifleman. Then, too, Rifle Marksmanship doesn't even mention the "lead" on a moving target;—but a coyote streaking through the mesquite or a pheasant winging across corn rows are wonderful instructors. It is a vital thing in open cavalry warfare or antiaircraft.

The best morale is built upon justifiable self-confidence well founded on past achievements, combined with the desire to achieve further. The second is largely the product of the first. These statements are true of the individual or the group. Woodcraft is a proverbial breeder of self-reliance,—the hunting field and camp of mutual confidence. Be he artist or laborer, the worker must know his tools. The tools with which most of us work are men. You will know a man better in five days' hunting than in three years of peacetime military service. And he will know you.

Of all this self-confidence, mutual reliance and knowledge of one another comes the highest type of team work. It is not the mechanical movement of the Manual of Arms,—it is not the machine precision of regiments at review,—it is something far more subtle, far more valuable. It is the interdependence of self-reliant men, knowing what they may expect of one another. It is the ideal team work on the field of battle today and tomorrow. Once your orders are issued and your command committed to action, it is the only team work that will overcome the unexpected and carry on. There may have been a time when the soldier was more a machine than a thinking apparatus:—but not now. If the soldier didn't have to think, we could build robots to replace him. Strange as it may seem, the more we mechanize warfare, the more we are forced to depend on the intelligence, judgment and initiative of the individual. Also, the more mobile the force, the truer this becomes.

Along these lines, consider the supervision of your men on hunting pass. Of necessity, little of it can be personal, but must operate through the channels of command. Your N. C. O.'s and more reliable men must handle hunting parties, whether for an afternoon or several weeks. This is the only control you will have in campaign over a mounted patrol, a reconnaissance car or many another function. So why not apply it here? It breeds confidence and cultivates a sense of responsibility all along the line. The officer whose supervision is limited to his range of vision doesn't belong in the Cavalry.

Sportsmanship, sometimes sadly lacking in army athletics, would justify the writing of volumes. Fundamentally it is the same in hunting as in any other sport, but its application is broader. It is based on a regard for law and property rights, consideration for others and a sympathetic respect for the game you hunt. Regard for law and property may be enforced through the supervision already mentioned. The rest will come through proper example and association. The fine points in the code of honor between hunters vary somewhat in different localities, but the principles are the same. These principles reveal themselves almost intuitively, once the over-anxiousness of the novice has subsided.

Needless to say, sportsmanship is necessary to desirable civilian contacts, for it is a thing recognized and respected even by those who do not possess it. Contacts so formed are wholly spontaneous and therefore more positive. Also, they are truly cosmopolitan, for in that glorious freemasonry of hunters, your friend, the cow hand, and your friend, the senator, meet, compete and live on terms of an equality that breeds true leadership.

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The United States Cavalry Association

Organized November 9, 1885

DESIGN

1. The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and the solidarity of the Cavalry of the Army of the United States.—*Article III of the Constitution.*

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56th Cavalry Brigade Field Maneuvers, 1932

By Lieutenant Colonel Palmer Swift, Cavalry

I. Nature of the Maneuvers

The employment of the Brigade on a counter-reconnaissance mission; necessitating rapid night marches, difficult bivouacs, prolonged outpost and patrol duty, and supply at night of troops in bivouacs inaccessible to wheeled transportation.

II. The Maneuver Area

The maneuvers were held in an area 20 miles long by 15 miles in width. The Brazos River follows a sinuous route from the northwest corner diagonally across the area to its southeast corner. An idea of the roughness of the country can be gained from the fact that the river travels 81 miles in covering this distance: 25.

There are but three bridges along this 81 miles of river. Elsewhere the approaches to the river are not practicable for wheeled transportation.

The only available trails frequently passed between large boulders, through narrow crevices, or along ravines; and in consequence, were impassable for anything wider than a horse with pack.

III. The Tactical Exercises

1. Seizure by each squadron of a bridge or ford on the assumed International boundary; troop movements and bivouacs to be completely concealed from aerial observation.

2. Stationary counter-reconnaissance screen to be established during daylight without being detected from the air.

3. Extension of screen fifteen miles into hostile territory; troop movements and bivouacs to be completely concealed from aerial observation.

4. Concentration by the Brigade under cover of darkness to defend a river crossing.

5. Delaying action from successive delaying positions.

"The Brazos River....across the area....travels 81 miles in covering....25."

"....approaches to the river are not practicable for wheeled transportation."
This picture was taken of the only trail to one of the fords.

IV. The Enemy

The enemy was a fictitious Cavalry Division represented by flags. A distinctive flag for each organization in a Cavalry Division was carried by a mounted trooper.

One of the Instructors commanded the represented enemy. The four Sergeant-Instructors were his subordinate commanders.

The maneuver was free for each side.

The only restriction placed upon the commander of the represented force was that the rates of marches, distances covered, frontages and road spaces be in strict accordance with the "Reference Data" published by the Command and General Staff School. The efficient handling of the represented force by the Instructor and Sergeant-Instructors made the problems very interesting.

V. Preliminary Training

1. Martial Law:

On seven occasions since June, 1919, lawlessness and disorder have made Martial Law imperative in parts of Texas. On all these occasions the Brigade Commander with a portion of his command has been called into military service of the State. In 1931 the entire Brigade was sent to the east Texas oil field to administer Martial Law.

Each of these situations was different from the others, but all of them served as valuable training for the Brigade.

2. Few Untrained Men:

At Galveston in 1920, law and order were reestablished after four months of Martial Law. The citizens of Galveston presented a silver loving cup, bearing the inscription:

"An Unpleasant Duty, Well Performed."

That cup is the main competitive prize in the Brigade. Competition for it starts at the end of each field training period and lasts until the end of the next maneuvers.

"No Troop which finds it necessary to bring recruits to summer field training is considered in the competition."

Because of this restriction competition for the Trophy develops efficient combat organizations with few recruits; and in most organizations with no recruits at maneuvers.

3. MAP PROBLEMS:

Several months before the field training period, Brigade and Regimental Staffs solved map problems on maps of the maneuver area. The problems were identical with the tactical exercises held during these maneuvers. These latter, however, were against a represented enemy; necessitating initiative on the part of commanders.

4. TROOPS HARDENED:

Troops were hardened for field service by marches, bivouacs and field exercises at home stations and during the first ten days of the field training period.

"....through narrow crevices....impassable for anything wider than a horse with pack."

"....a bridge....on the assumed International boundary," bearing its maximum load.

Prior to the maneuvers the Brigade Commander informed Regimental Commanders that the nature of the maneuvers would necessitate:

a. Marching at night on trails and across country at the rate of 6 miles per hour.
b. Bivouacking by squads widely dispersed.
c. Discarding tents, bedding rolls and picket lines.
d. Relying upon pack animals for supply.
e. Intensive training in the foregoing before maneuvers.

VI. Conduct of the Maneuvers

1. MARCHES:

For the purpose of maintaining interest in the maneuvers and conserving the physical endurance of personnel and animals, orders directed that bivouacs be reached by 10:45 P. M., each night.

The country is so rough that organizations could not adhere to prearranged march tables. All bivouacs, however, were reached by 10:45 P. M. by:

1. Trotting at the rate of 9 to 10 miles an hour.
2. Trotting periods from 5 to 7 minutes long.
3. Walking periods from 2 to 4 minutes long.
4. Resting for the last 10 minutes in each hour.
5. Leading into the halt.

Distances were covered at the rate of from 6.25 to 7 miles per hour; and without fatigue to animals.

All but two of the marches were made after dark. The two exceptions were 20 and 22 miles respectively. Several miles of each were through cactus, thorns and loose stones, over which 3 miles per hour was the maximum at night; in consequence it was necessary to start an hour before dark. In these instances the two squadrons, by use of cover and infiltration, reached previously designated assembly points without being observed from the air. From assembly points they marched to bivouacs under cover of darkness. Rimrock, boulders, cactus, thorn covered brush, loose stones, etc. taxed the cleverness of squad leaders at night.

2. BIVOUACS:

In bivouac the troops were so disposed as to secure a maximum of rest while meeting the demands of security against ground and air attack. No picket lines were used and no tents were pitched. Squads bivouacked under the direction of their squad leaders. The horses in a squad were secured to a rope tied around the trunk of a large tree; and the men slept in the immediate vicinity. Where a squad area contained no large tree each trooper tied his horse to a small tree or bush of sufficient size to conceal himself and mount. Squads were supervised by their respective platoon leaders, platoons by Troop commanders, etc., so as to maintain integrity of units and the chain of command.

Troops required but few minutes to go quietly into bivouac for the night and were also enabled at dawn to saddle without confusion and move out on a few minutes' notice.

Well trained air observers flying as low as 300 feet failed to locate more than 15% of the troops; and most of the squadron bivouacs were never discovered.

3. WATERING ANIMALS:

Water for animals was available only in small water holes and in the mountainous rugged country where the banks of streams are too precipitous to ride into. The Brazos River was in flood and dangerous because of quick-sand.

The Troop picket lines and standards for same were not taken on maneuvers. This made available a pack for other use. Each Troop used this pack to carry a collapsible canvas water tank and one canvas bucket per squad. The troops were thus enabled to water at a number of places at the same time and at small water holes without roiling the water. Watering was also a simple matter at points along the river inaccessible because of precipitous banks or the presence of quick-sand.

4. DRINKING WATER:

Drinking water was scarce and its transportation by wheeled vehicles impossible in many places.

Each organization constructed a rack to contain four ten gallon containers; two of which were carried on each side of a Phillips pack. The means thus provided enabled each organization to have an adequate supply of drinking water and convinced the command that a desert water bag would be indispensable for operations in desert country and should be authorized troop equipment, available where necessary.

"....canvas water tank....enabled troops to water at points inaccessible because of precipitous banks."

"....field desk....on one side of a pack....typewriter and stool fold inside the chest."

5. SUPPLY:

All supply was after midnight and by pack animals to bivouacs. No forced ration was used; on the contrary, supply officers were reminded that the better the men fed the more interested they would be in the maneuvers. The supply officers took pride in complying with every request from troops; even to the extent of supplying ice, fresh beef and fresh bread under very difficult conditions.

6. FIELD DESK PACK ANIMAL:

A very satisfactory field desk was carried as a load on one side of a pack. A portable typewriter and stool fold inside the chest.

7. DYEING OF WHITE HORSES:

In order to render them less conspicuous from the air, all white horses were dyed. Several means were used; but the only satisfactory method was too expensive to be advocated.

8. DROPPED MESSAGES:

In order that the friendly plane should not disclose the locations of the various headquarters, messages from airplanes to Brigade and Regimental commanders were dropped in fields at least one-half mile from their respective command posts, and picked up by mounted messengers.

9. INITIATIVE:

The initiative displayed in the Brigade deserves recognition.

10. ARMORED CARS:

Denied the Armored Cars of the Regular service, one

officer. (Captain John B. Dunlap, M.G. Troop, 112th Cavalry), at his own expense, built an Armored Car; which in some respects is an improvement on our Regular service cars. The car, built on a Willys Knight chassis, functioned perfectly throughout the maneuvers; and made a speed of 70 miles per hour en-route to camp. Two more of these cars are being constructed by the Brigade, but with the following changes, as recommended by the Commanding General, 1st Cavalry Division:

(1) Cutting wheel protection to hub line.
(2) Putting 4-inch channel iron bumpers front and rear.
(3) Putting 6-inch channel iron detachable running boards from front to rear fenders.
(4) Lowering gun into turret.
(5) Installing motorcycle seat to rotate with turret in rear compartment.
(6) Increase in size of turret to full width of body.

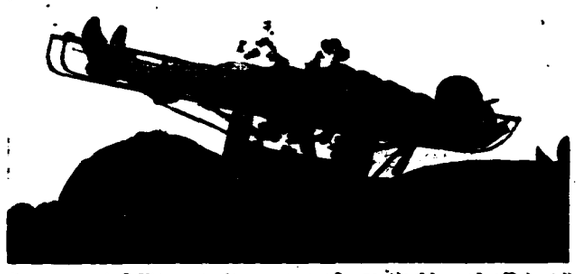
b. Evacuation of Casualties:

Organizations operated in some cases from 5 to 10 miles from the nearest point to which wheeled transportation could approach.

Major H. L. Bartlett, M.C., Texas National Guard, felt the need for mounted evacuation of casualties. He, in consequence, designed and constructed a mounted litter carrier which proved practicable and efficient.

c. Squadron Aid Kit:

Maj. Bartlett, (borrowing from the design of the 1st Medical Squadron), constructed and used a squad-



"....mounted litter carrier....proved practicable and efficient."

ron aid pack. Total weight 200 lbs. Transported at walk, trot and gallop. The raw-hide straps passing from foot of litter ring at front of saddle and up to front spring attachment are for the purpose of steadying the empty litter. When loaded these become slack without adjustment, allowing the full action of springs. Contents are accessible while mounted.

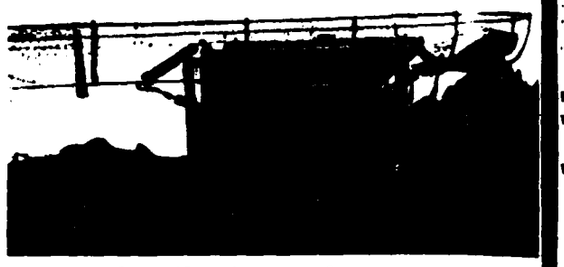
d. Tarantulas and Rattlesnakes:

The mild winter indicated that the area would be infested with tarantulas and rattlesnakes. For this reason the use of hammocks was authorized. Many in the Brigade carried a light hammock instead of a blanket. Individual hammocks were slung under the trees and over them mosquito bars were suspended so as to enclose the hammocks. The shelter tent half was spread over the latter. The scheme safeguarded the men from tarantulas and rattlesnakes and also concealed them from air observation.

VII. Comments

1. The field picket line is a useless article of equipment on maneuvers.

2. Bodies of Cavalry as large as a Squadron can normally cover 20 miles per day for at least four consecutive



"....a squadron aid pack was used....contents are available while mounted."

days but can do so at night over difficult terrain in less than 3½ hours.

3. Very short periods at the walk are adequate in a march table for almost complete recovery of the horse after trotting.

4. Cavalry should bivouac with men and animals widely dispersed in small groups.

5. By infiltration to successive rendezvous points Cavalry in bodies as large as a Squadron can, in all but exceptional terrain, cover 20 miles per day in daylight unobserved from airplanes.

6. White horses for the Cavalry are a nuisance and dyeing them to render them less conspicuous from the air is not practicable.

7. The lariat is very useful for securing animals, recovering men and animals from treacherous streams and in fording streams. There should be at least one lariat per squad as organizational equipment.

8. For Cavalry, operating in country similar to the Southwest, a desert water bag, similar to that formerly issued, would be almost indispensable.

9. Pitching of shelter tents, except under extremes of weather conditions, will be inadvisable because of the ease with which they can be observed from the air.

10. Terrain such as that in which the maneuvers were held is not infrequent in our Southwest—nor in the countries to our north and south.

VIII. Remarks by an Observer

The Commanding General, Eighth Corps Area, was represented at this maneuver by an officer from the office of the Assistant Chief of Staff, G-3. The following remarks are extracted from his official report:

1. Excellent morale despite a very hard maneuver continuous for four days and nights. Splendid spirit prevailed.

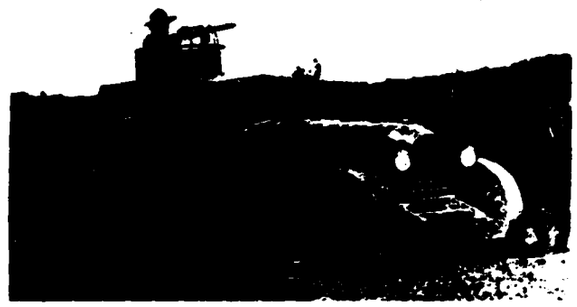
2. An inspection of animals revealed surprisingly few with saddle, cinch or other abrasions. The maneuver was very strenuous with a great deal of night work and, with the number of strange and untrained horses present, their condition bespeaks excellent handling by this Brigade.

3. The initiative of this unit demands recognition. Denied the Armored Cars of the Regular Service, one officer at his own expense built an armored car, which in some ways is an improvement on our regular service vehicles. The car built on a Willys-Knight chassis functioned perfectly throughout the maneuver and at times made a speed of 70 miles per hour. Two more of these cars are planned by the Brigade.

4. A Medical officer of the Brigade developed and made a contrivance to evacuate wounded by horse which seemed highly practicable and efficient.

5. Corps were dispensed with on the maneuvers, as was also pitching of shelter tents. Instead, individual hammocks were carried and slung under the trees. The shelter half was spread over the top; also, a mosquito bar was suspended so as to enclose the hammock. The scheme safeguarded the men from tarantulas and rattlesnakes, with which the country is infested, and securely concealed the men from air observation. In a country of trees such a plan is practical and worthy of serious consideration.

6. *Training.* A splendid maneuver was being executed. A well planned problem and one that made a thorough and exhaustive test of the Brigade's ability to function in the field. Two airplanes, one hostile and one friendly, operated throughout. Men were in field four days and nights, and the problem was continuous. A Regular Army officer in charge of 36 men with flags, each of which represented a designated Red enemy, was active night and day and kept the Blue force on the alert all the time. All Blue movement was executed under cover of darkness.



Speed 70 miles per hour. Designed and constructed by Captain John B. Dunlap, M. G. Troop, 112th Cavalry.

Chemicals—For and Against the Cavalry

By Captain George J. B. Fisher, C.W.S., Chemical Officer, 1st Cavalry Division

IT was a May day in South Texas. The cavalry brigade was executing a delaying mission against an infantry division. After the stubborn defense of a river crossing we were finally retiring to a new position, forced back by a combination of rifle fire, smoke and tear gas, all supported by implacable umpire rulings.

This day it was very evident that not the least important use of chemicals on maneuvers is against umpires. The "enemy" gave a good demonstration of how to do it. Here is the formula: first, get your own umpires well in hand; then blanket the opposing umpires with tear gas and push forward briskly, claiming everything in sight. A trace of CN in an umpire's eyes is worth a whole cloud against an embattled regiment. Providing, of course, you can catch the umpire without a gas mask, which usually isn't so difficult.

So we fell back, gave up a position that might have been held indefinitely, and the maneuver flowed along in accordance with the omniscient design of higher authority.

After trotting well beyond the doughboys' reach we stopped for a blow. Hot work, and no shade. But a fence post offered some support while I talked the situation over with a troop commander.

"That damned tear gas didn't bother my men," he explained, not a little pride in his voice. "They all had masks, but not a man used them. My outfit can stay in that stuff all day."

A hardy outfit, to be sure. A fifty mile march, a drenching rain at 2:00 AM, chow wagons lost, or stand and take a cloud of CN; these were all in the day's work. These troopers were tough, because their skipper knew they had to be, to ride with the cavalry.

But—and right here is a big BUT. Hardihood doesn't carry the soldier far where chemicals are involved. Here is one place where discretion is decidedly the better part of valor.

In this instance the troop commander was not only subjecting his men to an unnecessary hardship; he was actually doing something very dangerous—sponsoring a cavalier approach to chemical warfare that might easily lead to disaster in actual combat.

On maneuvers, as in other peace-time training, it is manifestly unwise to use casualty-producing chemicals. We load machine guns with blank cartridges and we likewise put down innocuous chemicals. But, if we are to get anything out of maneuvers, we must at least imagine the reality of simulated rifle fire. Now, with chemicals, we can go a step farther. We can produce a temporary, although harmless, irritation that at least invites the wearing of masks. Yet even this is no more than a portent.

What we have reason to expect in future campaigns, what our chemical training must teach us to protect against, is only lightly reflected by lachrymators. But the same lachrymators can be made to perform an important training role if we will accept them as representing casualty agents; if, on their appearance, we put the gas mask into use as promptly as we would under an attack of lethal chemicals.

"And, anyway," continued my hard-riding troop commander, "the cavalry don't worry much about gas. The doughs may have to stand and take it, but not us. We get up and go."

Which, after all, is largely a matter of whether one wishes to go. The cavalry can go, far and fast. That constitutes its true *raison d'être*. Yet there are times, particularly on delaying missions, when ability to close to a key position is vitally important.

Still, the argument is not without point. At least we may concede that the approach of the two arms, infantry and cavalry, to chemical warfare is dissimilar.

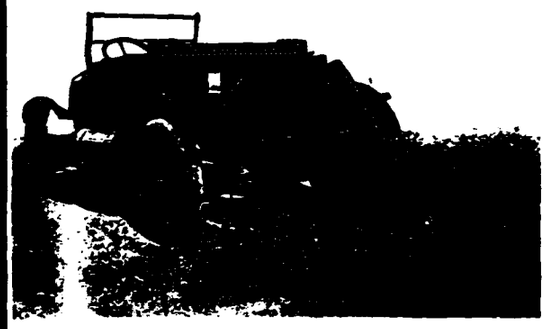
As a matter of fact, we have very little in the way of historical background to guide us in cavalry-chemical doctrine. The World War, on which our practical knowledge of chemical combat is so largely based, offered scant opportunities for the cavalry arm. Yet we face the future with two well defined ideas behind our military training: that cavalry has a definite use in modern warfare, and that chemical combat must in no case be ignored.

"Our peace-time preparation in chemical warfare will be based on opposing effectively an enemy employing chemical agents and weapons."

So, the problem of cavalry-chemical training may be reduced to something like this: To reconcile the well established characteristics of cavalry and our more limited experience with military chemicals. Thus, the way is paved for the fullest participation of cavalry in modern warfare.

For this reason it is important that officers of cavalry, as well as certain selected noncommissioned officers, be well instructed in the recognized doctrine of chemical warfare, both offensive and defensive. This instruction, against a background of cavalry training and experience, provides the only rational approach to the chemical tactics of the mounted service.

There is no advantage to further burden the already overloaded cavalry troop with either offensive or defensive chemical impedimenta, unless its use is clearly imperative. It is quite conceivable that future campaigns one cavalry brigade will have to contend with chemicals, while another brigade of the same division will have no more worries on this score than had Jeb Stuart. So, it is evident that flexibility is highly important. We must carry the added load when the strategic situation requires, while it is equally



4.2 Inch Chemical Mortar in Firing Position from Experimental Vehicle Developed at Fort Riley.

progress way to dispense with it when we may. At the same time, whether the trooper carries a five-pound mask or not, he must unquestionably have under his belt the knowledge of when and how to use it.

The same principle applies to offensive as well as to defensive chemical materiel. On the offensive side the cavalry is concerned with smoke and possibly tear gas, although we may seldom expect to use the casualty-producing group of agents in the offense. Even opportunities for the effective use of smoke may be comparatively rare. Yet, when they do develop, the possibilities of artificial obscuration are so great that we cannot afford to neglect them. The provisions for putting down smoke screens must therefore be of such flexibility that, without undue burdening, we can still assign the screen when desired.

This largely logistical problem has been given considerable study in the First Cavalry Division. It includes the use of chemical candles by mounted cavalry troops. The proper placement of candles and the building up of the screen, these may quickly be taught the trooper. The means of transport, however, must be standardized before we are ready to utilize smoke in tactical situations.

Present views on this subject center around a pack animal of sufficient candles for laying a screen some one hundred feet in length. The controlling factor, of course, is the pack load. If we can carry a net load weight of one hundred and fifty pounds, we should be able to transport either seventy-five smoke candles, or fifty smoke and twenty-five tear candles, whichever suit the tactical situation. This, then, furnishes a rough indication of the future cavalry smoke equipment.

When a candle screen is to be built, not less than one whole unit, say seventy-five candles, should be used. The ultimate length of such a screen must always depend on wind direction and velocity. The duration of the screen then becomes a question of the number of candles available.

Having devised a satisfactory packing arrangement for candles, some thought must next be given to assignment of the pack hangers. Here again flexibility is indispensable. The troop, already carrying so much, should probably not be burdened with a chemical pack. One such pack per squadron, however, would provide three per wartime regiment which, if concentrated, set up a very impressive screen; if used separately, in isolated squadron operations, each pack still furnishes valuable artificial cover of short duration.

So much for the use of chemicals by the cavalry unit. In divisional operations, however, chemical support is to be expected from artillery, air corps and from the divisional chemical troops.

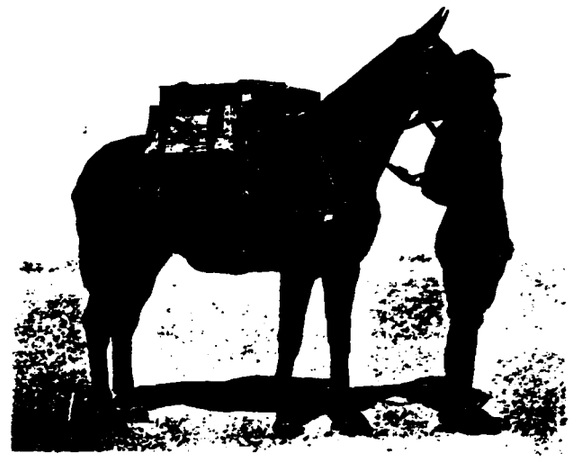
These auxiliaries, like the cavalry itself, are primarily concerned with non-lethals. Here the cavalry characteristic, movement, is decisive. We cannot afford to employ chemicals of the persistent variety, which, with the possible exception of the chemical mortar, no divisional weapon is suited to non-persistent casualty agents.

The light artillery blanketing with white phosphorus, planes screening with titanium tetrachloride, chemical troops putting down smoke and possibly phosgene to pave the way for a cavalry charge; these seem to round out the picture of chemical support to major cavalry operations.

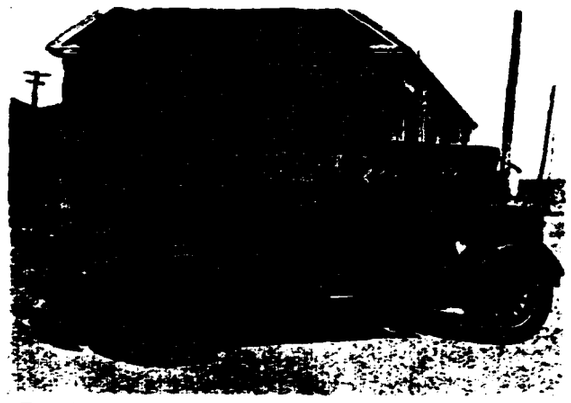
The chemical mortar, however, is not yet prepared to fill its proper role in this layout. The weapon itself is ideal. It shoots accurately, from defilade, with considerable range. Its rapidity of fire and the fact that one mortar shell carries much more agent than does a 75-mm chemical shell are indications of its possibilities. Yet, horse-drawn, this weapon moves too slowly for normal cavalry uses. And the mortar is too heavy to pack.

The answer, therefore, appears to lie in mechanizing, or at least in motorizing, the chemical mortar, so that it will have about the same mobility as armored car units.

It seems probable that a light chassis of the Ford or Chevrolet type will be required for each chemical mortar serving the cavalry in the field. The ideal is an inexpensive vehicle of armored car speed and maneuverability, from which the mortar can be con-



Pack for Chemical Candles Developed by 8th Cavalry for 1932 Maneuvers.



Experimental Passenger Motor and Ammunition Carrier, 4.2" Chemical Mortar.

placed to a surface firing position within sixty seconds. Once this is achieved, the chemical mortar becomes a powerful cavalry adjunct.

How many platoons of four such mortars shall be assigned the wartime cavalry division must remain a matter for corps or army decision. The peace-time training problem is to recognize the situations in which this weapon can most effectively aid the cavalry, for we may be reasonably certain that the mortars, with chemical service personnel to serve them, will be at the disposal of the cavalry commander in future campaigns.

On the whole, however, the cavalry is as much, possibly more, concerned with protection against chemical attack than with the offensive use of chemical weapons. "Chemical security" may have a remote sound, yet it does have a very immediate bearing on tactical dispositions.

Just a few years ago, when the cavalry was more prosperous, I witnessed a thrilling sight. After the first night, on a journey from the West Coast, I was awake at daybreak. The train was passing through west Texas. Lifting the curtain I saw, on a road close to the tracks, a full cavalry brigade on the march. In the early morning sun the men and animals were fresh, almost glittered. For a mile or so they filled the road, riding close up, with an air of confidence that must have inspired every fellow passenger (who was awake) with pride.

The principle of the mass is well enough in battle, but it has no place in the approach march. My very confident brigade was just then "on the spot" for an aerial chemical attack. The enemy dawn patrol would have picked it up at the first break of day and signalled the location of the likely target to a confederate waiting for just such prey. Then a hedge-hop from the rear, a cloud of blinding smoke and, a few seconds later, a confused mass of men and animals finding themselves, with the returning sunlight, bathed in a mist of we know not what poisonous chemicals.

This sort of attack is one of the most difficult that the cavalry may have to contend with. It is sudden, unexpected and disastrous. We have no World War experience to indicate just how deadly it may be. We can shield the men, to some extent, and render effective first aid, but just what can be done about the animals is still a problem. Yet we can at least adjust road distances so as to oblige the hostile agitator to scatter much of his noxious brew on open ground.

Picket lines, too, must be thought of when we bivouac within the ever widening scope of enemy air operations. Orderly, garrison-like arrangements must be discarded in the field. Only second to the attack of mounted columns comes the hostile objective of dismounting cavalry by destroying its horses. So we are lax indeed if we do not habitually, on maneuvers, picket in such fashion as to avoid easy and obvious targets from the air.

Then the cavalry, in war, has not itself alone to protect.

"If the Infantry is the Queen of Battles," says one of our distinguished cavalry leaders, "the Cavalry is her Escort of Honor."

But no chivalrous escort will permit his companion to stumble blindly across an area trapped with persistent, noxious chemicals. That is, if the escort knows how to ferret out these deadly areas.

The screening mission looms high among the cavalry's contributions to military success. Covering the advance of a corps or army is a job that can be relegated to no other arm. Yet an advance on one hand infers a retirement on the other, and the retiring enemy, if he is utilizing chemicals, is bound to interdict where he can. A classic example is the ease with which a force retiring across South Mountain could have mustardized the Cashtown pass and thus have tactically hampered Lee's movement on to Gettysburg. It is not too much to suppose that such tactics will be encountered in future warfare—on the contrary, cavalry is not "able to oppose effectively any enemy employing chemical agents," unless it is able to recognize and delineate gassed areas.

Chemical reconnaissance, in fact, is preëminently a cavalry function. Such scouting can never be accomplished by air. The scent must be picked up on the ground. The cavalry, well out in front, has the responsibility of developing the invidious hazard of mustardized terrain. And, if we can't counteract the poison, we can at least map the danger areas so that foot troops may avoid it.

The dread prospects of chemical warfare carry for the cavalry arm both responsibilities and opportunities. If we overlook either in our preparations for future combat, then our peace-time training is faulty.

Caterpillar or Scorpion?

By Lieutenant Colonel J. W. Stilwell, Infantry

In the past ten years there has been a tremendous improvement in the speed, range, and carrying power of airplanes, and in the speed and mechanical ability of tanks. The future will undoubtedly see a continued improvement along these lines, and also in radio telephony and other means of communication which will increase enormously the ease of control of both these weapons.

Does this mean anything to the infantry? Can we continue to use our old methods of security, our old formations on the march, our old ways of gaining contact,—or must we stir ourselves and find something better. Even though our old methods of security, march formation, etc., can still be used in many cases, we must learn new methods to be applied when there is any probability of our being attacked by mechanized forces,—a threat that is growing daily.

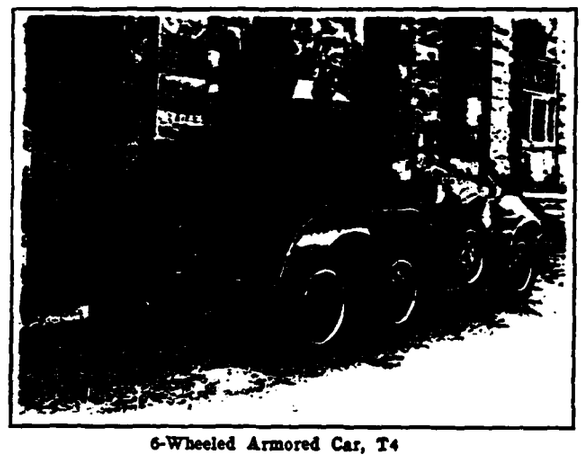
Take our columns on the march,—a slow moving, unwieldy, vulnerable mass of foot-soldiers, covered by an advance guard, also composed of foot-soldiers with a few guns attached, a flank guard, of similar composition, and a long tail stretching out behind, formed of animal-drawn wagons. Our protection against air attack lies in rifle and machine-gun fire. We have at least attacked that problem, and can see a solution. The infantry is being trained to combat the air threat, and no longer fears it. The development of radio telephony will of course operate to increase the efficiency of maneuver in the air, and the march will undoubtedly be frequently delayed, but there is no longer any thought that airplanes can deal out death and destruction with impunity. Planes are going to be shot down, and in such manner that these attacks on marching columns will soon be quite unpopular among aviators. We are confident of that. It is the efficiency of planes in reconnaissance that bothers us more than their ability to fight us.

But how about fast tanks? Invulnerable to rifle fire and fearing machine-gun fire little more, able by their speed to largely nullify the fire of one-pounders, which besides are too few to be available all along the column, the fast tank can either lie in wait under cover, or failing cover, can strike in from a considerable distance and reach the column before adequate measures for defense can be taken. Making due allowance for their disadvantages,—the possibility of detection from the air, the noise they make, frequent mechanical troubles, their supply difficulties,—they still constitute a possibility to which we cannot shut our eyes.

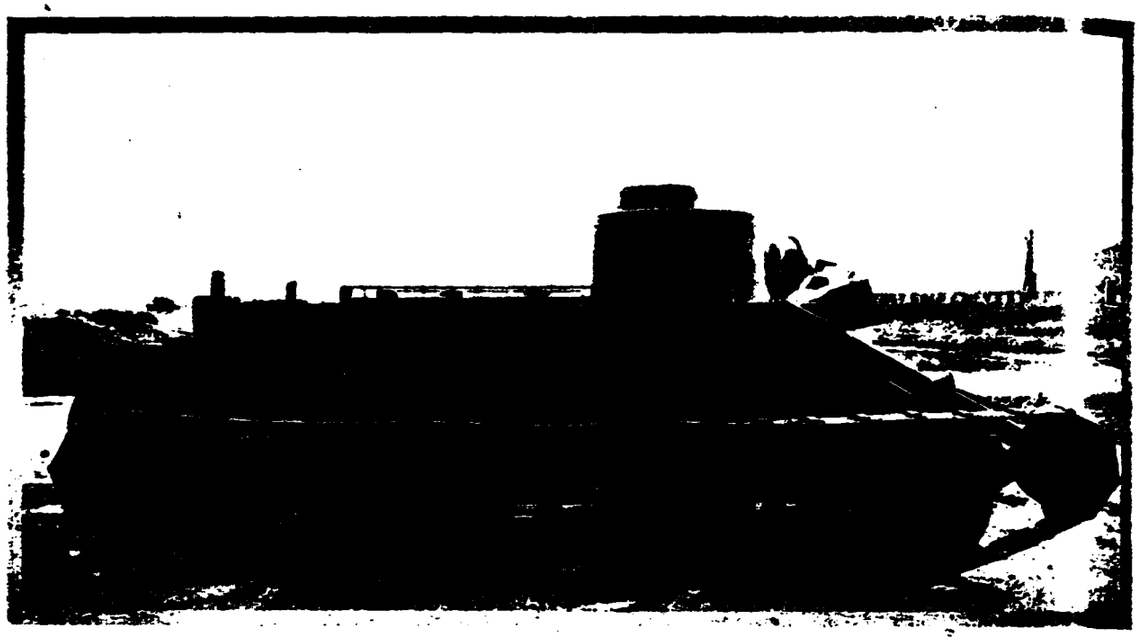
The infantry column as now constituted is a large, fat caterpillar, ambling along at the mercy of nimble ants which can leap on it with impunity, do their dirty work and disappear. If our long train of slow-moving wagons accompanies it, the case is worse, for then the caterpillar is dragging another caterpillar and is further handicapped in his defense. Let us assume that even though our own people still cling to General Grant's wagons, the march of progress and the scarcity of animals in this highly mechanized country will soon force us into complete motorization of our combat forces. High speed has now become so essential in warfare and has been attained to such an extent in some branches that it is not thinkable that the basic branch can be allowed to continue to crawl. We are going to have motorized trains, which will be able to move by long bounds in a short time, and so can take advantage of cover; which will be invulnerable to gas attacks; which will eat only when working; and which will be able to serve the combat troops without handicapping them. We may resist it, but it will be forced upon us. We are also going to motorize our foot troops, but more about that later.

Confining our fears to our column of combat troops, in a force acting independently, the question is how to change it from a caterpillar into a scorpion. It is threatened to an increasing degree with sudden attacks from a distance. We cannot hide it; planes reconnoitering for fast tanks will locate it and promptly inform the latter, who, before the infantry mass has moved two miles, will dash in from thirty miles away, far beyond the possible reach of our ground reconnaissance agencies, and cut it to pieces. No possible increase in armament, or measures for close reconnaissance can save it, unless we change its formations and methods.

How is this to be done? The first and most obvious solution is to march at night. This reduces the danger of detection, but does not eliminate it. Night flying is no longer an experiment, and the air service has



6-Wheeled Armored Car, T4



The Christie Tank

developed flares which will light up the ground well enough for accurate observation. The tank is of course seriously handicapped by having to move at night,—driving is difficult, and fire is not accurate,—but darkness gives it cover, and it can move up much closer undetected before making its attack. Even though the casualties produced by a night attack by tanks will be less than by day, the demoralization in the column will be immeasurably greater, and the possibilities of hits on tanks are greatly reduced. We will not gain materially under these conditions by confining our march to the hours of darkness. There are times when it is not practicable anyway.

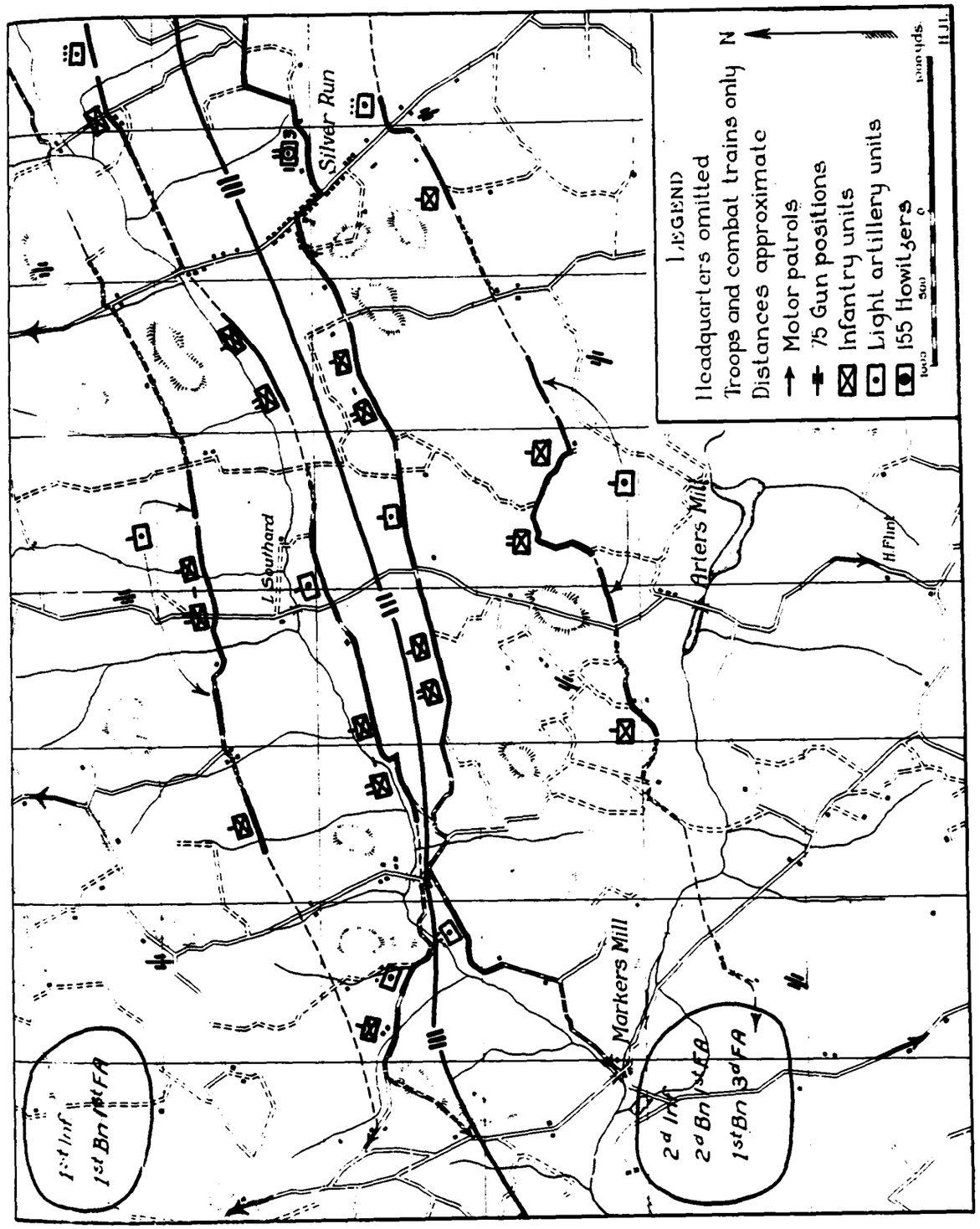
Our task is still to find a way by moving by day. We must increase the rapidity of movement and decrease the vulnerability of our march formation. Let us then so speed up the infantry column that even though the reconnaissance planes spot us and report us to the tanks, the latter cannot be sure of finding us at or near the same point when they close in. This brings us to complete motorization, the mass being moved by bounds from one point to another, each forward point being selected so as to offer the best chances of prompt defense against the threat, or alternatively, a portion being moved forward at increased speed from one favorable covering position to another until the mass can close up. Our own speed will then counteract the speed of the tanks, and we will have time to protect ourselves at every phase. Motors for the foot troops would give us back our power of marching by day.

This would be satisfactory if we could be fully motorized, but we have not yet reached that point. In the meanwhile we must do something with the means available. The means being inadequate, we must adapt the method.

In the past when we reached the danger zone covered by hostile artillery fire, we changed our formation from route column and took up what we called an approach march. The new conditions we are now facing simply impel us to do the same thing sooner. The danger of contact from a greater distance having increased, let us then change our formation at a greater distance. For instance, instead of marching in a long column to within a mile or two of contact, let us make the entire day's march so disposed that no matter what happens, we are in a position to ward off attacks from flank and rear and still go into action promptly to the front.

The field trains we will leave in laager well back. They will be protected by machine guns and perhaps a few pieces of artillery. They will be so disposed in woods or towns that they will be hard to find and will not offer a remunerative target. Since we cannot spare enough weapons to make them secure against a determined attack by a large number of tanks, we must make the distance to be run a deterring factor in the calculations of the raiders. In the majority of cases the prospect of destroying some of the vehicles of a train will not be sufficient reason for diverting any large number of tanks from an attempt against our combat forces. The results would be no more effective or far-reaching than the futile cavalry raids of the Civil War.

The main body of combat troops will march on as broad a front as possible, up to the limit where the width of the formation equals its depth. All available roads will be used, and often where the going is



not difficult, some of the troops will march across country, with mounted engineers doing emergency work in cutting fences, tearing down walls, making slashings and improvising stream crossings. The column will become a rough circle or diamond, with

Vickers-Armstrong Light Tank. Max. Speed 21.8 m. p. h.

the combat trains on the inside, grouped so that sections will be closest to the units to which they belong.

All reconnaissance agencies will be increased. Airplanes will reconnoiter to a distance of at least twenty miles; motors will run out to a distance of at least ten miles on all roads leading in on the force, cross-country vehicles thoroughly covering the ground off the roads over the five-mile belt nearest the troops, and the usual patrols and air-guards and observers will operate closer in. This reconnaissance will be continuous and will be carried on not only to the front, but well back on the flanks as well, to detect any enemy who tries to slip in after the main body has passed. A rear guard will close the gap in rear.

Our weapons must undergo a redistribution. The machine guns will as now be scattered by platoon through the battalion, principally to combat airplanes, but the 37-mm guns must be where they can go into action more promptly against tanks. They must therefore be attached to battalions and march at the head of the interior battalions and in a position to operate on the outer flank of the flank battalions. They will move with the foot-troops, but may at times remain near favorable firing positions until the bulk of the battalion has passed, afterward increasing their gait to regain their proper place. Lacking better means, they can be carried in light commercial trucks.

The field artillery can no longer expect to move in a group deep in the column with no care for its own protection. It will be a vital factor in the security of the whole force, and will have to disperse considerably. The mass of it will be motorized, and due to its greater mobility, it will be able to move from point to point, let a portion of the foot-troops pass under its protection, and again move forward to another favorable position. As the main body passes avenues of approach from any direction, guns must cover these approaches, displacing successively to others in time to prevent possible attack along them. This work will be arduous, but necessary.

By this means, with frequent moves by echelon of the anti-tank weapons and 75's, a large proportion of them will always be in firing positions. Special anti-aircraft weapons, when and if we get them, will be well forward.

Command will be exercised from a central position within the mass and well forward. All means of communication must be utilized to retain proper control.

The accompanying sketch will illustrate the idea better than words. As pictured, a reinforced brigade, exposed to air and tank attack, is marching toward probable contact with an enemy still forty or fifty miles distant. It must be ready to repel a tank attack which can reach it from back of the enemy's location within two hours, it must continue to make the best time possible forward, and it must be ready to go into action in case the enemy moves his foot-troops up suddenly in motors. In the formation indicated, with the field trains fifty miles behind it, it is prepared for all-around defense, and can bring the fire of most of its artillery to bear in any direction promptly. It is partly deployed for action to the front, and can as-

The Vickers-Armstrong Crossley 4½ Ton Car. Max. Speed 43 m. p. h.

semble and use its artillery in that direction in less time than it now takes the infantry to go from route column to their assembly positions. It is no longer a caterpillar; it now bristles with teeth on all sides, and has a much improved chance of getting to its lair before it is pecked to death with surprise attacks.

Notice of Annual Meeting

The annual meeting of the U. S. Cavalry Association will be held at the Army and Navy Club, Washington, D. C., at 8:00 p. m., January 30, 1933.

Members who do not expect to be present may send their proxies to the Secretary, U. S. Cavalry Association, 1624 H St., N. W., Washington, D. C.

Uncle Sam's Warriors of the Campus

By Major William H. Hobson, Infantry (DOL)

UNCLE SAM is a busy man. No one envies him his two-fold job: playing big brother—whether he elects to do so or not—in a wrangling family of nations while trying to keep his own disturbed house in order. Yet, good-naturedly, he tackles each problem with confidence, and is always willing to lend an attentive ear to either side of a national question. For example, the debate over military education. It is hoary with antiquity, yet the argument continues; and the ring grows hotter and hotter.

Just recently Uncle Sam's agents have completed an investigation of the Reserve Officers' Training Corps (R.O.T.C.) system of military education which maintains 324 units in 232 schools and colleges; about 127,000 students are enrolled—85,000 in the senior units in colleges, and the rest (42,500) in junior units in secondary schools.

What new evidence did this investigation reveal? What conclusions did the investigators arrive at? And, more important, in the light of the new evidence, what does Uncle Sam himself think should be done about the R.O.T.C.? Is he willing to continue in his budget the item $4,000,000 a year, to support this post-war incubator for civilian military leaders?

First, for a word picture of the R.O.T.C. as drawn by its graduates. One is now available in the form of Pamphlet No. 28, U. S. Department of Interior, Office of Education. This pamphlet, entitled "A Study of the Educational Value of Military Instruction in Universities and Colleges," is for sale by the Superintendent of Documents, Washington, D. C., at five cents. Mr. William John Cooper, U. S. Commissioner of Education, the author of an article, "The Question of Military Instruction," in the March, 1932, number of *School Life*, the official organ of the Office of Education, in commenting on pre-war military training, states, in part: ".....This kind of military education proved to be of great service to the Republic in time of danger. Did it have any bearing on getting us into the war? No such charge has been made so far as I can discover. Does it tend to make men eager for actual warfare? It has been asserted by antimilitarists that it does, but I can find no facts to substantiate the charge. In an effort to answer this question, at least in part, the Office of Education is cooperating with a committee in attempting to ascertain from recent graduates who had been enrolled in the Reserve Officers' Training Corps in many of our colleges their frank opinion of the weaknesses and strong points in the military courses which they took and the usefulness, if any, of these courses in civil life....."

In his letter of transmittal with pamphlet No. 28, Mr. Cooper further explains to Doctor Ray Lyman Wilbur, Secretary of the U. S. Department of Interior, that ".....About 16,000 questionnaires were mailed; more than 10,000 returns were received. All the people who received these blanks were graduates in the period extending from 1920 to 1930. Coming from those who have had experience with the course the returns speak for themselves....."

The introduction to the report on the study explains, in part:

"The educational value of military training has been a matter of debate since the earliest appearance of such training in the college curriculum over a century ago.....

"Thus far there has been relatively little reliable data bearing upon the question, and therefore the discussion has been characterized by bias on both sides...

"It seems also that the opinions of those who have actually undergone a given experience may be assumed to be of more positive value as a basis for conclusions than opinions expressed by those who have not themselves undergone the experience, reactions to which are being studied....."

"The curriculum of the Reserve Officers' Training Corps of the senior division consists of a 4-year course, divided into basic and advanced courses, each of two years' duration.....The basis upon which the course is offered is entirely a matter for institutional decision. At present the course is required of freshmen and sophomores at 80 of the 126 institutions maintaining senior units..... The advanced course is entirely optional and operates on a schedule of five hours per week for both junior and senior years. In addition, the trainees must pledge themselves to attend one 6-week training camp during the summer following completion of their junior year. The aim of the advanced course is to give specialized instruction in that branch of service chosen by the candidate for commission, and to afford practical training in leadership and command.....

"A questionnaire containing 8 principal questions was sent out to.....54 institutions.....

"Every care was taken in formulating the questionnaire to avoid suggesting or influencing the answers...

"A wide geographical sampling of institutions was made; 39 states and the District of Columbia were represented.....

"All types of senior.....units were included except the institution organized essentially as a military school."

The pamphlet (No. 28) continues with: a copy of the questionnaire form; a list of the names of the institutions in the study, showing type, basis of training (required or elective), inquiries made, replies received,

and percentage of replies received; a general analysis of the findings, first as a group and, second, according to individual institution; a detailed analysis of opinions expressed by the graduates that could not be tabulated in the simple form of "yes" or "no"; and finally by a brief summary. The summary of the study, complete, reads:

"1. The volume of opinions drawn from more than 10,000 college graduates who completed the R.O.T.C. course in military science and tactics gives full recognition to the educational values derived from the

Colonel E. Goring Bliss, presenting loving cups for highest scholarship to Cadet Capt. Ralph Koebel (Senior class); Cadet Corporal Robert Hall (Sophomore class); Cadet William Collins (Freshmen class); Cadet Sergeant John W. Ahern, (Junior class), Military Day, Georgetown University, 1932.

course. This is apparent from the standpoints of both general education and discipline and educational subject matter. The course is recognized for its utility in developing right habits of mind and body and qualities of character that are fully as useful in everyday experience as they are when applied to military objectives.

"2. The R.O.T.C. is especially recommended by graduates because it has brought to them a more definite and serious recognition of a number of the more important duties and responsibilities of a democratic citizenship.

"3. Graduates of the R.O.T.C. have come to feel that some college authorities and faculties have not given sufficient recognition to the R.O.T.C. as an educational instrument, largely through a failure to perceive many of the educational values that have been developed through its agency.

"4. Although graduates recognize on the whole that military education is equal in quality to that which is academic or professional, they feel that the R.O.T.C. course could be strengthened by better pedagogical training on the part of the teachers of military science, and by their placing greater stress upon the study of principles rather than upon military technique.

"5. The graduates would strongly oppose the abolition of military training from institutions of collegiate grade, and are of the opinion that the contribution made by the R.O.T.C. to a young man's general education is sufficient in value to warrant the continuance of the course as a curriculum requirement.

"6. Ninety-three and six-tenths per cent of the 9,636 replies attest that R.O.T.C. training does not create a militaristic attitude in the minds of those who have experienced it, but that it does furnish graduates with a sense of individual responsibility toward national welfare and security."

General Analysis of the Findings

Question[1]	Percentage answering "yes"	Percentage answering "no"	Total replies to individual questions out of the 10,184 replies received
1	2	3	4
1. In your opinion, has the ROTC military course of study a definite educational value of its own?	97.1	2.9	[illegible]
2. Did the ROTC contribute anything important or unique to your education?	94.9	5.1	[illegible]
4. From your own experience was the time spent on the training justified by the results obtained?	94.9	5.1	[illegible]
7. In your own opinion does the ROTC course of instruction tend to produce a militaristic attitude inimical to world peace?	6.4	93.6	[illegible]
8. Judging by your own experience:			
(a) Do you favor the ROTC as a required subject for the first two years of college?	81.0	19.0	[illegible]
(b) Would you make the entire course optional?	26.8	73.2	[illegible]
[2](c) Would you abolish the ROTC from collegiate institutions?	1.5	98.5	[illegible]

Question	Percentage of affirmative answers	Total replies to individual questions out of the 10,184 replies received
	5	6
3. How did the quality of the ROTC courses, in respect to content and organization, compare with other courses given at your institution?		
Below average in quality	11.7	
Average in quality	68.0	10,099
Above average in quality	20.3	[illegible]
5. In your opinion, did military training aid or make easier the development in your own life of one or more of the qualities or characteristics listed below:		
Leadership	79.1	8,448
Initiative	55.6	5,893
Orderliness	66.5	6,794
Disciplinary value	91.6	8,233
Others most often mentioned in replies		
Confidence, health, patriotism, decision		
6. In what way, if any, has the military education you have received been of economic value to you since graduation?		
In improving physical development	49.3	5,871
In helping to obtain first employment	12.4	1,265

[1] For purpose of clearness, questions calling for "yes" or "no" replies are grouped together.

[2] There were 576 fewer replies to question 8 (b) than 8 (a) that number evidently considering question 8 (a) as covering the ground.

Note.—Approximately 400 questionnaires were returned with no writing on the back page.

And now we turn to the educators under whose critical eye the R.O.T.C. has been functioning for some thirteen years. What do they say about it? Space will permit here only brief excerpts from typical comments

of some of the 56 presidents of institutions of all types located from coast to coast.

President John Grier Hibben of Princeton University: "..... It does not breed any militaristic spirit among our undergraduates; the discipline, training ..... render very valuable experience to our young men."

President W. Coleman Nevils of Georgetown University: "The R.O.T.C. has received the unqualified approval of both the faculty and student body..... Our military department occupies a position on a par with all other departments of the institution. Believing in the educational value of the training, the university grants appropriate scholastic credits toward a degree for time devoted to military instruction."

President Thomas S. Baker of Carnegie Institute of Technology: "..... It is an element in reasonable preparedness without, it seems to me, the blighting influence of militarism."

President Charles A. Lory of the Colorado State Agricultural College: "..... We find the courses in Military Science, Law, Policy, History and Tactics decidedly helpful, supplementing the work of our other departments in training in patriotism, citizenship, courtesy and leadership."

President Frederick B. Robinson of The College of the City of New York: "..... The influence of the R.O.T.C. is, on the whole, beneficial to the individual, the college and the nation."

President H. W. Foght of the University of Wichita: "I have great faith in the work of the R.O.T.C. as an agency for preparedness without in any sense committing the nation to militarism. I am speaking as much from my own personal experience in this field, as from a study of the effects of this training upon the members of the R.O.T.C. ....."

President Albert Atkinson of Montana State: "We believe the work offered to be worthwhile and to have real educational value. .....All other college courses, outside of the courses in military, require primary consideration for individual attainment and development, and we consider the military courses a valuable addition to a well-rounded training."

President Edward C. Elliott of Purdue University: "..... I consider that the R.O.T.C. contributes largely and efficiently to the development of these essential qualities of which dynamic character is composed—the sense of personal responsibility, the spirit of purposeful cooperation, the inspiration of leadership, and a recognition of the eternal place of order and organization in human society....."

President F. D. Farrell of Kansas State Agricultural College: "..... I am sufficiently impressed with the value of an adequately supported and properly directed R.O.T.C. as a part of the work of the Land-Grant Colleges that I should favor it even if we knew there would never be another war."

With such evidence before him, it is easy to imagine Uncle Sam delivering himself of these sentiments in an address to the many groups—pros, cons and neutrals—interested in the timely question of military education:

"The R.O.T.C. should profit by—not suffer from—the controversy over it. I am familiar with the evidence submitted by the debaters on both sides of this question. The opposition maintains that military education is objectionable because: it is unnecessary; it is

VIEW OF A COMPANY IN LINE OF PLATOONS, AT GEORGETOWN, 1932.

out of harmony with the Kellogg Pact; it creates a warlike spirit which tends to bring on rather than prevent war; it is too expensive; harmful methods are being used in colleges to popularize it; the practical results of it in terms of national defense are negligible; the educational advantages—mental, physical and moral—are questionable. Supporting these claims I find: certain religious organizations; so-called 'liberal' groups (varying from communists to 'constructive idealists'); pacifists; internationalists; etc.

"On the other hand I find supporting the present system: educators and student bodies, especially in those institutions maintaining units; R.O.T.C. graduates; patriotic societies; veteran organizations; statesmen and high Government officials; and that part of the general public familiar with the work of the units, their methods of operation, and the results being attained.

"The opposition, in my opinion, has failed to produce evidence to substantiate their charges.

"My advice to the friends of the R.O.T.C. is that they not become unduly excited over ridiculous aimed at our young 'warrior' now in his early teens. He still needs wise guidance in his rearing, if he is to gain his rightful place in our National Defense family, as an indispensable member of that larger family we call 'Government.' Let us console ourselves with these thoughts: other loyal intelligent Americans in the main, are proud, as we are, of the progress our son has made so far; for they, too, see in him a valuable educational factor for maintaining peace at home and abroad; and they seem willing to pay the insignificant price of his upkeep, even in these hard times.

The Halger-Ultra Bullet

Digest of an Article by Major J. K. Boles, F.A., in July-August, 1932, U. S. Field Artillery Journal, 1624 H St., N.W., Washington, D. C.

ACCORDING to reports some amazing results have been obtained with the new Halger-Ultra bullets developed by Dr. H. Gerlich of Kiel, Germany.

The latest information is that Dr. Gerlich has been able to step a bullet up to a velocity of about 6000 feet per second and that this bullet at short distances will penetrate armor plate more than one-half inch in thickness. Accuracy has not been neglected in developing this high speed bullet.

In recent years the trend in the development of tanks and armored cars has been to armor them with speed instead of metal and to furnish only enough of the latter to protect them from machine gun and rifle fire, relying upon their speed to prevent direct hits by artillery. The development of such a cartridge as the Halger would, therefore, eliminate from the battlefield any lightly armored vehicle.

A cartridge possessing the characteristics claimed for the new one would enable the rifleman firing at aircraft to take far less "lead" and, therefore, increase the probability of hitting the rapidly moving target. It would also greatly increase the effectiveness of fire upon the battlefield, because with such velocities the trajectory is so flat that at ranges of less than 500 yards only one sight setting would be necessary. This same feature makes it especially valuable to sportsmen, most of whom have lost desirable trophies because of a slight error in estimating the range.

Dr. Gerlich, it is said, obtains these tremendous velocities mainly by the shape of his bullet, which weighs only about a hundred grains for the 7 mm (or .276) caliber, and by the use of about 100 grains of dense powder. The bullet, it is understood, is made of a soft iron jacket (with soft lead core) coated with cupro-nickel. Instead of having a long bearing surface, as does the ordinary bullet, only two bands touch the bore (somewhat similar to an artillery projectile with two rotating bands). These are understood to expand on discharge and thereby form very efficient gas-checks. The cartridge case is made somewhat larger than that for the Springfield in order to hold the hundred grains of powder, more than twice the service charge.

It is difficult to understand why such a small, comparatively fragile, bullet should not disintegrate upon striking a hard steel surface. The only explanation advanced is simply that it "hasn't time to dy to pieces," but instead it drives through this armor plate with such speed as to make a hole practically twice the original diameter of the bullet and, when fired against heavy armor plate too thick to penetrate, it will dig a crater about five-eighths of an inch deep and an inch and a half across and blast splinters, like small fragments, from the far side, provided the armor is not more than one and one-half inches in thickness.

One of the most difficult claims to understand is that of the absence of excessive recoil when this cartridge is used in the rifle of the normal weight. One eminent ballistician claims that, according to formulas, the recoil attendant upon such velocities with a rifle of normal weight would be many times that which is physically endurable. Some ballisticians claim that these velocities cannot be attained with a barrel less than 42 inches in length. An excessive recoil would bar this cartridge from use in shoulder weapons, but not for use in machine guns or other mounted weapons for anti-tan and anti-aircraft purposes.

Time will tell whether Dr. Gerlich has attained such velocities that the usual theories no longer apply and if so, what will be the effects on future armaments.

Vital Factors in World War

*By Ponocrates**

THANKS to modern inventions, such as aircraft, wireless, motor transport, and fast ships, the world is ever becoming smaller. From the point of view of war it is no longer possible to conceive wars of any magnitude taking place almost unobserved in one corner of the world while the rest of the world is unaffected. Distances mean so much less, and nations are economically, financially and even politically so inter-connected that a war, on a scale comparable perhaps with the Franco-Prussian War of 1870, could not now take place as it did sixty years ago with near neighbours, such as Great Britain, merely mildly interested. The Great War brought almost all the world into action, and the tendency for a big war to become a world problem is likely to increase year by year. For that very reason, it may be less likely that big wars will take place, but at the same time, with the increase in the scale of conflagration there is an increase in the magnitude of the consequences. It may be well, therefore, just to take stock of the world as a whole, to align some of the big factors in world war, and to note the matters in the existing word that are likely to be important perhaps a generation hence.

Now, whether we belong to the school which believes that armies should be entirely mechanised, or to that which would cling to the organization of the last war, or to one which advocates something between these extremes, all will agree that any large war will be decided by man-power, industry, and raw materials, where raw materials include also food. The need for movement throughout the world introduces as a further vital factor, sea-power.

Man-Power

The following list shows the location of the main populations of the world:—

From "The Statesman's Year Book," 1929)

Nation	*Population In Millions*	*Annual Increase*	*Year of Estimate*
China	440	Not known	1923
India	319	3,750,000	1921
Russia	147	Not known	1927
U. S. A.	120	1,430,000	1928
British Empire	65 (whites) 51 (African natives)	660,000†	1926-28
Japan	64	846,000	1927
Germany	63	402,000	1927
France	41 (whites) 56 (natives)	70,000	1926-27
Italy	41	457,000	1927

At first glance, China, India and Russia would appear to be very important. But in each case there is some consideration which removes these nations from the front rank, as far as man-power is concerned. China is at present disorganized and torn with dissension, and at all times, though described as an entity, will contain races so different in character as to render real unity problematical. The great majority of the people of India come from non-fighting stock. Russia suffers from the effects of vast distances and of the continual struggle against climate. These three peoples are reduced in value from a military point of view on account of their lack of education. To be effective in war, man-power must not only be virile, but it must be highly developed mentally.

The really important Powers from the point of view of man-power are thus the next group, in order of size, the United States, the British Empire, Japan, Germany, France and Italy.

The United States man-power suffers from a lack of homogeneity. In 1921, out of a total of 105 millions, 10½ millions were negroes and 36½ millions were foreigners, only just over half the populations being "100 percent Americans" of Anglo-Saxon origin. While the Anglo-Saxon proportion, for lack of births, decreases steadily, the other proportions, conspicuous for a high birth-rate, tend to mount year by year. In time a cosmopolitan product, with characteristics very different from the original British stock, is certain to be developed. The man-power of this nation, as composed today, is to be noted as enjoying a high standard of living, as highly educated and more advanced in the uses of modern inventions than any other. But it is very mixed. Alongside materialism in its worst form, a disregard for law and order and crime statistics which are a national menace are to be found idealism and firm support for religion, peace and charity. This people is unwarlike but has, on the whole, good fighting qualities. It is likely to increase yearly in size by about 1½ millions.

White Man-Power in the British Empire

The white man-power of the British Empire is scattered, with 45½ millions in Great Britain and Northern Ireland, 9½ millions in Canada, and 7½ millions in Australia and New Zealand, as the main components. It is a man-power uniform in its ideals, traditions and history, toughened by wide experience and as generally developed mentally as any in the world. It possesses in Great Britain a source of natural seamen. The white people of the Empire are increasing at a medium rate of about 500,000 a year, while increase due to white immigration is about 150,000 a year. The birth-rate of the whites in the Empire compares reasonably well with that of the United States and Germany, though it is behind that of Japan and Italy. As far as man-power is concerned, apart from any aid from India and the native races of Africa, the British Em-

* From the *Army, Navy and Air Force Gazette* (Paris). Ponocrates is one of the best known pseudonyms in Europe.

† Increase in population to Dominions from countries outside the British Empire.

pire for a generation or two seems likely to keep its place.

Japan

Japan's man-power is increasing at an inordinate rate. Her people are notable fighters, hardy and self-sacrificing. From the point of view of population alone, Japan must be recognized as becoming yearly a more formidable military power.

Germany

Next upon the list comes Germany. Until recent years the virility of the German race was a by-word and her great increase in population is given as a contributory cause of the Great War. The German people are highly educated and, as the last war proved, a military nation in every respect. It is interesting, however, to note that there has been recently an appreciable decline on the annual increase of population. While it was 548,000 in 1925, it fell to 494,000 in 1926, and to 402,000 in 1927—a drop of 27 per cent, in three years. This tendency, if accentuated, may prove important. Meanwhile Germany remains, from the purely man-power aspect, the dominant race in Europe, even though by treaty she is forbidden the military training of her people.

France and Italy

France presents a marked difference. Alone of the larger nations she has no annual increase of white population of any size to her credit. The comparison with her neighbour, Italy, a people of the same present size, shows the state which France has reached. While France in 1927 claimed an excess of white births over deaths of only 70,000, Italy's figure was over six times as great—457,000. The sensitiveness of France as regards communications with the sources of her native man-power can well be appreciated.

Both the people of France and Italy are highly educated; both enforce universal conscription. France has, in addition, a fine military history behind her.

To sum up the man-power situation then, the most formidable mass of intelligent and courageous man-power will be found for many years to come in the United States. The next, the British Empire, is remarkable for being scattered round the globe. The third nation, Japan, like the first, is increasing rapidly in strength and is also a Pacific power. The remainder are all European powers. France, with stationary white man-power, backed by native millions, is sandwiched between Germany and Italy, both of which in a generation look like possessing a great superiority over France in population.

Industry

But man-power alone is not decisive in modern war. Only man-power backed by modern industry can become so. It is necessary to see which nations have both.

The nations possessing large manufacturing industries, in order of the magnitude of those industries, are: The United States, Great Britain, Germany, France, Italy, Japan, in the first rank; those in the second grade being Belgium, Czecho-Slovakia, Poland, and Canada. It is notable that the six nations of first importance from the point of view of man-power are also the first six from the point of view of war industries. This is partly coincident and partly due to the fact that a large nation will, if it can, for various reasons, make its own manufactures.

But whether these nations have industries adequate to provide all the war stores needed for the full use in the field of their man-power is another question. Certain facts obtainable from the records of the Great War, as far as Britain was concerned, are illuminating.

Firstly, in 1918, when every man possible was being utilized, it appears that about five million were placed in the field and about five million were employed upon munition production. Secondly, with these proportions, the output for ten months in 1918 reached a scale of about 11,000 new gun bodies, 60 million shell, 120,000 machine guns, one million rifles, 22,000 aero-engines and 1,400 tanks. Thirdly, even after the entry of the United States into the war, Great Britain received imports of war stores made in America to help out her industries. Fourthly, at no period were the armies in the field considered to have held enough of every war store. Lastly, time was needed for an industrial nation to get into full war production. The records of 1914-1918 show that years were needed.

The conclusion that can be drawn from these facts as far as the great nations of the world are concerned is that probably only the United States has enough man-power to supply fully both the needs of the munition factories and the armies in the field. All the others will have to judge nicely between the needs of the one and the other. Even after years of effort, as seen by the 1918 production, there is a limit to the output of a country in war stores which will limit the size of armies and air forces that can be placed in the field. Unless vast reserves of arms can be laid up in peace (an expensive and dangerous policy in days of continual invention and improvement), a nation, the man-power of which is increasing out of all proportion to the increase in its industries, as perhaps is the case of Japan and Italy today, is not really, from a military point of view, becoming as powerful as might appear.

In the case of all the nations, whatever their man-power and their industries, a long period, perhaps two to three years, depending upon the degree of preparedness of industry, will elapse in war before the nations can even begin to exist at their full power. The value of such forces as exist on the outbreak of war will be out of all proportion to their size.

Raw Materials

In the above consideration of the possibilities of war production by the great nations, it has been assumed that all have adequate supplies of raw materials. Food is the most vital of raw materials and next for war purposes come perhaps, oil, coal, iron, steel, copper, tin, cotton, and rubber.

The condition of the six Great Powers, whose man-power and industries place them in the front rank, varies considerably as regards these raw materials. The United States possesses ample supplies of all the requisites, except rubber and tin. Further, her supplies are concentrated within her borders. Open sea communications are not a necessity for her existence, though they may be for her prosperity.

The British Empire has all the requirements, though oil only in limited quantities. In her case, however, the main population and industry, in Great Britain, is separated by many miles of ocean from many of her raw material sources, which come from all parts of the world. Open sea-routes are for her essential.

Japan is greatly deficient in many materials. She has no home sources of supply on any scale of coal and iron, oil and rubber. Even in food she requires imports. She also is dependent upon open sea communications, though these, for her, need not be so far flung as in the case of the British Empire.

Germany, as the Great War proved, is largely self-supporting in raw materials. She lacks oil, copper, cotton and rubber and nitrates. With her great chemical industry, however, she has shown a marvelous capacity for evolving substitutes for missing materials. For instance, she has produced oil from coal, and nitrates from the nitrogen in the air.

France is similarly placed to Germany. She possesses much the same resources and lacks the same materials. She has not the same chemical production, but if the sea routes be open she has access to supplies from her colonies.

Italy is far worse off, for not only must she import food for a part of her people, but she is lacking in oil, coal, iron, steel, copper, tin, cotton and rubber; in fact, nearly every important raw material. Without free use of the seas or the establishment of great war stocks Italy will be unable to wage a big war.

Sea-Power

World war presupposes the whole world as the scene of action. A vital factor is the ability to apply force at whatever part of the world seems most advantageous. This ability, whatever the progress of aircraft, can only rest upon sea-power. Also, as we have seen, certain Great Powers—notably the British Empire, Japan, France and Italy—depend upon certain sea communications for their whole war effort.

Sea-power rests mainly upon the strength of fleets and bases. As regards the same six Great Powers, the United States aspires to, and no doubt will, have equality with the greatest other navy in the world, that of the British Empire. But she possesses relatively few overseas bases. The expansion of naval forces in war is as slow a process as that of land and air forces. It is limited by the output in ships and the existence of natural seamen. While in output no doubt American dockyards could play their full part, it is doubtful whether sufficient true seamen for great expansion exist in the United States. No amount of training will turn a landsman into a seafaring man.

The British Empire has still the greatest fleet and has bases in many parts of the world. Great Britain has a great ship-building industry and in her mercantile marine in her people is a reserve of fine seamen. But her sea communications are long and hard to protect except near British bases.

Japan retains a fleet which aims at supremacy in vital home waters. She has shipyards and also a reserve of seafaring population, but no far-flung bases.

Germany has been crippled as a sea-power under the Versailles Treaty.

France and Italy have fleets far smaller than the British and American. Both are placed in a difficult position as regards sea-power, both relatively to each other and to the British Empire. Neither can be said to possess supremacy, except in purely local waters.

Summary

A general summary of the vital factors as applied to the world is interesting. It shows that power is distributed over the six Great Powers, the United States, the British Empire, Germany, France, Japan, and Italy, and that each of these Powers is wanting in something. Thus the United States has insufficient overseas bases and reserves of natural seamen. The British Empire lacks concentration and is consequently sensitive as to sea communications. Germany is not allowed to train armed forces. France is nervous of her white birth rate. Japan needs raw materials. Italy has a serious economic problem, based upon a shortage of fuels and minerals.

It is very apparent from the above summary how important sea-power is. The deficiency of each of the Great Powers could be overcome with sea-power. It could give the United States naval bases and seamen. Britain security of communications, Germany time to train her armed forces, France access to her native man-power, and Japan and Italy their raw materials. The British Empire, as the greatest sea-power, holds for the future the balance of power just as it has done in the past. No Great Power will care to have British sea-power against it, and every Great Power would like to be allied to that sea-power.

As regards the future, as far as can be foreseen, most of the salient points in the world situation are likely to be accentuated. Thus, predominance of the United States, already pronounced in certain directions, is likely to be more pronounced. The dependence of the British Empire upon communications will become greater. The shortage of man-power in France, of raw materials in Japan and Italy, will probably be felt more year by year. The only deficiency in Germany, the lack of armed forces, may become less noticeable if other Powers adopt any measure of disarmament. For the future, then, it is safe to assume that sea-power will be more important than ever. The British Empire will be well advised to maintain its position upon the sea.

The Signal Corps Photographic Laboratory

By Captain James Notestein, Signal Corps (Infantry)

Officer in Charge, Signal Corps Photographic Laboratory, Army War College

"WHEN do we eat?"

Lieutenant A. W. Greely, U. S. Cavalry, engaged on polar exploration in the years 1881-1882, was forced to discard a part of his impedimenta. The choice lay between abandoning a portion of his food supplies, articles of scientific equipment, or his cherished file of polar pictures. Lieutenant Greely's laboriously prepared "wet process" plates were safely returned to the United States. These, he reasoned, will serve posterity.

The problem of how best to preserve valuable historical negatives and make prints therefrom available to scientist, writer and editor faced the War Department in 1894. The Department had just amplified its pictorial records by the acquisition of the "Brady Collection." This file contained approximately 6000 plate negatives. It covered twenty-five years of our national history. Rare portraits of distinguished Americans living in the early years of the 19th Century, prominent figures in the War with Mexico and the only available pictorial record of the Civil War, were etched on these thin glass plates. The problem was solved by the Secretary of War. He placed the negative collections under the supervisory care of "Lieutenant Greely," then Brigadier General A. W. Greely, Chief Signal Officer of the Army.

General Greely established and equipped a Signal Corps Photographic Laboratory at Fort Myer, Virginia. Facilities for negative storage and processing were provided. Prints were made available for research and illustration.

The original collections were greatly augmented by valuable negatives secured from many sources covering the Indian Wars, Spanish-American War, Boxer Rebellion and the Cuban Pacification. After 1900 the files grew apace due to the more or less professional efforts of Signal Corps troops equipped with cameras and assigned to photographic missions in addition to their other duties. Negatives and prints found their way to the War Department files covering training, housing, new developments in ordnance, communications and equipment, army participation in relief of disaster from flood and fire, together with many cabinets filled with official portraits of the officers identified with military activities during this period.

The original laboratory at Fort Myer outgrew available facilities at that station after the Spanish-American War. Its capacity was increased and the plant consolidated with the War Department Library in the State, War and Navy Building.

In 1909 a new photographic problem presented itself. The Wright Brothers demonstrated to the War Department that flight through the air in a heavier than air machine was feasible. Motion pictures of the official tests at Fort Myer were delivered to the Signal Corps for safekeeping. The storage of this negative and that of the Army's first educational picture "Close Order Drill," photographed at the U. S. Military Academy in 1916, was accomplished easily by filing in a single drawer of a filing cabinet, but they presaged a dangerous and important storage problem for the future.

Photo by Signal Corps

Left: Mr. Brady and his "studio" on a Civil War Location. Inset—Barred and locked files in the laboratory film vault which contain the original Brady negatives. Right: The Signal Corps Photographic Laboratory, Army War College, D. C.

Left: Scoring Sound on a Training Film. Right: Recording Sound Scored in the Studio on a Training Film.

Immediately upon the entry of the United States into the World War, tremendous expansion resulted. Within two years, the expected storage problem was a reality. The Signal Corps was a repository for almost 7,000,000 feet of historical motion picture film and approximately 85,000 still negatives, a pictorial record of the participation of American troops on all fronts. From these files more than 1,000,000 prints of still pictures were required for the Historical Branch of the General Staff and the Committee on Public Information. Several million feet of training film were needed. They were provided. These prints played an important part in the training program for the quickly mobilized Army of the United States. The task of processing, distribution and storage outgrew temporary expedients, especially in view of the fire hazard involved.

In 1919, the Signal Corps occupied a new building and film vault at The Army War College, built to suit its own storage and plant requirements. Years were devoted to indexing, cross-indexing and cataloguing film and motion picture negative so that any scene or still picture might be readily available to soldier or civilian. So great was the interest of the plant employees that practically no loss resulted from filing, indexing and storage. This enviable accomplishment probably resulted from the identification of most of these employees with film and negatives from its initial development, either in the Paris or Washington laboratories.

The value of the pictorial record of the Army is entirely dependent upon its ready accessibility and distribution. Hence, the War Department policy of encouraging the widespread projection of official motion pictures in church, school and the meeting place of patriotic societies, as well as the sale of historical photographs, at a nominal price, to any responsible individual. Coupled with the decentralized loans of training film and certain special military subjects through Corps Area Signal Officers, the Signal Corps Laboratory has distributed approximately 4,000 reels of motion picture film and 100,000 still pictures each year. Signal Corps film and prints find their way into every section of the United States and into many foreign countries, thus stimulating new interest in the Army and its activities among those who have no other contact with the military service.

Changes in tactics, technique and equipment, after the World War, served to render obsolete, and obsolescent, many of the sixty-two subjects in the training file. These pictures were produced under the direction of the General Staff, by contract with a commercial motion picture company. In 1928, with the cooperation of the Chiefs of Branches concerned, the laboratory entered the field of educational film production, including direction, editing and processing. Fourteen new subjects, comprising thirty-three reels, have been produced. All were approved by the War Department and distributed to the service. In 1931, funds were made available to the laboratory for the purchase of sound recording and processing equipment. New training films are issued in the 35-mm and 16-mm home movie size and in 35-mm sound version. The laboratory has, in addition, formulated a schedule for scoring sound on selected silent films produced since 1928.

With the availability of new subject matter, loans of training film from Corps Area libraries have increased from year to year. The laboratory undertakes to furnish additional prints as required and offers its facilities for the cleaning and repair of serviceable motion picture film from service schools and corps area libraries.

Present equipment and facility in its use contrast markedly with the days of General Greely's issue of cameras to Signal Corps troops in the field, who covered military photographic assignments in addition to their other duties. Within the laboratory is installed the best photographic equipment which the commercial market affords. Trained personnel does complete justice to this equipment. Motion picture photographers from the laboratory go on assignment with

training film units and cover subjects of national interest for the historical files, returning negative which is creditable to the Signal Corps. Developing, printing, titling and animating, when required, are accomplished within the plant so as to furnish a finished product which compares favorably with the better commercial pictures of a similar nature. Still photographers cover local assignments at the White House, in the War Department buildings, on the District Engineer's projects, in short, wherever they are ordered by the Army Pictorial Service. Prints from negatives made on assignments, from the portrait studio, enlarging or contact printing rooms, in general, are superior to those produced commercially. Excellence of equipment and painstaking care in processing, make possible these results.

Each year selected graduates from the Photographic Course at the Signal Corps School are detailed to the laboratory for the additional professional training required to fit them for duty as supervisors or assistant supervisors of corps area or service school photographic laboratories. In this manner, the plant serves to perpetuate a high standard of photographic excellence within its own doors and eventually throughout the service.

Every precaution, within the limit of available funds, is made to safeguard the pictorial record of the army in order that it may "serve posterity". Continuous rejacketing of still negatives is in progress. About five years, working spare time, is required of the still laboratory personnel to accomplish this project. The entire operation is then repeated. Rejacketing includes negative inspection to catch chemical decomposition, breakage and filing errors. Vault stocks of motion picture negative are rewound and inspected bi-annually. Rolls showing signs of decomposition, or the effect of wear, are replaced by duplicate negative fabricated from corresponding files of master print. While no satisfactory solution has been reached by the large experimental laboratories for preserving motion picture film, they are receiving pressure for such a solution, as the age of industry increases. Some process to accomplish such an end coupled with common-sense vigilance pending such a discovery, will make "Flashes of Action" (World War film) available to an audience which will find in it the same interest that the Command and General Staff School would find today in projecting nine reels of "Napoleon's Retreat from Moscow."

The film vault, an adjunct of the laboratory. This vault now contains approximately 5,000,000 feet of War Dept. motion picture films. Inset—Interior of one of the eighteen bank vaults for film storage.

The Real Conflict at Shanghai: International Law *vs.* Tactics

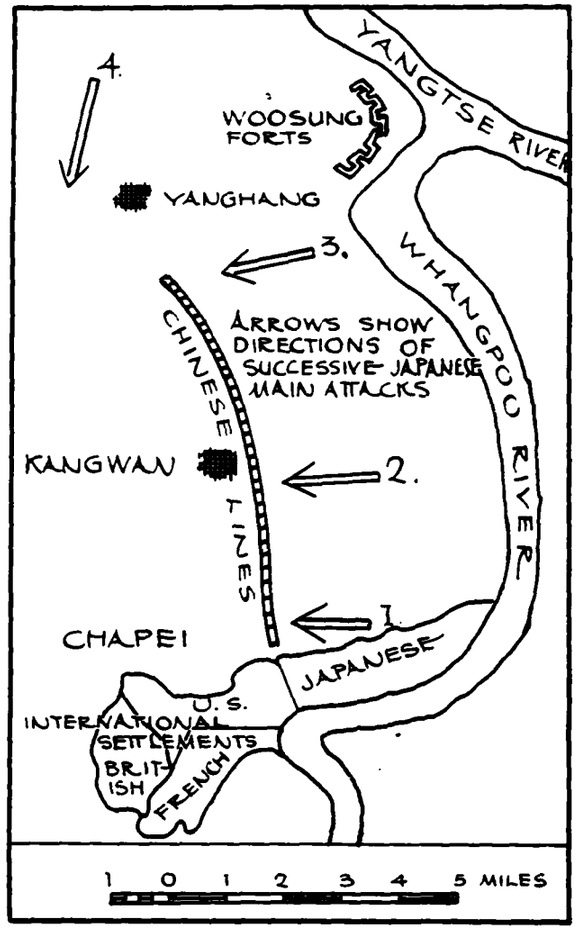
THE latest complete example of a military operation, the Japanese attack at Shanghai, is now on record. Tactically, the lessons were obvious, confirming those principles we at least respect. Tactics are the things one can do in battle: the possible moves of the war game. As with strategy, statesmen can never add to, but may often subtract from these possibilities.

Few cabinets have been better fitted, by training and by doctrine, to prosecute war, and to give a general in the field intelligent, sympathetic backing, than the one which succeeded to power in Japan after the fall of the Shidehara Ministry. But, examining this operation, there appears some evidence that the cabinet, rather than the general, really conducted it.

The right of the Chinese defensive position rested on the International Settlement—neutral ground. But the Chinese left was in the air; it rested on no strong terrain feature, although prolonged and covered to some extent by the detached Woosung forts. In reducing a defensive position, tactics offer but four courses: a straight push, a penetration, a single envelopment or turning movement, and a double envelopment—that maneuver which began as a Punic victory and continued as a Prussian obsession. The Japanese general commanding at Shanghai was a professional soldier, well understanding these elementary theorems of attack. The weakness of the Chinese left was certainly apparent to him at first glance. And he knew that the Japanese naval forces had already failed in a frontal attack in the Chapei area. But instead of adopting the natural and outstanding course: instead of moving troops up the Yangtse River and falling on the flank in rear of the Chinese left, he tried again to penetrate the line near Kangwan Station, and next, to drive in south of the Woosung Forts, toward Yanghang: successive and difficult frontal attacks. In view of General Uyeda's known ability, one can only conclude that he was obeying orders—which none but his home government could impose upon him. But why did a cabinet with considerable military training among its members impose such orders?

Japan had announced that her object was simply to gain Shanghai, not to make war on China. Diplomatically, this statement was so admirable as to be almost an ironical bow toward the United States, which in 1914 seized Vera Cruz without, so President Wilson protested, the slightest hostile intent toward the Mexican people. International law has already acquiesced in the theory that naval forces and marines might land to protect their nationals, and even capture a port in the process, without committing an act of war.

At Vera Cruz, the United States extended this principle by landing army units to hold what the navy had gained. At Shanghai, Japan further extended it by throwing in army units during the fight itself to reinforce the navy, which had not succeeded in gaining anything. The possible attitude of the Western Powers toward this extension naturally caused Japan some anxiety, but she had the dragon



by the tail and could not afford to let go after the Chapei reverse, for, if she evacuated Shanghai before driving out the Chinese, she would have nothing to trade later for a free hand in Manchuria.

But apt as the position may have been diplomatically, it was not so fortunate from a military standpoint. When Japan confined her avowed aims to Shanghai,

she also limited her theater of operations. By introducing army units into the fighting, she had already overstepped the Vera Cruz precedent on which her initial action was based. So to send troops inland up the Yangtse for a far-flung turning movement might, at that delicate stage, have been considered tantamount to invasion and a technical act of war. This was a consummation devoutly to be avoided. Therefore, unless a break with the Western Powers was to be risked, the military maneuver must be curtailed and limited to the immediate area of Shanghai; that is, to direct attacks on the Shanghai position.

Yet even after the check which the naval landing parties had received in the early Chapei fighting, it still seemed probable that the army units would succeed, even in another frontal attack. Armies are intended for land warfare which, to bluejackets, is an avocation at best. The Chinese forces lacked training, discipline, and team work; in all of which the Japanese were superior—so far superior, it was generally conceded at the time, that neither trenches nor numbers could be expected to offset the difference in fighting efficiency.

But the customary unexpected happened. To those of us who were unable to be present at the first battle of Jericho, the similar spectacle, promised us by Mr. Hearst and others in the next war, was not produced. Japanese aviation accomplished no more and no less than our active officers of the Air Corps claim and concede for a battle of entrenched positions. And the Chinese showed the results of careful foreign training in those two still supreme defensive weapons: burrowed earth and well-placed machine guns. On the morale side, Chapei had given them confidence in success.

When the frontal attacks of the army had also failed the general was superseded, as is usually the case when it is clear that a new plan must be tried and when this change of plan must be made without weakening confidence in the directing authorities at home. The alternatives were to abandon the Shanghai operation entirely or else to try a turning movement up the Yangtse River, even at the risk of Western displeasure. Japan chose the latter. It succeeded tactically. It succeeded diplomatically as well, for the Chinese defense caved in before specific protest could be raised. Before the West knew what was happening or how it was done, Shanghai was in Japanese hands.

Thus, when risked and put to the test, military expediency did not, in this case, jeopardize the diplomatic objectives, but instead actually gained them. Whether or not the hazard to foreign relations was as great as the statesmen believed; and whether or not this hazard, so cautiously played at first, condoned the loss in men and prestige caused by binding General Uyeda's hands, are questions of which an outsider is scarcely competent to judge. But it appears as difficult in war as in peace, for a nation as for an individual, to have a cake and eat it, too.

A Section Leader's Impression of a Big Offensive

(As told to a stenographer soon afterwards)

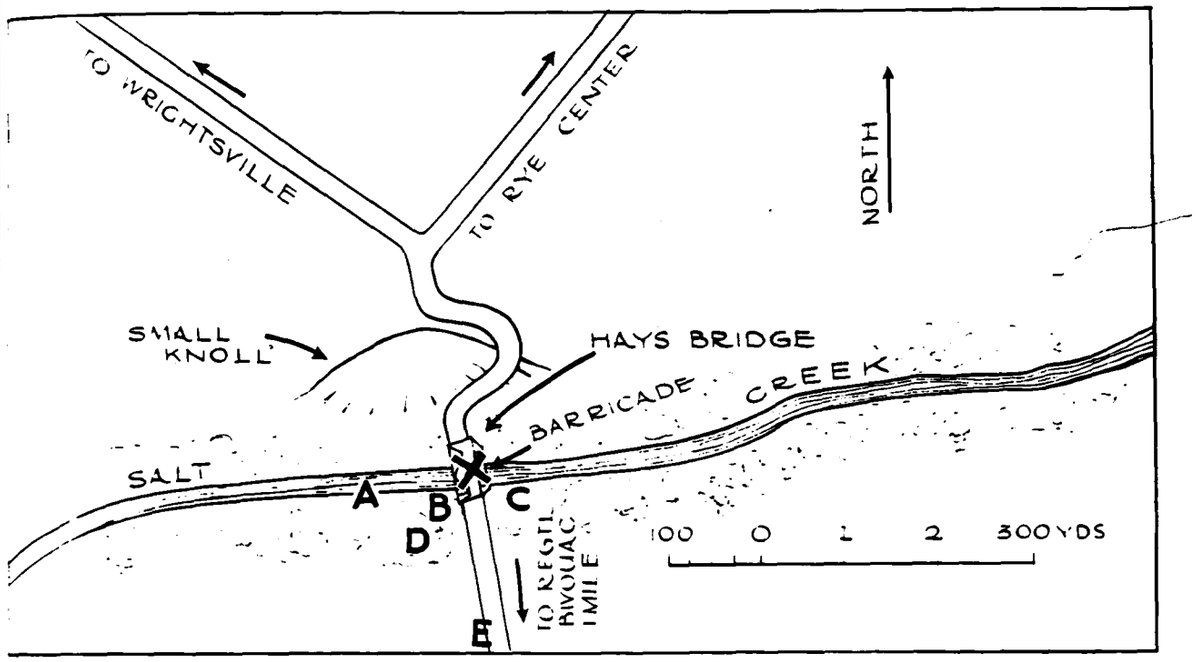
September 30, 1918.

SUNDAY morning at 5:50 a. m. the barrage was put down about 50 yards in front of us and stayed there for 4 minutes and then lifted and for the first two hundred yards we advanced in mass formation and E Company being in support as F Company fell back and took up our position and advanced on and then we came in contact with a heavy nest of German machine guns and was held up there for a few minutes and with our bombs and Lewis guns we wiped those out and went through a heavy mass of Jerry wire (it was about 50 yards wide) and we got through the wire. We were then up with F Company and come in contact with another nest of machine guns and we made a rush through them and, going through, we saw, I guess, almost 20 machine guns and 50 or 60 dead and wounded Germans and then we advanced on and came to some more wire, which seemed to be 50 or 60 yards through, and we went on and then came to the canal tunnel and went over it and came to a trench and was held up by an awful nest of machine guns and us being short of bombs and Lewis ammunition had to remain there till more troops come and, in the time of that, it being so smoky and foggy I myself saw some American troops in front of the line. I went out there and found 23 of my own men out there in shell holes, and they could not get back, for they were almost in the muzzle of that awful nest of Jerry machine guns. And got out there and got them scattered out in shell holes, and the smoke all left and we saw about 50 Germans coming and we had ten Lewis guns with us and give them orders to fire and we opened up on them and about half of them fell and the rest of them went to the rear and just before we got to that we captured 108 prisoners and 3 of his 2-inch guns and, when we stopped these Germans, I seen that we were too far out and I got them together, and we crawled back into our trench and, out of the 23, I lost 2 men and would not of lost them if they had listened to what I told them. But we got back into our trench, and part of them got straggled off again, and the rest of us got with the company at the tunnel, and my estimate of prisoners is about 500 and I saw about 150 machine guns and we were relieved by Australians and was ordered to come to the rear and did so.

CORPORAL W. C. SMITH.
Company E, 119th Infantry

NOTES FROM THE CHIEF OF CAVALRY

What Would You Do in a Situation Like This?



SECOND Lieutenant Kirby Hawks rubbed his hands together in a gesture of complete self-satisfaction. "Now," said Mr. Hawks, "I think nothing is going to get across that bridge!"

The circumstances which caused Mr. Hawks to be so pleased with his work were these: His regiment, to which was attached a platoon of armored cars, had gone into bivouac at 10:00 AM. in hostile territory. An outpost was promptly established. In addition there was a detached post of a rifle platoon with an anti-tank gun (.50 caliber machine gun) attached, our Mr. Hawks in command, had been sent to cover Hay's Bridge, the only crossing over Salt Creek, an unfordable stream which ran east and west about one mile north of the regimental bivouac. It was known that the regiment would remain in bivouac throughout the day and probably part of the night. Enemy cavalry, while known to be within a day's march to the west, had not been encountered in force as yet, but his reconnaissance, horse, air, and mechanized, had been active since yesterday, particularly his armored cars.

Lieutenant Hawks, at 10:00 AM. had found the ground around Hay's Bridge as shown in the sketch, and had promptly disposed his force as follows:

Hay's Bridge was completely blocked by a strong barricade. At point "A" close to the river bank Corporal Headspace, in charge of the .50 caliber gun, had sited his weapon to cover the barricade. The platoon was disposed in the edge of the woods along the river bank at "B" and "C" to cover the bridge by fire. The horses were at "D."

At 10:30 AM. an irate voice interrupted Hawk's contemplation with, "Will you tell me how in Heaven's name I am to get my cars across that bridge and make a reconnaissance of Wrightsville and Rye Center?" Hawks turned to see First Lieutenant Piston Slapp, commander of the armored car platoon, behind him, his cars halted on the road.

"I suppose if you must cross here, said Hawks, we shall have to take down the barrier. We can get it down in about ten minutes," and turning to his platoon sergeant he gave instructions for the removal of the barricade. "Anyhow," thought Hawks, "I can rebuild it in another half hour."

"And don't block that bridge again, Hawks," said Lieutenant Slapp. "We'll be coming back this way sometime today—maybe with Red cars after us and we'll want to get across here in a hurry."

Slapp and his cars disappeared to the north and Mr. Hawks sat on a rock to do some thinking. "My whole plan was built up on the idea of barricading the bridge," he mused, "now that this barricade can't be used my dispositions don't look so good. Now, let's see—what shall I do?" Well,

What would you do?

For Solution Turn to Next Page.

A Solution of Lieutenant Hawks' Problem

"The more I think of it," Mr. Hawks continued to himself, "the more I think I'm wrong in my dispositions—barricade or no barricade. That knoll just across Salt Creek commands my position and affords perfect cover to an attacking party. Also, it gives observation of this bank of the creek. That knoll might just as well work for me as for the Reds. Suppose I put Corporal Headspace's .50 caliber machine gun on the north slope of the knoll, so that it commands the Wrightsville and Rye Center Roads. The gun could be concealed easily. Then I could put the platoon under cover on the reverse (south) slope so disposed that it can easily move to defend the knoll or cover the retirement on the bridge. An observation post near the summit would cover all the ground on the north bank of the creek. The horses might well stay where they are, under cover on the south bank. Yes, that seems more sensible to me for daylight dispositions and that's what I'll do. When night comes, if it is a bright moonlight night like last night, we'll keep the same dispositions, but if it is quite dark I'll leave a listening post at the junction of the Wrightsville and Rye Center Roads and then defend the bridge from the south bank. the rifle squads near the bank on each side of the bridge, the .50 caliber machine gun near the edge of the road at about "E", sited down the road on the bridge.—*Department of Tactics, the Cavalry School.*

Cavalry School Publications

MECHANIZED CAVALRY. The Cavalry School has just published a pamphlet entitled "Mechanized Cavalry." The text of this pamphlet has been prepared at the Cavalry School with the assistance of the Commanding Officer, Detachment, 1st Cavalry (Mechanized), and the Office of the Chief of Cavalry. The pamphlet contains a general discussion of Mechanized Cavalry, Mechanized Cavalry with Horse Cavalry Units, the Mechanized Cavalry Regiment, and Defense Against Mechanized Units. It is the first authoritative text on Mechanized Cavalry published in the United States Army, and it is believed that all officers will find it most interesting and instructive.

THE CAVALRY 37MM. GUN SQUAD. The Cavalry School has also published "The Cavalry 37mm. Gun Squad", which carefully covers the use of this gun for general purposes and against moving targets, as it has now been modified and adapted to the cavalry pack saddle. This pamphlet should be most useful to all regimental headquarters and in machine gun troops.

TACTICAL PRINCIPLES AND LOGISTICS FOR CAVALRY. Receipt is acknowledged of the new text recently produced at the Cavalry School, "Tactical Principles and Logistics for Cavalry." The inclusion therein of an extensive chapter on Cavalry Supply will be welcomed by cavalry men in general, for whom it will fill a long felt want.

Extracts from the Annual Report of Major General Guy V. Henry, Chief of Cavalry

For the Fiscal Year Ending June 30, 1932

Personnel Section

MORALE: In general, the morale of the ... personnel is high and they take great pride ... arm; this in spite of inadequate pay to meet ... expenses and many other discouraging factors.

Military Education of Regular Army Officers: Cavalry officers attending the 1932-193... at various schools:

Army War College	5
Army Industrial College	1
Command and General Staff School (2nd Year Course)	11
Command and General Staff School (1st Year Course)	14
Advanced Course, The Cavalry School	17
Troop Officers' Course, The Cavalry School	21
Special Advanced Equitation Course, The Cavalry School	14
Air Corps Tactical School	2
Advanced Course, Infantry School	1
Advanced Course, F. A. School	1
Tank School	5
Motor Transport School	3
Signal School	5
Ecole de Guerre, Paris	1
German Cavalry School	1
Polish Cavalry School	1
Rhodes Scholarship, Oxford University	1

Education of National Guard and Reserve ... Officers: Cavalry officers who attended 1931 ... courses at The Cavalry School: *National Guard and Reserve Field Officers' Course* (April 29 to June 15, 1932

Lieutenant Colonel, Reserve	1
Major, Reserve	1
National Guard and Reserve Troop Officers' Course (March 11 to June 15 1932)	
National Guard	
Major	1
Captains	7
1st Lieutenants	5
2nd Lieutenants	4
Reserve	
Captain	1
1st Lieutenants	5
2nd Lieutenants	3
Troop Officers' Course (Sept. 15, 1931 to June 17, 1932)	
2nd Lieutenant, Reserve (at his own expense)	1

Education of Cavalry Enlisted Men: Enlisted men who pursued courses at Special Service Schools during the fiscal year 1931-32:

Noncommissioned Officers' Course, The Cavalry School (Jan. 4 to June 17, 193...	
Regular Army	25
National Guard	3
Signal School, Fort Monmouth, N. J.	7 R. A.
Motor Transport School, Holabird Q. M. Depot	2 "
Stenographic Course, Fort Geo. G. Meade, Md.	5 "
Advanced Horseshoers' Course, The Cavalry School (July 13 to Nov. 10, 1931	4 "
Advanced Horseshoers' Course, The Cavalry School Feb. 17 to June 8, 1932	13 "
Saddlers' Course, The Cavalry School July 13 to Nov. 10, 1931	3 "
Saddlers' Course, The Cavalry School Feb. 17 to June 8, 1932	10 "

Plans and Training Section

Experimental regimental organization: With a view to increasing the firepower and mobility of the cavalry regiment and of giving it additional defense against attacks of armored vehicles, an experimental reorganization of the 2nd Cavalry (Fort Riley, Kansas) for one year has been authorized by this office. This re-organization is purely a temporary one, and is intended solely for practical observation of its tactical effectiveness. The salient features embodied in this project are:

1. The incorporation of a platoon (4 cars) of armored cars in the headquarters troop.
2. The addition of a .50-caliber machine-gun platoon (8 guns), in pack, to the machine-gun troop, for anti-armored vehicle defense.
3. The substitution of light trucks for the escort wagons of the regimental train.

Final report upon this project will be rendered at about this time next year.

GENERAL TRAINING: Training has made uniform progress during the past year. Various theories which have been advanced either to improve existing methods or to develop new ones have been tested during the year. These tests have, in general, been conducted in connection with regular training exercises.

Specifically—the methods, developed at the Cavalry School, of conducting long and rapid marches have been worked out and are being given further test by other Cavalry organizations. Definite conclusions based upon a study of all these tests will undoubtedly be made during the coming year.

The training in machine-gun operation of all members of Cavalry rifle troops has been inaugurated. This promises to provide an adequate supply of troopers within each regiment capable of operating the machine-gun in action.

Emphasis during the year has also been placed upon increasing the efficiency of communication personnel, improving the effectiveness of existing means of communication and developing radio telephone.

Maneuvers. The 4th Corps Area maneuvers were held at Fort Benning, Georgia, during the period from April 15 to May 15, 1932. The 6th Cavalry marched from Fort Oglethorpe, Georgia, to engage in these exercises. Considerable mutual benefit is always derived by the representative units of the several arms which participate in such exercises.

From May 9 to 21, troops of the 1st Cavalry Division from Fort Bliss, Texas, were engaged in maneuvers in the vicinity of El Paso, Texas. A test under service conditions of the new light machine guns and their packs and of the new Cavalry radio equipment SCR-163 radio sets was made during these maneuvers.

At Leon Springs, Texas, troops of the 2nd Infantry Division augmented by the 5th and 12th Cavalry Regiments carried out an interesting series of maneuvers from May 12 to 26, 1932.

The Cavalry School, during the month of May, conducted a varied series of tactical exercises and demonstrations. These exercises, while primarily intended for student officer instruction, are also excellent means of imparting training to the various troop units which take part in them. The hundred mile forced march, inaugurated last year, was repeated this May as part of the regular field exercises. The command was organized as a reinforced brigade with approximately 610 officers and men and 750 animals.

Antiaircraft training: The importance of adequate offensive tactics for use against hostile aviation is fully appreciated by the Cavalry. Every effort is being made not only to create a uniform appreciation of the menace from the air, but also to develop a uniform, effective and vigorous defense against aerial molestation.

Marches: Elements of the disbanded Mechanized Force marched from Fort Eustis, Virginia, to Fort Knox, Kentucky, during the early part of November, 1931. The movement of approximately 500 miles was made entirely overland by motor and was concluded within four days.

During the Cavalry School maneuvers the latter part of May a force approximating a cavalry brigade, reinforced, made a march of 100 miles within twenty-four hours. After a short rest this force resumed the march, and proceeded to an attack position in continuation of the definite tactical situation upon which the troops were employed.

Incident to the 2nd Division maneuvers held in the vicinity of Tilden, Texas, the 5th Cavalry and Headquarters Troop, 1st Cavalry Brigade, marched from their home station, Fort Clark, Texas, on May 9, 1932, to the maneuver area and returned on May 25, 1932, to Fort Clark.

The 12th Cavalry (less 2nd Squadron and Band) marched from Fort Ringgold, Texas, on May 5, 1932, to Tilden, Texas, to participate in the above-mentioned maneuvers. The return to its home station, June 2, 1932.

The 6th Cavalry moved by marching to Fort Benning, Georgia, during April, 1932, and, after participating in the 4th Corps Area maneuvers held at the Infantry School, returned to its home station, Fort Oglethorpe, Georgia, on May 28, 1932.

Training films. Two cavalry training films "Cavalry Rifle Platoon—Its Weapons, Organization and Formation" and the "Cavalry Rifle Platoon in Mounted Action" have been released for use by the service since June 30, 1931.

Two films were taken at Fort Riley during the year by commercial firms. The "Riders of Riley" shows the equestrian activities of student officers' classes at the Cavalry School. "The 13th Cavalry" shows sequences of that regiment and of Troop A, 1st Armored Car Squadron.

Cavalry School Extension Courses. No extensive revision of these courses is contemplated for 1932-33: only such revision as may be necessary to correct existing errors will be attempted during this period. It is probable no complete revision of these courses will be made until the Cavalry Field manual is officially adopted by the War Department.

Reserve Officers' Training Corps. During the period covered by this report several studies have been prepared with a view to improving the quality of instruction given at the institutions having Cavalry R. O. T. C. units.

A table showing the strength of Cavalry R. O. T. C. units of which they are part in the various institutions and the number of mounts allotted each unit follows:

Institution	Location	Enrollment Cav.	Enrollment Total	No. of Units	No. of Mounts
Norwich University	Northfield, Vt.	272	272	1	67
Mass. Agricultural Col.	Amherst, Mass.	360	360	1	44
Va. Military Inst.	Lexington, Va.	217	656	3	60
Univ. of Georgia	Athens, Ga.	314	545	2	60
Culver Mil. Academy	Culver, Ind.	101	462	3	*
Univ. of Illinois	Urbana, Ill.	667	2300	7	54
Mich. State College	Lansing, Mich.	350	1249	4	59
Univ. of Arizona	Tucson, Ariz.	438	438	1	56
New Mexico Mil. Inst.	Roswell, N. Mexico	401	401	1	99
Texas A. & M. Col.	College Sta., Tex.	205	1952	3	63
Oklahoma Mil. Academy	Claremore, Okla.	86	182	2	60
*No. Govt.	Totals	3410	9316	28	622

The following table shows a comparison of enrollment in Cavalry R. O. T. C. units for the past three years:

	1930	1931	1932
Basic Course, 1st Year	1760	1593	1572
Basic Course, 2nd Year	1205	1143	1125
Advanced Course, 1st Year	381	396	357
Advanced Course, 2nd Year	330	295	356
Totals	3676	3427	3410

It is estimated that 422 students attended R. O. T. C. (Cavalry) summer camps last year. Cavalry R. O. T. C. camps were conducted at the following Cavalry posts last year:

Fort Ethan Allen, Vermont
Fort Myer, Virginia
Fort Oglethorpe, Georgia
Fort Bliss, Texas
Fort Clark, Texas

Citizens' Military Training Camps. 1854 candidates were enrolled in Cavalry C. M. T. Camps during 1931: 1782 completed the course. The number completing the course in 1931 was a decrease of 97 from the previous year. The following indicates posts at which Cavalry C. M. T. Camps were held during 1931 and the number of C. M. T. C. candidates trained by Cavalry troops:

Post	Branch	No. of Candidates
Fort Ethan Allen, Vermont	Cavalry*	325
Fort Myer, Virginia	Cavalry	257
Fort Oglethorpe, Georgia ..	Cavalry & Basi ...	73
Fort Knox, Kentucky	Cavalry*	17
Fort Sheridan, Illinois	Cavalry	25
Fort Des Moines, Iowa	Cavalry & Infa ry	50
Fort Riley, Kansas	Infantry	15
Fort Bliss, Texas	Cavalry & Basi ...	13
Camp S. D. Little, Arizona	Cavalry*	6
Presidio of Monterey, Calif.	Cavalry & F. A ...	25
Total C.M.T.C. trained by Cavalry		316

*Number of Basic C.M.T.C., in addition to Cava... trained by these troops not known.

Materiel and Equipment Section

Automotive development. The Chief of ...avalry and the Chief of Ordnance are cooperating closely on the development of armored vehicles.

Combat cars. Experiments are being made with various types of combat cars.

Armored cars. The Mechanized Regiment is now being equipped with the T-4 armored car, 6-wheel, 4-wheel drive.

Personnel carriers. Experiments are being made to produce satisfactory cross-country vehicles for personnel carriers in the Scout Troop and Machine Gun Troop of the Mechanized Regiment.

Automatic arms. Satisfactory progress is being made in the production of anti-tank weapons and stable mounts for the light machine guns. Also in radio communications.

Private Mounts

In the past year legislation caused the reduction of the authorized number of private mounts from two to one. In my branch this resulted in a great many officers below field grade being forced to dispose of their second mount at a considerable sacrifice.

A study of the private mount situation in the leading armies of the world discloses a rather liberal attitude on the part of the governments concerned. In general, mounted officers either own their mounts or the government furnishes them. In most cases, if the government furnishes a mount it likewise permits the officer to maintain one or more private mounts. If the mount is furnished by the government it is maintained and foraged. The same is equally true for the authorized number of privately owned mounts.

If contemplated legislation does away entirely with mounted pay, it will work a drastic hardship on all mounted officers in the grade of captain and below.

In the event that legislation precludes mounted pay I earnestly recommend that the government forage and maintain two privately owned mounts for all mounted officers.

I am convinced that the high standard of horsemanship and horsemastership as evidenced during the past twenty-five years can, in part, be attributed to the liberal attitude and encouragement officers received from the government with respect to their private mounts.

It is urgently hoped that nothing further will be done to affect the status of the privately owned mounts in the American Army.

Our International Horse Shows

DURING October and November were held America's three interesting and instructive horse shows with their colorful and hotly contested international military jumping events. These shows were:

The Boston Horse Show, Boston, Mass., October 25th to 29th.

The National Horse Show, New York City, November 9th to 15th.

The Royal Winter Fair, Toronto, Canada, November 16th to 24th.

The armies of Canada, Irish Free State, United States and France were each officially represented by a team.

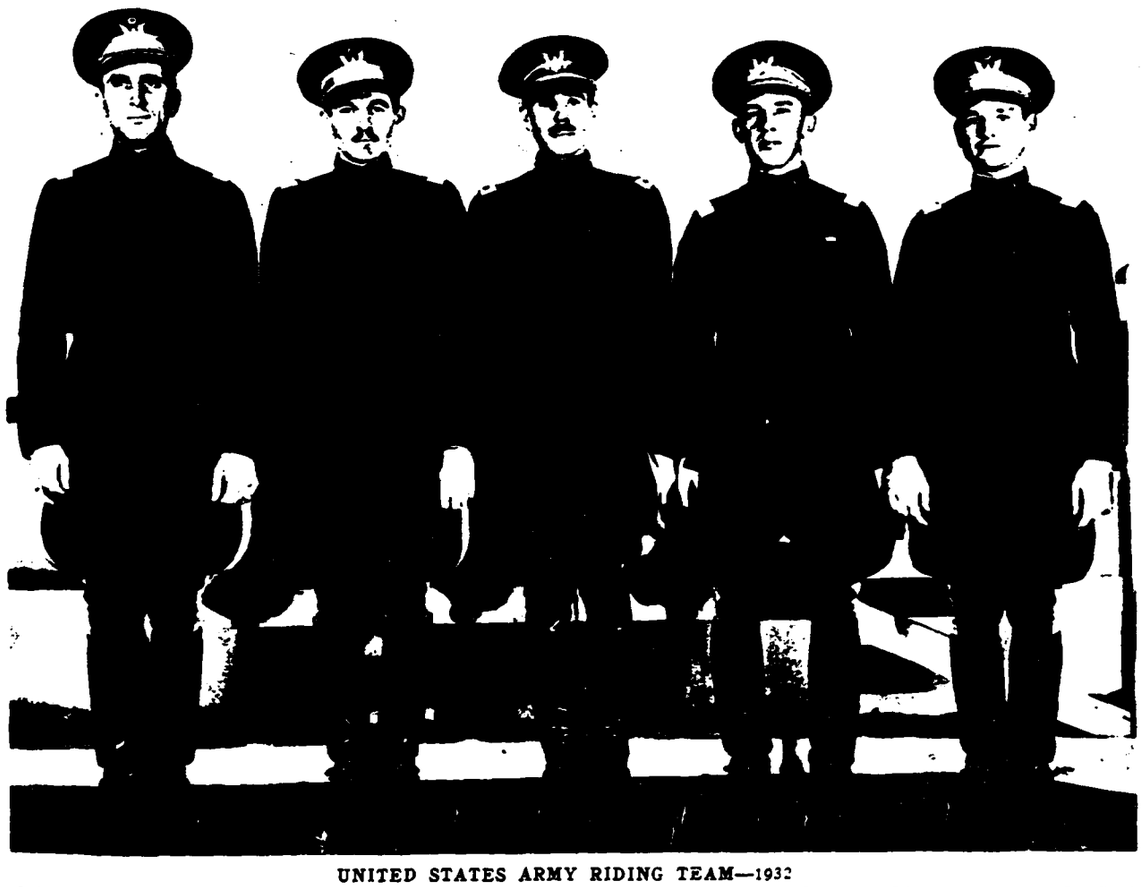
CANADA: Lieutenant Colonel R. S. Timmis; Captain C. C. Mann; Captain L. D. Hammond; Captain S. Bate.

IRISH FREE STATE: Colonel F. J. Bennett; Captain D. J. Corry; Captain F. A. Ahern; Lieutenant J. ... Neylon.

UNITED STATES: Major J. T. Cole, Cavalry; Lieutenant P. C. Hains, Cavalry; Lieutenant C. W. A. Raguse, Cavalry; Lieutenant E. F. Thomson, Cavalry; Lieutenant J. M. Willems, Field Artillery.

FRANCE: Captain Pierre Clavé; Lieutenant Pierre Cavalié; Lieutenant Jean de Tilière.

In addition to the official teams, there were a number of military entries. At Boston, Captain R. E. Anthony represented the 110th Cavalry, Massachusetts National Guard. At New York, the Regular Army had the Fort Myer, Virginia, Horse Show Team with Lieutenant Colonel C. P. George, F. A., and Captain G. I. Smith, Cavalry; the West Point Team with Captain Frank L. Carr, Cavalry, and Lieutenant John W. Wofford, Cavalry; and as individuals, Lieutenant Colonel J. K. Brown, Cavalry, and Lieutenant John L. Hornor, Q.M.C.; the National Guard and Organized Reserve were represented by The Essex Troop Team, Colonel William H. Welch, Captain Theodore Galiza.



UNITED STATES ARMY RIDING TEAM—1932
(Left to right) Major John T. Cole, Cavalry; 1st Lt. Carl W. A. Raguse, Cavalry; 1st Lt. John A. Willems, F. A.; 1st Lt. Earl F. Thomson, Cavalry; 1st Lt. Peter C. Hains, 3d, Cavalry.

Lieutenant Geo. M. Alicanti-Kaufman, and Lieutenant Frank Huyler. Lieutenant Huyler continued on to Toronto in which show a number of Canadian officers and men participated in addition to the official team.

The International Military Classes at both Boston and New York were for the first time judged under the rules of the Fédération Equestre Internationale. These rules are in general use in Europe and are those of the Equestrian Events in the Olympic Games. The civilian events and the mixed civilian and military events were judged as heretofore under the rules commonly used in the United States and Canada—those of the Association of American Horse Shows. At Toronto the International Events were judged under a combination of both sets of rules.

The main features of the Equestrian Federation rules are:

In classes where *faults* are converted into *points*, faults are penalized according to the following table:

Table A

(a)	First disobedience	3 points
(b)	Knockdown, front or hind feet	4 points
(c)	Landing in water or ditch, front or hind feet	4 points
(d)	Second disobedience	6 points
(e)	Fall of horse and rider	6 points
(f)	Fall of rider only	10 points
(g)	Third disobedience	elimination

Disobediences are cumulative on the entire round.
For example:

First disobedience (a runout at the post and rail)	3 points
Second disobedience (circling on the course)	6 points
Third disobedience (refusal at the hedge)	elimination

(h)	Jumping an obstacle out of its proper order	elimination
(i)	An uncorrected error on the course	elimination
(j)	Jumping an obstacle before it is reset	elimination
(k)	Horse leaving the ring, mounted or riderless	elimination
(l)	Overtime is penalized at the rate of ¼ point per full second, or is cause for elimination, according to the conditions of the class. Overtime is never a ground for elimination in team classes.	

Places are awarded on a penalty basis. In case of a tie the same course will be re-jumped. Places in jump-off are awarded on a penalty basis, except that in case of ties amongst contestants who have no time-penalties, *time* decides; and in case of equality of total penalties, penalties other than for time decide.

A *disobedience* is:

1. ***Refusal,*** accompanied or not by disturbing the obstacle so that it must be reset.
2. ***Runout.***
3. ***Defense.***
4. ***Circling*** in any part of the course for any reason except to retake the course.

Defense. Any action (stopping, backing, rearing, etc.) by which a horse seeks to avoid forward movement.

There were slight variations in the courses at each of the three shows, but the plates below are, in general, correct for all three.

All of the shows barred the official military teams from hunter classes and a number of the jumping classes. They were, however, allowed to enter the open jumping classes and, of course, civilians were barred from the international military classes.

The first evening performance of the Boston show had the colorful "Parade of International Officers" at an appropriate time during which the national anthems of the competing nations were played. The parade was followed by the "Officer Charger Class," open to all; Course H, time allowance: 1 minute, 7 seconds.

The results of this and the other classes at Boston are shown below:

INTERNATIONAL MILITARY CLASSES

Class 94—Military Jumping (Officer Charger)

Course H—1 min. 5 sec.

1. Tan Bark, U. S. Army Team (Lieut. Thomson up)
2. Ugly, U. S. Army Team (Lieut. Raguse up)
3. First Attempt, Irish Free State Army Team (Capt. Conry up)
4. Cezar, French Army Team (Lieut. Cavaillé up)

U. S. Army also entered Ansonia, Timber Cruiser, Tyrol and Joe Aleshire.

Class 96—International Military Pair Jumping

Course B—1 min. 29 sec.

1. Bean Eadair, Irish Free State Army Team (Capt. Aherne up) / Blarney Castle, Irish Free State Army Team (Lieut. Neylon up)
2. Avocat, U. S. Army Team (Lieut. Hains up) / Ansonia, U. S. Army Team (Lieut. Thomson up)
3. Acis, French Army Team (Lieut. Cavaille up) / Champagne, French Army Team (Lieut. de Tilere up) / Suzanne, U. S. Army Team (Lieut. Hains up) / Tyrol, U. S. Army Team (Lieut. Thomson up)

U. S. Army also entered Muskogee and Timber Cruiser and Babe Wartham and Joe Aleshire.

Class 98—Individual Military Trophy

Course F—1 min. 5 sec.

1. Michael, Canadian Army Team (Capt. Mann up)
2. Ugly, U. S. Army Team (Lieut. Raguse up)
3. Acis, French Army Team (Lieut. de Tilere up)
4. Gallow Glass, Irish Free State Army Team (Capt. Aherne up)

Joe Aleshire, Tan Bark and Tyrol also entered for the U. S. Army

Class 95—$1000 International Military Stake

Course A—1 min. 10 sec.

1. Ugly, U. S. Army Team (Lieut. Raguse up)
2. Gallon Glass, Irish Free State Army Team (Capt. Aherne up)
3. Slievenamon, Irish Free State Army Team (Capt. Conry up)
4. Turoe, Irish Free State Army Team (Capt. Conry up)
5. Blarney Castle, Irish Free State Army Team (Capt. Aherne up)
6. Michael, Canadian Army Team (Capt. Mann up)

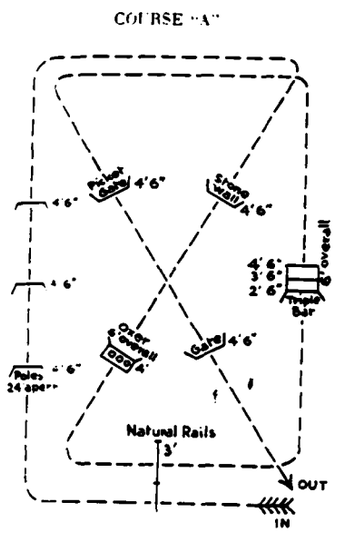
Joe Aleshire, Dick Waring, Tyrol, Tan Bark and Ansonia also entered for the U. S. Army.

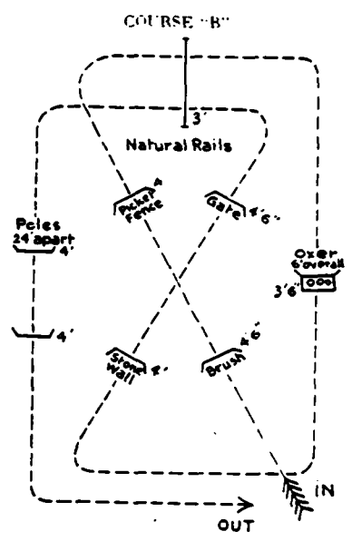
Nos. 1, 2 and 3 went clean on the original course—on the jump off Nos. 1 and 2 went clean, Ugly winning on time.

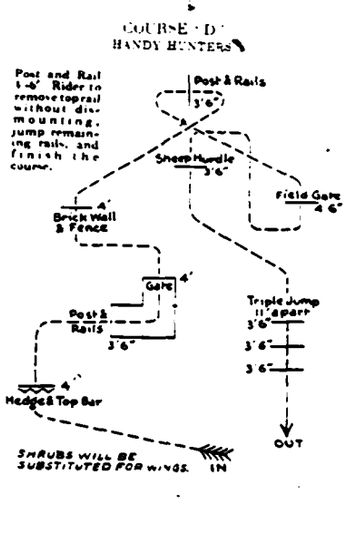
Class 97—International Military Team Trophy

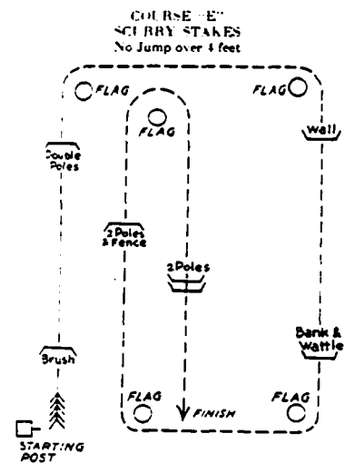
Course A—1 min. 10 sec.

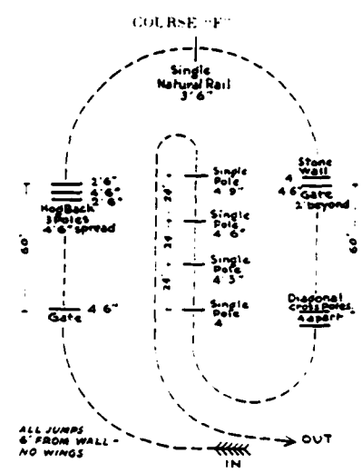
1. Gallow Glass, Irish Free State Team (Capt. Aherne up) / Kilmallock, Irish Free State Team (Lieut. Neylon up) / Shannon Power, Irish Free State Team (Capt. Conry up)
2. Tenace, French Army Team (Capt. Clave up) / Acis, French Army Team (Lieut. de Tilere up) / Cezar, French Army Team (Lieut. Cavaille up)
3. Tan Bark, U. S. Army Team (Lieut. Thomson up) / Ugly, U. S. Army Team (Lieut. Raguse up) / Joe Aleshire, U. S. Army Team (Major Cole up)

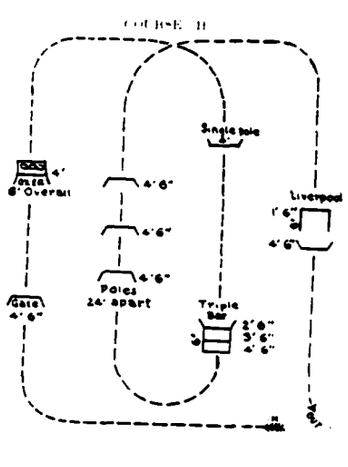












Michael, Canadian Army Team (Capt. Mann up)
4. Bucephalus, Canadian Army Team (Col. Timmis up) / Red Plume, Canadian Army Team (Lieut. Hammond up)

The Irish and French teams jumped off for first and second places, having tied on the original course—each team having one knockdown for its three horses jumped.

MIXED CIVILIAN AND MILITARY CLASSES

Class 87—Handy Hunter

Course D

1. Popover, Hugh Bancroft, Jr.
2. Gallon Glass, Irish Free State Army Team
3. Tyrol, U. S. Army Team (Lieut. Haines up)
4. Good News, R. P. Symmes

U. S. Army also entered Suzanne.

Class 90—Scurry Sweepstake

1. Babe Wartham, U. S. Army Team (Lieut. Raguse up)
2. Fairfax, Hugh Bancroft, Jr.
3. Martin's Caddy, Dr. Thomas F. Broderick
4. Sourient III, Belle W. Baruch

There was only one foreign entry in this class.
U. S. Army also entered Suzanne.

Class 88—Hunters or Jumpers

Triple Bar

1. Cezar, French Army Team (Lieut. Cavaille up)
2. Champagne, French Army Team (Lieut. Cavaille up)
3. Martin's Caddy, Thomas F. Broderick
4. Judex, French Army Team (Capt. Clave up)

U. S. Army had four entries—Ansonia, Timber Cruiser, Babe Wartham, and Avocat.

Class 91—Three Hunters or Jumpers

Robespierre, French Army Team (Capt. Clave up)

1. Cambronne, French Army Team (Lieut. Cavaille up) / Acis, French Army Team (Lieut. de Tilere up) / Show Me, Hugh Bancroft, Jr. (Danny Shea up)
2. Cinderella, Hugh Bancroft, Jr. (Hugh Bancroft, Jr. up) / Popover, Hugh Bancroft, Jr. Bob Henderson up) / Michael, Canadian Army Team (Capt. Hammond up)
3. Bucephalus, Canadian Army Team (Capt. Mann up) / Red Plume, Canadian Army Team (Col. Timmis up) / Red Prophet, Canadian Army Team (Col. Timmis up)
4. Mountain Top, Canadian Army Team (Capt. Mann up) / Bronte, Canadian Army Team (Capt. Bates up)

U. S. Army had one entry of Avocat, Suzanne and Muskogee, ridden respectively by Major Cole, Lieut. Thompson, and Lieut. Hains, but did not place.

Class 86—Hunters or Jumpers

Four jumps, 5 feet

1. Cezar, French Army Team (Lieut. Cavaille up)
2. Michael, Canadian Army Team (Capt. Mann up)
3. Show Me, Hugh Bancroft, Jr. (Bob Hutchenson up)
4. Acis, French Army Team (Capt. Clave up)

There were no U. S. Army entries.

Class 92—$1000 Jumper Stake
Course H

1. Ansonia, U. S. Army Team (Lieut. Thomson up)
2. Perdannis, Hugh Bancroft, Jr. (Danny Shea up)
3. St. Cloud, Hugh Bancroft, Jr. (Danny Shea up)
4. Babe Wartham, U. S. Army Team (Lieut. Raguse up)
5. Gray Dawn, Miss E. R. Sears (Mr. Cravens up)
6. Muskogee, U. S Army Team (Lieut. Hains up)

Timber Cruiser also entered for U. S. Army.

RECAPITULATION

For the five International Military Classes the ribbons were awarded as follows:

	Firsts	Seconds	Thirds	Fourths	Fifths	Sixths
U. S. Army	2	3	1	1	0	0
French Army	0	1	2	1	0	0
Irish Free State Army	2	1	2	2	1	0
Canadian Army	1	0	0	1	0	1

For the six mixed Civilian and Military Jumping Classes the ribbons were awarded as follows:

	Firsts	Seconds	Thirds	Fourths	Fifths	Sixths
Civilians	1	3	4	2	1	0
U. S. Army	2	0	1	1	0	1
French Army	3	1	0	2	0	0
Irish Army	0	1	0	0	0	0
Canadian Army	0	1	1	1	0	0

The National Horse Show, New York

There was renewed interest in this year's National Horse Show. All classes were well filled: the hunter classes were an education in that type of horseflesh. and the jumping classes were uniformly excellent.

In this show the United States Army Team had the unique distinction of winning both the International Military Team Trophy and the International Individual Military Championship,—truly an outstanding accomplishment.

Other items of note were the fine escort furnished the International Teams by Squadron A, N. Y. National Guard and the exhibitions of "Rough Riding" by the New York City Police and "Trick Riding" by the New York State Troopers. This latter squad of about fifteen troopers were mounted on pinto ponies equipped with specially arranged stock saddles and gave an exhibition of which they may well be proud.

The details of the various classes in which military personnel participated follow.

INTERNATIONAL MILITARY CLASSES

Class 132—International Military Pair Jumping
Course B—1 min. 25 sec.

1. Michael, Canadian Army Team (Capt. Mann up) / Red Plume, Canadian Army Team (Capt. Hammond up)
2. Slievenamon, Irish Free St. Army Team (Capt. Ahern up) / Gallowglass, Irish Free St. Army Team (Capt Corry up)
3. Beann Eadair, Irish Fr. St. Army Team (Capt. Corry up) / Blarney Castle, Irish Free St. Army Team (Lt. Neylon up)
4. Shannon Power, Irish F. St. Army Team (Capt. Corry up) / Kilmallock, Irish Free St. Army Team (Capt. Ahern up)

U. S. Army Team also entered Muskogee and Timber Cruiser, Suzanne and Tyrol, Clysmic and Avocat, Tan Bark and Ugly.
Fort Myer entered Squire and Miss America.

Class 134—International Military Team Trophy
Course A—1 min. 15 sec.

1. Tan Bark, U. S. Army Team (Lt. Thomson up) / Ugly, U. S. Army Team (Lt. Raguse up) / Joe Aleshire, U. S. Army Team (Major Cole up)
2. Judex, French Army Team (Capt. Clave up) / Acis, French Army Team (Lt. de Tilere up) / Cezar, French Army Team (Capt. Cavaille up)

Red Prophet, Canadian Army Team (Capt. Hamm. ad up
3. Red Plume, Canadian Army Team (Capt. Mann u / Michael, Canadian Army Team (Col. Timmis up / Gallowglass, Irish Free St. Army Team (Capt. A rn up
4. Kilmallock, Irish Free St. Army Team (Capt. N on up / Shannon Power, Irish Fr. St. Army Team (Capt. C rry up

The French Army Team jumped first with two kn kdowns for Capt. Clave and the other two horses jumped clean—Penalties 8 points. Then the Irish and Canadian jumped with 6 and 5 knockdowns, respectively. Lt. Thomson lead off for the United States with one knocked n, fo lowed by Lt. Raguse and Major Cole both jumpi g clean.

Class 135—International Individual Military Champ nship
Course A—1 min. 15 sec.

1. Tan Bark, U. S. Army Team (Lt. Thomson up)
2. Cezar, French Army Team (Lt. Cavaille up)

In this class three from each country who had j ped in the Military Team Championship were entitled jump On the original course Lt. Cavaille for Fran Capt Corry for the Irish Free State, and Lt. Thon n. L Raguse and Major Cole for the United States a jumped clean. On the jump-off Lt. Thomson again jumped clean while Lt. Cavaille, Lt. Raguse and Major le ea had one knock-down. Lt. Cavaille was placed second on his time score of 40 4/5 seconds against 46 1/5 and 47 3/5 seconds for Lt. Raguse and Major Cole respe tively.

Class 130—Officers' Chargers (Privately owned)
The Charles L. Scott Challenge Cup
Private Horses—American Officers
Course A

1. Squire, Fort Myer Horse Show Team (Capt. G. I. Smith up)
2. Timber Cruiser, Captain E. Y. Argo (Lt. Williams up)

Horses were also entered by Lt. Alicanti-Kaufman, Lt. John L. Hornor, Jr., Lt. Frank Huyler, and Col. Wm. H. Welch.

Class 133—International Military Sweepstake, $1,000
Course A—1 min. 15 sec.

1. Shannon Power, Irish Free St. Army Team (Capt. Corry up)
2. Michael, Canadian Army Team (Capt. Mann up)
3. Ugly, U. S. Army Team (Lt. Raguse up)
4. Gallowglass, Irish Free State Army Team (Lt. N on up)
5. Joe Aleshire, U. S. Army Team (Major Cole up)
6. Ireland's Own, Irish Free St. Army Team (Capt. Ahern up)

In addition to the regular international teams, Fort Myer was represented by Lt. Col. George on Miss America and Captain G. I Smith on Squire and Lt. Frank Huyler, ORC, rode Captain Kidd. This was an excellent class. On the first round out of 25 contestants, three Irish, two U. S., two French and one Canadian team horses jumped clean. On the jump-off six of these eight horses went clean with the remarkable result that Capt. Corry of the Irish Free State Army Team and Captain Mann of the Canadian Army Team each jumped the course in 45 2/5 seconds. This tied them and on the second jump-off both went clean—Capt. Corry winning on 44 2/5 seconds against Captain Mann's 48 seconds.

MILITARY JUMPERS

Class 131—The Bowman Challenge Cup
Course F reduced to 4' 3"

1. Cezar, French Army Team
2. Blarney Castle, Irish Free State Army Team

All regular international teams entered this class and, in addition, West Point, Fort Myer, Lt. Geo. Alicanti-Kaufman and Lt. Frank Huyler, ORC.

Class 129—Officers' Chargers
2 jumps 3' 6"
Suitability 70% Gaits 20% Jumping 10%

1. Russelson, Lt. Col. John K. Brown (Lt. Col. Br up)
2. Avocat, U S. Army Team (Major Cole up)
3. Mithridate, West Point Horse Show Team (Capt. arr up)
4. Beann Eadair, Irish Free St. Army Team (Capt. ann up)

Lt. Alicanti-Kaufman, Lt. Frank Huyler, Col. Wm. H. Welch, Essex Troop Horse Show Team, Fort yer and West Point were also represented.

MIXED CIVILIAN AND MILITARY CLASSES

Class 102—Green Hunter

1. Bon Diable, Mrs. John Hay Whitney
2. Rock Alder, Edward V. Quinn

3. Int Sir Richard. H. Hollon Crowell
4. Mithridate, West Point Horse Show Team (Capt. Frank up)

Class 121 Pen Jump

1. Fairfax, Hugh Bancroft, Jr. (Danny Shea up)
2. Tan Bark, U. S. Army Team (Lt. Thomson up)
3. Suzanne, U. S. Army Team (Lt. Thomson up)
4. Slievenamon, Irish Free State Army Team (Capt. Corry up)

A entered Lt. Frank Huyler, Cav-ORC, on Captain Kidd and Fort Myer Team, with Lt. Col. George, F. A., on Miss America.

Class 128 -Jumpers; $2,000 Stake
Course A

1. J. French Army Team
2. A French Army Team
3. Clysmic, U. S. Army Team
4. T U. S. Army Team
5. Champagne, French Army Team
6. A s, Mr. Donald Grant Herring

T U. S. Army Team also jumped Suzanne and the West Point Team jumped Geraldine and Queen's Own, Lt. Ford up. The French Army Team placed all three entered.

Class 127—Jumpers—Westchester Challenge Cup (Team of three owned by one exhibitor)
Course A

1. Slievenamon, Irish Free State Army Team
2. Blarney Castle, Irish Free State Army Team
3. Avocat, U. S. Army Team (Major Cole up)
4. Muskogee, U. S. Army Team (Lt. Hains up)
5. Tyrol, U. S. Army Team (Lt. Raguse up)
6. Judex, French Army Team
7. Champagne, French Army Team
8. Acis, French Army Team
9. Penace, French Army Team
10. Cezar, French Army Team
11. Robespierre, French Army Team

Mr. Hugh Bancroft, Jr., and Fort Myer also entered one team each and the Canadian Army Team two teams.

Class 118—Jumpers—The Puritan
Course B

1. Clysmic, Mr. Alvin Untermeyer
2. Peter, Capt. Theodore Galiza
3. By Request, Trillora Farm
4. Golden Eagle, Dr. Andrew J. Jackson

Horses were also entered by Lt. John L. Hornor, Jr., QMC, Col. Wm. H. Welch, Essex Troop Horse Show Team, and the Canadian Army Team.

Class 105—Half-Bred Hunter Challenge Trophy
Hunter Course

1. Your Way, Mr. Edward V. Quinn
2. Sunny Sunday, Moreland Stables
3. Black Gnat, Mr. Peter Drever
4. Russelson, Lt. Col. John K. Brown

Class 119—Jumpers—The Rocket
4 jumps 5' high

1. Big Chief, Mr. H. E. Millard
2. Avocat, U. S. Army Team, (Major Cole up)
3. By Request, Trillora Farm
4. Champagne, French Army Team

The following military personnel also entered horses: Fort Myer, West Point, Irish Free State and Canadian Army Teams, and Col. Wm. H. Welch.

Class 120—Jumpers—The Skyscraper
4 jumps 5' 2 jumps 5' 6" 2 jumps 6'

1. Black Gnat, Mr. Peter Drever
2. Acis, French Army Team
3. Visc French Army Team
4. Over ooking General, Mr. James P. Hunter

Class 122—Jumpers—The Brooks-Bright Foundation Challenge Cup
Course A

1. St. Cloud, Mr. Hugh Bancroft, Jr.
2. Bronte, Canadian Army Team
3. Killmallock, Irish Free State Army Team
4. Bucephalus, Canadian Army Team

The U. S. and French Army Teams entered this class. Fort Myer and West Point, Lt. John L. Hornor, Jr., Lt. Frank Huyler, and Lt. Col. Wm. H. Welch entered.

Class 110—Qualified Hunters—Middleweight
Course B

1. Red Tape, Mrs. R. S. McLaughlin
2. Trolly, Mrs. Bernard F. Gimbel
3. Highlander, Essex Troop Horse Show Team
4. Imp Ballymore, Old Town Hill Farm

Class 126—Jumpers—The Handy
Course D

1. The Wasp, Trillora Farm
2. Popover, Mr. Hugh Bancroft, Jr.
3. Queen of Sports, Mr. Frederick von Lambeck
4. Tan Bark, U. S. Army Team

Lt. John L. Hornor, Jr., Lt. Frank Huyler, Fort Myer and the Irish Free State Army Teams also entered.

Class 125—Jumpers—The Scurry
Course D

1. Fairfax, Mr. Hugh Bancroft, Jr.
2. Squire, Fort Myer Horse Show Team, Capt. G. I. Smith up)
3. Babe Wartham, U. S. Army Team (Lt. Raguse up)
4. Cherokee, Miss Eleanor Victor

Class 123—Jumpers—Triple Bar

1. Cezar, French Army Team
2. Flash, Fort Myer Horse Show Team (Capt. G. I. Smith up)
3. Red Prophet, Canadian Army Team
4. Blarney Castle, Irish Free State Team

The U. S. Army Team, Lt. John L. Hornor, Jr., Col. Wm. H. Welch, and West Point also entered.

Class 124—Jumpers—Touch and Out
8 jumps 4' 6"

1. Gallowglass, Irish Free State Army Team
2. Robespierre, French Army Team
3. Turoe, Irish Free State Army Team
4. Big Chief, Mr. H. E. Millard

All the international teams, Fort Myer, West Point and Col. Wm. H. Welch also made entries.

RECAPITULATION

For the six International Military Classes the ribbons were awarded as follows:

	Firsts	Seconds	Thirds	Fourths	Fifths	Sixths
U. S. Army Team	2		1		1	
French Army Team	1	2				
Irish Army Team	1	2	1	3		1
Canadian Army Team	1	1	1			

For the eleven mixed civilian and military jumping classes the ribbons were awarded as follows:

	Firsts	Seconds	Thirds	Fourths	Fifths	Sixths
Civilians	7	1	3	4		1
U. S. Army Team		3	3	2		
French Army Team	2	3	2	2	1	
Irish Army Team	2		2	2		
Canadian Army Team		1	1	1		
Other officers		1				
West Point Team,				1		
Fort Myer Team		2				

The Royal Winter Fair, Toronto

The Royal Winter Fair, like the New York Show, had full entry lists, including many Canadian military, other than the official team personnel. Most conspicuous among whom was Lieutenant W. M. Cleland who, with a number of good horses, was a consistent winner.

This Fair with its indoor ring has the unique distinction of having a duplicate ring for "warming up" prior to entering the exhibition ring. Its jumping courses were modifications of those in Boston and New York.

The results of the military efforts are as follows:

INTERNATIONAL MILITARY CLASSES

Class 118—Military Touch and Out Stake
Course H (modified)

1. Clysmic, U. S. Army Team (Lt. J. W. Williams up)
2. Sundart, Lt. W. M. Cleland
3. Champagne, French Army Team (Lt. Cavaille up)
4. Blarney Castle, Irish Free State Army Team
The U. S. Team also entered Ugly, Tan Bark, Joe Aleshire, Suzanne and Muskogee in this class.

Class 119—$500.00 O'Keefe's Military Jumping Stake
Course H (modified)

1. Roxana, Lt. W. M. Cleland
2. Sundart, Lt. W. M. Cleland
3. Aeis, French Army Team (Lt. de Tiliere up)
4. Cezar, French Army Team (Lt. Cavaille up)
5. Cuchlain, Lt. Eaton
The U. S. and Canadian Army teams did not exhibit in this class as horses arrived just a few hours before this class was called.

Class 124—Military Broad Jump
Course H (modified)

1. Sundart, Lt. W. M. Cleland
2. Joe Aleshire, U. S. Army Team (Major Cole up)
3. Avocat, U. S. Army Team (Major Cole up)
4. Cambronne, French Army Team (Lt. Cavaille up)
The U. S. Team also showed Babe Wartham, Timber Cruiser, Tan Bark and Ansonia.

Class 121—International Officers' Team Challenge Trophy

1. Red Prophet, Canadian Army Team
Red Plume, Canadian Army Team
Michael, Canadian Army Team
2. Tan Bark, U. S. Army Team (Lieut. Thomson up)
Ugly, U. S. Army Team (Lieut. Raguse up)
Joe Aleshire, U. S. Army Team (Major Cole up)
3. Aeis, French Army Team
Champagne, French Army Team
Robespierre, French Army Team
4. Turoe, Irish Free State Army Team
Ireland's Own, Irish Free State Army Team
Shannon Power, Irish Free State Army Team

Class 120—Military Figure 8 Performance
Course A (modified)

1. Ansonia, U. S. Army Team (Lt. Thomson up)
2. Cezar, French Army Team (Lt. Cavaille up)
3. Red Plume, Canadian Army Team (Capt. Hammond up)
4. Joe Aleshire, U. S. Army Team (Maj. Cole up)
The U. S. Team also showed Babe Wartham, Timber Cruiser, Tan Bark and Avocat.

Class 122—Military Handy Course
Course D

1. Roxana, Lt. W. M. Cleland
2. Slievenamon, Irish Free State Army Team
3. Ansonia, U. S. Army Team (Lt. Thomson up)
4. Tenace, French Army Team (Capt. Clave up)
The U. S. Team also showed Suzanne, Timber Cruiser, Tyrol and Muskogee.

Class 123—Military Teams of 3 Jumpers Abreast

1. French Army Team
French Army Team
French Army Team
2. Irish Free State Army Team
Irish Free State Army Team
Irish Free State Army Team
3. Irish Free State Army Team
Irish Free State Army Team
Irish Free State Army Team
4. Avocat, U. S. Army Team (Maj. Cole up)
Tyrol, U. S. Army Team (Lt. Raguse up)
Suzanne, U. S. Army Team (Lt. Thomson up)
The U. S. Team also showed a team composed of Mount Adams, Timber Cruiser and Ansonia.

MIXED CIVILIAN AND MILITARY CLASSES

Class 107—Pair Performance

1. Gallow Glass, Irish Free State Army Team
Slievenamon, Irish Free State Army Team
2. Solar Eclipse, Mr. Jarvis
3. Irish Free State Army Team
Irish Free State Army Team
4. Lt. W. M. Cleland
Lt. W. M. Cleland
The U. S. Team showed Tyrol and Suzanne, Avocat and Ansonia, Muskogee and Timber Cruiser. French and Canadian Teams did not enter.

Class 114—Course H (modified) Stake—Open to All

1. Gallow Glass, Irish Free State Army Team
2. Blarney Castle, Irish Free State Army Team
3. Turoe, Irish Free State Army Team
4. Sundart, Lt. W. M. Cleland
5. Slievenamon, Irish Free State
6. Roxana, Lt. W. M. Cleland
French, Canadian and U. S. Teams did not enter.

Class 115—Knock Down and Out Stake

1. Michael, Canadian Army Team (Capt. Mann up)
2. Spats, Mr. Ness
3. Roxana, Lt. W. M. Cleland
4. Watch Me, Mr. Ellsworth
5. Rolla G. Kripp, Mr. Sumner
6. Lucifer, Mr. McLaughlin
French and U. S. Teams did not enter.

RECAPITULATION

For the seven military classes the ribbons were awarded as follows:

	Firsts	Seconds	Thirds	Fourths	Fifths	Sixths
U. S. Army	2	2	2	2		
French Army	1	1	3	3		
Irish Free State		2	1	2		
Canadian Army	1		1			
Others	3	2			1	1

For the three civilian and military classes the ribbons were awarded as follows:

	Firsts	Seconds	Thirds	Fourths	Fifths	Sixths
U. S. Army						
French Army						
Irish Free State	2	1	2		1	
Canadian Army	1					
Others		2	1	3	1	2

A glance at the recapitulations shows that in the seventeen International Military Classes the Blues were divided—United States Army Team 6; French Army Team, 2; Irish Free State Army Team, 3; Canadian Army Team, 3; Lieutenant Cleland (Canadian) 3. We have just reason to congratulate our team on its general high-class performance and to be proud of its achievements.

Far Southwest Rifle, Pistol and Shotgun Association Matches

THE Far Southwest Rifle, Pistol and Shotgun Association of El Paso, Texas, held its first matches at the El Paso Police Rifle Club Range from September 26 to October 2, 1932. Due to the fact that no matches were held at Camp Perry this year the National Rifle Association assigned to the Far Southwest Matches several of the trophies annually awarded at the National Matches at Camp Perry. These trophies included: the Navy Cup, presented in 1929 by the United States Navy; the Cavalryman's Cup, awarded in the Presidents' Match to the individual cavalryman making the highest score and presented by the 1910 United States Marine Corps Rifle Team; the Colonel Dillard H. Clarke Memorial Trophy for individual pistol competition, purchased by the National Rifle Association in 1928 in accordance with the bequest of Captain Edward H. Clarke; and, in the small bore competition, the United States Trophy presented by the United States Cartridge Company in 1923.

The matches held this year included competitions with rifles, pistols, revolvers, and shotguns and were attended by many competitors from all over the southwest. Representatives from units of the 1st Cavalry Division, stationed at Fort Bliss, Texas, and Fort D. A. Russell, Texas, participated in many of these matches. Scores and places of the highest army competitors in the various matches are as follows:

N. R. A. Navy Cup Match

Name	Organization and Station	Place	Score
Sgt. W. [illegible] McGimpsey	1st Cav. ..... Marfa, Texas	1st	[illegible]
Sgt. R. [illegible] Kirby	5th Cav. ..... Fort Bliss	[illegible]	[illegible]
Sgt. W. F. Jackson	7th Cav. ..... Fort Bliss	7th	97

Far Southwest Tyro Match

Sgt. [illegible] Campbell	7th Cav. ..... Fort Bliss	2nd	[illegible]
Sgt. W. W. Wise	Hq. Tr. 1st Cav. Div. ..... Fort Bliss	12th	45
[illegible] Leach	5th Cav. ..... Fort Bliss	15th	47

Coast Guard Trophy Match

Sgt. Leslie Hedgin	1st Cav. ..... Marfa, Texas	1st	[illegible]
Sgt. Frank Kulczynski	7th Cav. ..... Fort Bliss	[illegible]	[illegible]
Pvt. 1cl C. H. Christensen	Tr. A 1st Ar. Car Sq. ..... Fort Bliss	4th	[illegible]

N. R. A. Members Match

Sgt. W. F. Jackson	7th Cav. ..... Fort Bliss	4th	48
Sgt. [illegible] Campbell	7th Cav. ..... Fort Bliss	4th	48
Sgt. Roy A. McDaris	5th Cav. ..... Fort Bliss	4th	48

Free Southwest Rifle Match

Sgt. W. [illegible] Jackson	7th Cav. ..... Fort Bliss	2nd	99
Capt. W. [illegible] Wilson	Inf. D. O. L. ... Ardmore, Okla.	7th	[illegible]
1st Sgt. W. E. Fitzgerald	Hq. Tr. 2nd ... Cav. Brigade .... Fort Bliss	5th	99

The President's Match

Sgt. R. [illegible] McDaris	5th Cav. ..... Fort Bliss	1st	[illegible]
Capt. W. [illegible] Wilson	Inf. D. O. L. ... Ardmore, Okla.	7th	[illegible]
Sgt. [illegible] Hedgin	1st Cav. ..... Marfa, Texas	11th	[illegible]

N. R. A. Wimbledon Match

1st Sgt. W. E. Fitzgerald	Hq. Tr. 2nd Cav. Brigade ..... Fort Bliss	12th	97
Sgt. R. [illegible] McDaris	5th Cav. ..... Fort Bliss	15th	94
Sgt. [illegible] Yeszerski	5th Cav. ..... Fort Bliss	15th	94

Far Southwest Two Man Team Match
Special Troops 1st Cavalry Division Team No. 1

Name	Organization and Station	Place	Score
1st Sgt. W. E. Fitzgerald			
Pvt. 1cl C. H. Christensen	Fort Bliss	2nd	[illegible]

1st Cavalry Team No. 1

Sgt. Leslie Hedgin			
Sgt. Wm. T. McGimpsey	Marfa, Texas	4th	[illegible]

7th Cavalry Team No. 1

Sgt. W. P. Jackson			
Sgt. Frank Kulczynski	Fort Bliss	6th	[illegible]

Far Southwest Team Match
1st Cavalry Team

Sgt. Wm. T. McGimpsey	[illegible]
Sgt. Sgt. Leslie Hedgin	[illegible]
Pvt. Chas. Burney	[illegible]
1st Sgt. Ben H. Harris	[illegible]
1st Lt. Grant A. Williams	[illegible]
Team total ..... Place No. [illegible]	[illegible]

8th Cavalry Team

Sgt. R. A. McDaris	[illegible]
Sgt. Ed. Yeszerski	[illegible]
Sgt. R. G. Kirby	[illegible]
Corp. Cleo J. Leach	[illegible]
Lt. C. D. Silvertherne	[illegible]
Team total ..... Place No. 4	1286

7th Cavalry Team

Sgt. G. A. Roach	[illegible]
Tech. Sgt. B. Schwartz	[illegible]
Sgt. Andrew Lafever	[illegible]
Sgt. W. P. Jackson	[illegible]
Sgt. F. Kulczynsk	[illegible]
Team total ..... Place No. [illegible]	[illegible]

PISTOL SECTION

Match No. 1—Far Southwest Slow Fire Match

Sgt. R. V. Wilzewsk	5th Cav. ..... Fort Bliss	1st	[illegible]
Sgt. Ed. Yeszerski	5th Cav. ..... Fort Bliss	2nd	[illegible]
1st Sgt. W. E. Fitzgerald	Hq. Tr. 2nd Cav. Brigade ..... Fort Bliss	17th	83

Match No. 2—25 Yards Timed Fire Match

Sgt. R. V. Wilzewski	5th Cav. ..... Fort Bliss	5th	91
Sgt. Ed Yeszerski	5th Cav. ..... Fort Bliss	7th	91
1st Sgt. Ben H. Harris	1st Cav. ..... Marfa, Texas	17th	90

Match No. 3—25 Yards Rapid Fire

Sgt. R. V. Wilzewski	5th Cav. ..... Fort Bliss	2nd	93
1st Sgt. Ben H. Harris	1st Cav. ..... Marfa, Texas	3rd	87
Sgt. Frank Kulczynski	7th Cav. ..... Fort Bliss	4th	87

Match No. 4—N. R. A. Individual Pistol Championship

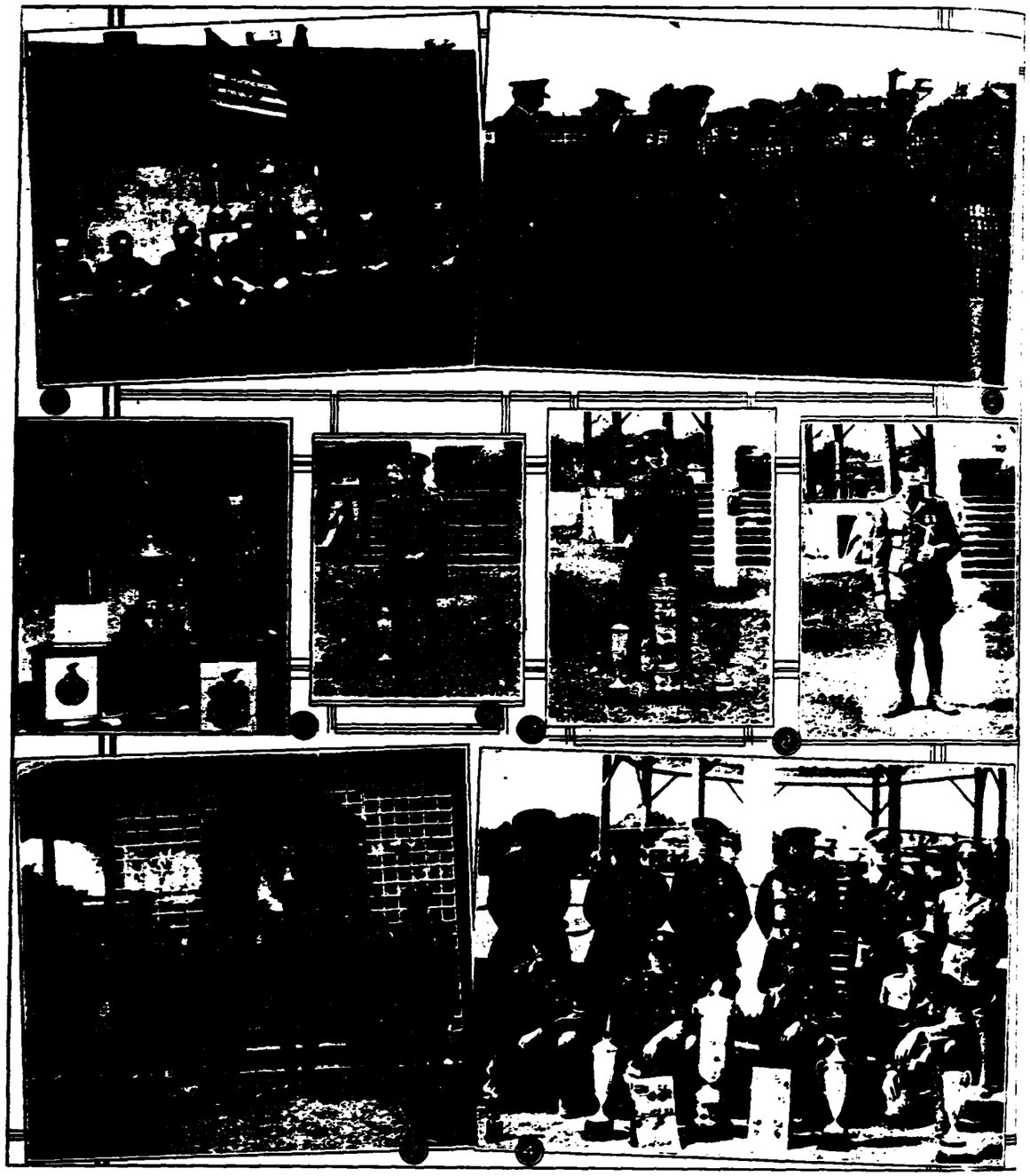
Sgt. R. V. Wilzewski	5th Cav. ..... Fort Bliss	3rd	267
Pvt. 1cl C. H. Christensen	Tr. A 1st Ar. Car Sq. ..... Fort Bliss	4th	267
Sgt. Ed Yeszerski	5th Cav. ..... Fort Bliss	5th	264

Match No. 6—Far Southwest Service Pistol Individual

Sgt. R. G. Kirby	5th Cav. ..... Fort Bliss	1st	247
Sgt. Frank Kulczynski	7th Cav. ..... Fort Bliss	2nd	239
Pvt. 1cl C. H. Christensen	Tr. A 1st Ar. Car Sq. ..... Fort Bliss	4th	234

Match No. 7—N. R. A. Pistol Team Match
Fort Bliss Pistol Team

Sgt. R. V. Wilzewski	5th Cav.	270
Sgt. Ed Yeszerski	5th Cav.	254
Sgt. R. G. Kirby	5th Cav.	257
1st Sgt. W. E. Fitzgerald	Hq. Tr. 2nd Cav. Brigade	254
Pvt. 1cl C. H. Christensen	Tr. A 1st Ar. Car Sq.	264
Team total ..... Place No. 1		1299



No. 1. 1st Cavalry Pistol and Rifle Squad.
No. 2. Fort Bliss Pistol Team. Left to Right: Brig. Gen. W. C. Short, Major O. A. Palmer, 1st Sgt. W. E. Fitzgerald. Sgt. Edward Yeszerski, Pvt. H. Christensen, Sgt. R. G. Kirby, Sgt. R. V. Wilzewski.
No. 3. 7th Cavalry Rifle and Pistol Team. Left to Right: Sgt. Frank Kulczynski, Troop A; Tech. Sgt. Benjamin Schwartz, Hq. Troop; Sgt. Andrew Lafavers, Hq. Troop; Sgt. Gilbert A. Roach, Troop F; 1st Sgt. Wilbur P. Jackson, Troop A; Sgt. James J. Campbell, Hq. Troop.
No. 4. 8th Cavalry Rifle and Pistol Team. Standing—Left to Right: Corp. R. H. Barr, Troop B; 1st Sgt. Harry Beard, Hq. Troop; 1st. Lt. C. D. Silverthorn;Sgt. O. D. Milton, Troop E; Sgt. J. Hopkins, Troop E; Corp. Cleo. J. Leach, Troop E Kneeling—Left to Right: Sgt. R. G. Kirby, M.G. Troop; Sgt.R. V. Wilzewski, Troop B; Sgt. E. Yeszerski, Troop F; Sgt. Roy McDaris, Troop F.
No. 5. Sergeant W. T. McGimpsey, 1st Cavalry, with Navy Cup.
No. 6. Sgt. Edward Yeszerski, 8th Cavalry, with Far Southwestern Rifle and Pistol Aggregate Trophy.
No. 7. Sgt. Roy A. McDaris, 8th Cavalry, with the Cavalryman's Cup, and his other Trophies.
No. 8. Sgt. R. G. Kirby, 8th Cavalry, with Far Southwest Service Pistol Trophy.

Match No. 8—Far Southwest Service Pistol Team Match

8th Cavalry Team

Sgt. H. R. Beard		Fort Bliss		234
Sgt. E. Yeszerski		Fort Bliss		234
Sgt. R. V. Wilzewski		Fort Bliss		241
Sgt. R. A. McDaris		Fort Bliss		230
Sgt. R. G. Kirby		Fort Bliss		250
	Total	Place No. 2		1189

Name	Organization and Station	Place	Score
82d Field Artillery Team			
Lt. C. F. Conrad	Fort Bliss		219
Lt. I. Herman	Fort Bliss		222
Lt. W. W. Ford	Fort Bliss		203
Sgt. M. G. Sullivan	Fort Bliss		77
Lt. L. Leiter	Fort Bliss		194
Total	Place No. 4		1037

Match No. 9—Colt Individual Pistol Match

1st Sgt. W. E. Fitzgerald	Hq. Tr. 2nd Cav. Brigade	Fort Bliss	4th	266
Sgt. C. H. Harris	1st Cav.	Marfa, Texas	7th	254

SMALL BORE SECTION

Match No. 1—N. R. A. Hercules Match Team of Two

Sgt. R. V. Wilzewski	8th Cav.	Fort Bliss		376
Mr. [illegible] Hession	O. R. C.	New Haven Conn.		291
Total		Place No. 4		667

Match No. 2—N. R. A. U. S. Trophy Short Range

Capt. P. Wilson	[illegible] D. C. L.	Ardmore, Okla.	7th	97

Match No. 5—N. R. A. Caswell Match

Shot as members of El Paso Police Rifle Club Team

Sgt. R. V. Wilzewski	8th Cav.	Fort Bliss	197
Sgt. W. E. Fitzgerald	Sig. Troops	Fort Bliss	196
Sgt. R. G. Kirby	8th Cav.	Fort Bliss	194
Jack Moore	Civilian		194
George Corning	Civilian		194
Total	Tied for 2nd place		965

Far Southwestern Rifle Championship Aggregate Match

Sgt. R. A. McDaris	8th Cav.	Fort Bliss	1st	5-
Sgt. W. T. McGimpsey	1st Cav.	Marfa, Texas	3rd	5-
Sgt. Leo F. Hedglin	1st Cav.	Marfa, Texas	4th	55

Far Southwestern Rifle and Pistol Aggregate Match

Sgt. E. Yeszerski	8th Cav.	Fort Bliss	1st	564
Pvt. C. H. Christensen	Tr. A 1st Ar. Car Sq.	Fort Bliss	2nd	557
1st Sgt. W. E. Fitzgerald	Hq. Tr. 2nd Cav. Brigade	Fort Bliss	3rd	548

1st Sergeant W. E. Fitzgerald of Headquarters Troop, 2nd Cavalry Brigade, fired as a member of the Cavalry Team in the National Matches of Camp Perry, Ohio, in 1924 and 1925. Sergeant Fitzgerald, in 1925, won the Farr Trophy in the famous Wimbledon Match, and the same year won 2nd place in the Navy Match. He has won many lesser trophies.

Sergeant Wilbur P. Jackson of Troop A, 7th Cavalry is a Distinguished Rifle shot. In 1929 he was on the Cavalry Team and in the National Individual Rifle Championship competition at Camp Perry, Ohio.

Private first class C. H. Christensen of Troop A, 1st Armored Car Squadron, fired as a member of the Cavalry Team with both rifle and pistol in the National Matches at Camp Perry, Ohio, in 1931 and placed 4th in the National Individual Pistol Match, at Camp Perry, Ohio, that year.

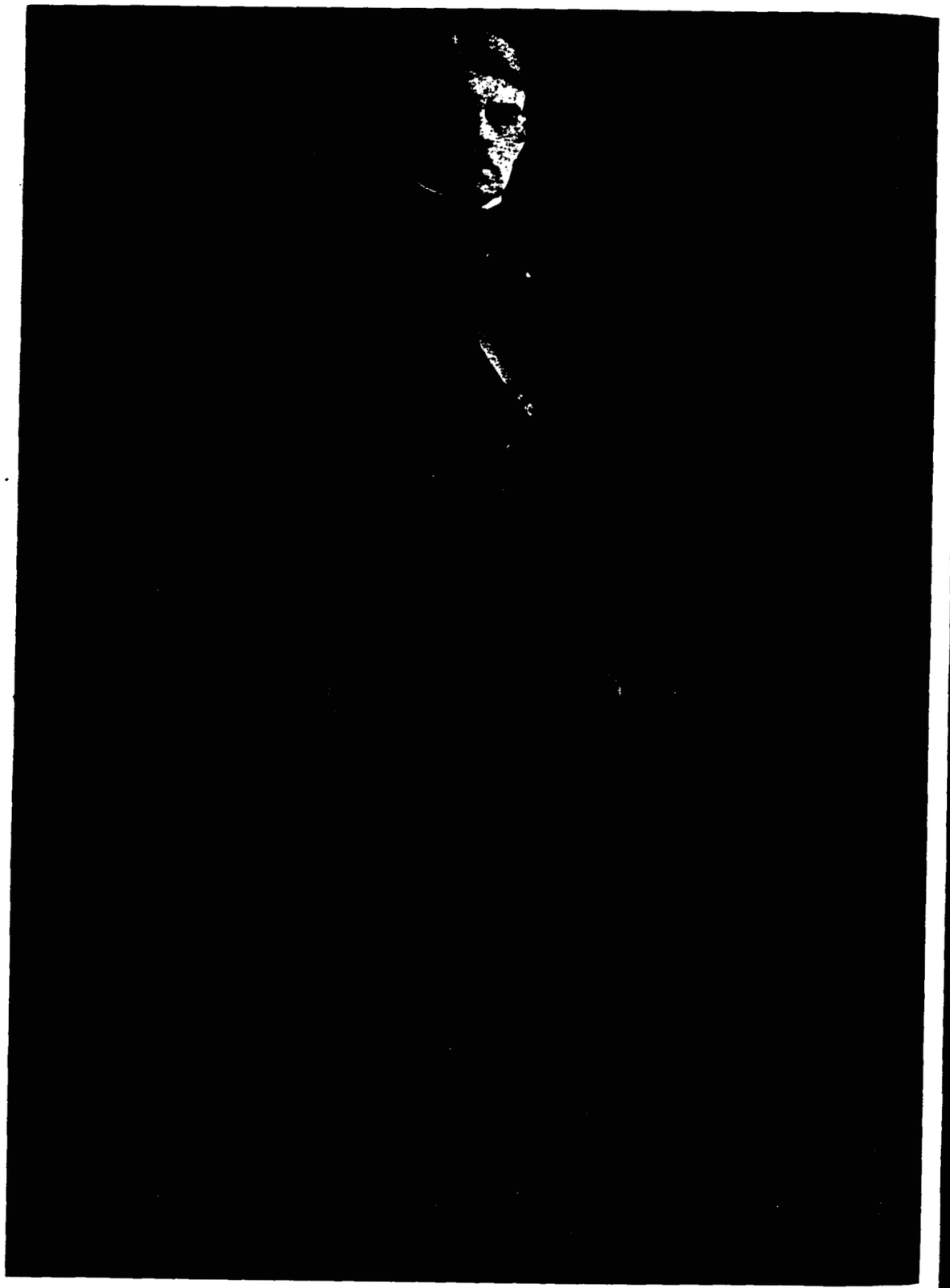
Sergeant Richard V. Wilzewski, Troop B, 8th Cavalry, enlisted in 1916 and assigned to the 8th Cavalry. Shortly after enlistment he was kicked in the face by a horse and practically lost the sight of his right eye. This forced him to shoot left handed, using his left eye. One of the few distinguished marksman with both rifle and pistol. He has won 68 medals in pistol and rifle matches. He is an expert pistol shot, both mounted and dismounted, has been on the Cavalry Rifle Team four times and on the Cavalry Pistol Team twice, firing in the National Matches at Camp Perry, Ohio, on each occasion. During one season he was appointed an assistant coach of the Cavalry Rifle Team. A summary of Sergeant Wilzewski's achievements are as follows:

During the 1930 National Match, this cavalryman won ten cash prizes, five medals and a brassard, the last for winning 32nd place among 1665 entries in the President's Match. During the same week, he finished first on the Cavalry Rifle Team which was firing in the National Rifle Team Match. This team finished in fourth place among 108 entries. In the National Individual Rifle Matches that year he placed twelfth out of 1671 competitors. For this he received a gold badge. Wilzewski also won 17th place out of a field of 535 in the National Individual Pistol Matches the same year, and 16th place in the National Rifle Association Individual Pistol Championship Match with 200 expert shots competing against him. In the automatic pistol and revolver slow fire he placed 3d out of a field of 100. A bronze medal was given him for this feat.

In the National Matches in 1931, Wilzewski entered as a member of the Cavalry Rifle Team and Cavalry Pistol Team, the latter taking 1st place in the Army Pistol Match. The Cavalry Rifle Team placed fifth. In the extremely difficult Army Pistol Match open to anyone, he won 1st out of 44 entries. He placed second in the slow fire .22 calibre pistol event, 5th in timed fire pistol, and 4th place in the Individual Pistol Class. In the last mentioned event there were approximately 1200 entries. In recognition of his wonderful shooting he was made a member of the 1931 National Pistol Team, which won 1st place. He was the second highest scorer on the team.

The mantelpiece in Wilzewski's quarters is lined with cups attesting to his skill. He was awarded the Cavalryman's Cup in 1924 and 1930, and the Fort Bliss Trophy in 1929 and 1931. At the 1932 Far Southwest Rifle Pistol and Shotgun Matches in El Paso, Texas, he won the Linz Trophy as individual pistol champion.

Sergeant Wilzewski has been in the Military Service for sixteen years. During that time he has made many friendships and is one of the most popular members of the Eighth Cavalry, in which he has served over eight years.



Major General Willard Ames Holbrook

Born in Wisconsin, July 23, 1860; Died in Washington, D. C., July 18, 1932

ANOTHER distinguished General, another enthusiastic Cavalryman, has passed on to the Great Bivouac. The second Chief of Cavalry of the Army lies waiting the last reveille. Seldom is such opportunity given one person to serve his country in so many places and under so many varied conditions. Seldom has a man been called upon to use his native talents and his military training to solve the many problems not usually connected with war. He at various times served as a leader of men on the firing line in battle, as a civil administrator, as a teacher, as a conciliator in a great strike; yes, even as a diplomat. It was the last quality which was called into play when he was selected by President Wilson to command the Southern Department during that part of 1916 when our relations with Mexico were so tense. For this outstanding service he received the Distinguished Service Medal and the citation, "For exceptionally meritorious and conspicuous service as Commanding General, Southern Department, where his firmness and tact in handling a threatening situation on the Mexican Border materially improved the conditions between the United States and Mexico."

He was appointed the first Chief of Cavalry under the New Defence Act and thus became the second chief of the arm, having for his dashing predecessor the Polish General Pulaski, who was Washington's Chief of Cavalry, though so named in orders. The gallant Frenchman who succeeded Pulaski in command of the cavalry legion of Washington's Army was never given the title, nor was any of the distinguished Generals during the Civil War. General Holbrook's four years tour as Chief of Cavalry was notable. For the first time in its history, he built up a cohesive spirit in his beloved arm. Serving as it had in small garrisons in widely separated stations the cavalry had developed as many thoughts and beliefs as there were regiments. During the period of General Holbrook's administration it began to coordinate these thoughts and beliefs into one, and that for the progress and improvement of that arm.

Immediately after his graduation from West Point in June 1887 Lieutenant Holbrook was stationed at old Fort Ellis, later at Fort Custer, both now passed into history never to be revived. It was during these early years that he earned his spurs in a battle with the Crow Indians near the agency in Montana. A few years later he graduated at the head of his class from the Infantry and Cavalry School at Fort Leavenworth and then served on the staff of General David S. Stanley, whose daughter he later married. His next four years were spent at West Point, first as instructor in mathematics, then as tactical officer. Two years after leaving West Point, war was declared with Spain, and he was promoted to the volunteer commission of Captain and Assistant Adjutant General, serving first at Chickamauga, Tenn., later in Matanzas, Cuba. Vacating his commission as Captain in July, 1899, he was immediately recommissioned as Major of the 38th volunteer Infantry and in December of that year arrived in the Philippine Islands.

In his first engagement he was recommended for the brevet commission of Lieutenant Colonel for gallantry in action.

In glancing over the record of his service during the year following we read the history of the Philippine Insurrection. Engaged with the enemy at Talisay, Luta, Banan, Lipa, Oila, Supoc, San Benito, Rosario, Tangol, Tiaon, San Juan de Boc Boc, Candelario, Saiaya, San Pablo. When the insurgents surrendered he was given command of a battalion of Panay Scouts and placed in charge of military, and later civil, affairs in Antique Province. He continued on this duty until a short time previous to his relief from foreign service in July, 1903.

Serving in the Southwest at Fort Huachuca, Whipple Barracks, later for a short period at Fort Riley, he was then ordered to college duty at the Pennsylvania Military College and served till 1909. This was followed by two years in Hawaii, and then to the War College to complete his military school education. After serving at various stations for the following four years he was again selected for the important duty of commanding troops during the tense situation arising from the strikes in Colorado. Here exercising his great quality of tact he maintained order and prevented what would undoubtedly have been a most serious and bloody situation. Little is known by the general public of this strenuous service performed by our troops. There was a minimum of publicity as to the part played by Holbrook's command. It was done modestly, quietly, efficiently, and tactfully. Through it all was the dominant exercise of a master will directing, cajoling, pacifying, controlling. A great service by a simple soldier.

Holbrook was promoted to the grade of Colonel in July, 1916, and immediately appointed to the command of the recently authorized 17th Cavalry. Again is seen his efficient work in bringing together increments from several regiments, coordinating, binding, them into one cohesive whole. Those who served in proximity to the 17th were loud in their praises when they so soon saw an enthusiastic, cohesive regiment organized in such a short space of time. Who among those present will ever forget those enjoyable Sunday morning rides across country with the 17th led by its commander?

Appointed a Brigadier in the National Army in August, 1918, he was assigned to the 83rd Division at Camp Sherman, Ohio, and took an intensely active part in the training of the Division with every expectation of later going to France. Undoubtedly he would have risen to high command. His record was brilliant, he was a finished soldier, an organizer of the first class, a leader of proven quality. But a man of his particular genius was badly needed to cope with a more serious problem on the Mexican Border. The Nation was bending its entire effort to assist the allies in Europe. Nothing must happen to divert our attention from the great mission in view nor to diminish the force now being trained for service in France. Affairs were not satisfactory on the Border. A man was needed to prevent any interference from that direction, a man who could be a forceful commander, and, at the same time, exercise the qualities of a diplomat. There was no hesitancy in choosing General Holbrook for the position. He was at once promoted to Major General, ordered to Fort Sam Houston in May, 1918, and given command of the entire Border. That trouble was avoided and that, but for a few minor sporadic outbursts, matters remained *in statu quo* is due to the great mind of the Commanding General. He was given a mission to perform. He let nothing confuse his mind as to what the successful accomplishment of this mission meant to the President. It was a great work well done, and General Holbrook deserves the thanks of the Nation for its success.

After the War, and after returning to his regular grade of Colonel, and on account of his familiarity with conditions in that section, he was detailed as Chief of Staff of the Southern Department and remained on this duty until July, 1920, when he was appointed Chief of Cavalry.

To all who had the great fortune to serve in his commands he was the elder brother, always ready and willing to guide and assist. Those of us who knew him intimately will always recall his friendly smile, his patience and forbearance with our mistakes, his words of wisdom and advice.

I repeat he was a great man among many men, and his influence will leave its mark not only on the Cavalry, which he loved so well, but on all who knew him and who came into contact with his warm, kindly, yet dominant, personality.

Au revoir, Holbrook. We salute you and we will never forget you. Select for us a remount in that bivouac where all good cavalrymen will meet eventually. We shall join you some day and we will want again to ride with you across that country which had no boundary.

—GEORGE VIDMER, *Colonel, Cavalry.*

SPORTS

1932 1st Cavalry Division Horse Show and Polo Tournaments

THE 1st Cavalry Division Horse Show was held at Fort Bliss on October 5, 6, 7, and 8, with units of the 1st Cavalry Division stationed at that post and Fort D. A. Russell participating. Officers of the 1932 show were as follows:

President and Director, Brigadier General W. C. Short, U.S.A.
Assistant Director, Major Frederick Gilbreath, Cav.
Executive, Major C. L. Clark, Field Artillery.
Treasurer, Major P. L. Thomas, Cavalry.
Secretary, 1st Lieutenant C. V. Bromley, Cav.
Judges:
Lieut. Col. J. P. Taulbee, Q.M.C., Randolph Field, Texas.
Lieut. Col. Innis P. Swift, Cav., San Antonio, Texas.
Major H. J. M. Smith, I.G.D., Fort Bliss, Texas.

The weather during the show was nearly perfect. Results of the various events in the show were as follows:

Place	Horse	Rider	Organization
	Class 1 Prix des Nations—Olympic Jumping Course		
1st	Kaiser	Lt. Reardon	8th Cavalry
2nd	Lone Star	Sgt. Witaski	7th Cavalry
3rd	Columbine	Sgt. Roberts	1st Cavalry
	Class 2 Division Commander's Trophy—Jumpers' Champ.		
1st	Goat	Sgt. Witaski	7th Cavalry
2nd	Lone Star	Sgt. Witaski	7th Cavalry
3rd	Woodrow	Capt. Boykin	8th Cavalry
	Class 3 Ladies Jumpers		
1st	Miss Mary	Mrs. Stiller	
2nd	Masquerader	Mrs. Maloney	
3rd	Blue	Mrs. Donaldson	
	Class 4 Touch and Out		
1st	Boo	Lt. Frierson	7th Cavalry
2nd	Woodrow	Capt. Boykin	8th Cavalry
3rd	Charlie	Corp. O'Neil	8th Cavalry
	Class 5 Novice Jumpers—Officers'		
1st	Miss Mary	Lt. Reardon	8th Cavalry
2nd	Trooper	Lt. Wright	7th Cavalry
3rd	Boots, Pvt.	Maj. Dornblaser	1st Cavalry
	Class 6 Officers' Private Mounts		
1st	Ken, Pvt.	Lt. Frierson	7th Cavalry
2nd	Frosty Morning, Pvt.	Lt. Reardon	8th Cavalry
3rd	Pappy Weeks, Pvt.	Lt. Conrad	82nd F. A.
	Class 7 Officers' Chargers		
1st	Ken, Pvt.	Lt. Frierson	7th Cavalry
2nd	Taheka	Lt. Wing	7th Cavalry
3rd	Diana, Pvt.	Lt. Donaldson	8th Cavalry
	Class 8 2nd Cavalry Brigade Trophy—Team Jumping		
1st	Woodrow Kaiser Bunny	Capt. Boykin Lt. Reardon Lt. Dewey	8th Cavalry
2nd	Taheka Calf Eye Boo	Lt. Wing Capt. Culton Lt. Frierson	7th Cavalry
3rd	Dexter Monocle Jerry, Pvt.	Capt. Hester Lt. McReynolds Lt. Herman	82nd F. A.
	Class 9 Enlisted Men's Mounts		
1st	Blue	Corp. O'Neil	8th Cavalry
2nd	Angel	Sgt. Shrout	7th Cavalry
3rd	Moon	Corp. Long	7th Cavalry
	Class 10 Novice Jumpers—Enlisted Men		
1st	Taqui Jim	PFC. Hinkle	Spec. Trs.
2nd	Goat	Sgt. Witaski	7th Cavalry
3rd	Susie	Corp. O'Neil	8th Cavalry
	Class 11 Novice Jumpers—Enlisted Men		
1st	Pegasus	Pvt. Bobbitt	8th Cavalry
2nd	Texas	Sgt. Shrout	7th Cavalry
3rd	Jimmy	Corp. Duval	8th Cavalry
	Class 12 Artillery Driving Contest		
1st			Btry B, 82nd F. A.
2nd			Btry C, 82nd F. A.
3rd			Btry A, 82nd F. A.

Place	Horse	Rider	Organization
	Class 13 1st Cavalry Brigade Trophy		
1st		(29 Points)	7th Cavalry
2nd		(26 Points)	8th Cavalry
3rd		(5 Points)	Spec. Trs.
	Class 14 Novice Hunters		
1st	Pappy Weeks, Pvt.	Capt. Hester	82nd F. A.
2nd	Ken, Pvt.	Lt. Frierson	7th Cavalry
3rd	Lorelle	Lt. Frierson	7th Cavalry
	Class 15 Hunters (Lightweight)		
1st	Mr. Weaver, Pvt.	Lt. Wright	7th Cavalry
2nd	Johnny	Lt. Ehrhardt	8th Cavalry
3rd	Diana, Pvt.	Lt. Donaldson	8th Cavalry
	Class 16 Hunters (Middle and Heavyweight)		
1st	Ken, Pvt.	Lt. Frierson	7th Cavalry
2nd	Pappy Weeks, Pvt.	Capt. Hester	82nd F. A.
3rd	Garryowen	Sgt. Witaski	7th Cavalry
	Blue	Mrs. Donaldson	8th Cavalry
	Class 17 Handy Hunters		
1st	Apology	Corp. Long	7th Cavalry
2nd	Snake	Lt. Frierson	7th Cavalry
3rd	Reno, Pvt.	Lt. Dewey	8th Cavalry
	Class 18 Ladies' Hunters		
1st	Ken, Pvt.	Miss Scott	
2nd	Garryowen	Miss Robinson	
3rd	Johnny	Miss Dornblaser	
	Class 19 Hunters—Privately Owned		
1st	Ken, Pvt.	Lt. Frierson	7th Cavalry
2nd	Pappy Weeks, Pvt.	Capt. Hester	82nd F. A.
3rd	Boots, Pvt.	Maj. Dornblaser	1st Cavalry
	Class 20 Hunt Team		
	Ken, Pvt.	Lt. Frierson	
1st	Garryowen	Capt. Culton	7th Cavalry
	Tony	Lt. Wing	
	Blue	Mrs. Donaldson	
2nd	Diana, Pvt.	Lt. Donaldson	8th Cavalry
	Chesterfield	Lt. Reardon	
	Nightengale	Lt. Riggs	
3rd	Johnny	Lt. Ehrhardt	1st Cavalry
	Columbine	Lt. Gandal	
	Class 21 Hunter Championship		
1st	Ken, Pvt.	Lt. Frierson	7th Cavalry
2nd	Pappy Weeks, Pvt.	Capt. Hester	82nd F. A.
	Class 22 Novice Polo Ponies		
1st	Ocatilla, Pvt.	Lt. Smith	1st Cavalry
2nd	Reno Beauty	Lt. Riggs	1st Cavalry
3rd	Sheba, Pvt.	Lt. Ehrhardt	1st Cavalry
	Class 23 Polo Mounts (Lightweight)		
1st	Nellie	Lt. Greear	Spec. Trs.
2nd	Balaclava	Capt. Beaumond	82nd F. A.
3rd	Half Pint, Pvt.	Lt. Sheldon	8th Cavalry
	Class 24 Polo Mounts (Middle and Heavyweights)		
1st	Pappy Weeks, Pvt.	Lt. Conrad	82nd F. A.
2nd	Apple Jack	Capt. Culton	7th Cavalry
3rd	Spot Light	Lt. Smith	1st Cavalry
	Class 25 Polo Pony Championship		
1st	Pappy Weeks, Pvt.	Lt. Conrad	82nd F. A.
2nd	Balaclava	Capt. Beaumond	82nd F. A.
3rd	Nellie	Lt. Greear	Spec. Trs.
	Class 26 Group of Twelve Polo Ponies		
1st			8th Cavalry
2nd			82nd F. A.
3rd			8th Cavalry
	Class 27 Ladies—Road Hacks		
1st	Diana, Pvt.	Mrs. Donaldson	
2nd	Nellie Gray, Pvt.	Miss Muller	
3rd	Almazon	Mrs. McReynolds	
	Class 28 Children's Three Gaited Ponies		
1st	Breezy, Pvt.	Miss Bettie Bassett	
2nd	Almazon	Miss McGaw	
3rd	Grand Pa	Dave Ellis	
	Class 29 Children's Three Gaited Ponies		
1st	Breezy, Pvt.	Miss Barbara Bassett	
2nd	Angel	Tom Shrout	
3rd	Johnny	Miss Jean Dornblaser	
	Class 30 Children's Jumpers		
1st	Apology	Miss Robenson	
2nd	Susie	Miss Bancroft	
3rd	Caesar	Miss Dornblaser	
	Class 31 Civilian Jumping		
1st	Reno, Pvt.	Miss Bancroft	
2nd	Susie	Miss Bancroft	
3rd	Masquerader	Mrs. Maloney	
	Class 32 Ambulances		
1st			1st Ambul. Troop
2nd			1st Ambul. Troop
3rd			1st Ambul. Troop
	Class 33 Pack Mules		
1st	Deuce	PFC. Bayles	1st P. T. Train
2nd	Red	PFC. Eddleman	1st P. T. Train
3rd	Runt	PFC. Melheim	4th P. T. Train

	Class 38 Pack Horses		
1st	Hickman	Corp. Semrow	8th Cavalry
2nd	Buck	Pvt. Lovell	Spec. Trs.
3rd	TZ	Corp. Morlas	7th Cavalry
	Class 35 Artillery Gun Team		
1st			Btry C, 82nd F. A.
2nd			Btry A, 82nd F. A.
3rd			Btry B, 82nd F. A.
	Class 36 Reel Carts		
1st			Btry B, 82nd F. A.
2nd			Hq. Btry, 82nd F. A.
3rd			Btry C, 82nd F. A.
	Class 37 Escort Wagons		
1st			8th Cavalry
2nd			7th Cavalry
3rd			20th Wagon Co.

Class 39 United States Cavalry Association Cup

Awarded to Lieutenant Frierson, 7th Cavalry, the officer scoring the greatest number of points in the show.

Standing of Contestants Three Highest:

Officer	Organization	Points Won
Lt. Frierson	7th Cavalry	44-2/3 Points
Lt. Reardon	8th Cavalry	15-2/3 Points
Capt. Hester	82nd F. A.	14-1/3 Points

Class 40, General Howze Trophy

Awarded the enlisted man scoring the highest number of points in the show, in the following classes: *Prix des Nations*, Touch and Out, Enlisted Men's Mounts, Novice Jumpers Enlisted Men, Novice Jumpers, Handy Hunters, Lightweight Hunters, Middleweight and Heavyweight Hunters, Hunt Teams.

1st. Sgt. Witaski, 7th Cavalry.
2nd. Corp. O'Neil, 8th Cavalry.

(These two contestants were tied for points. Sergeant Witaski won first place on account of having won Class 2.

Class 41, 82nd Field Artillery Trophy

The public or private horse of the 1st Battalion, 82nd Field Artillery, ridden by an officer or enlisted man of that battalion, making the best performance in jumper and hunter classes during the entire show.

1st Pappy Weeks, Pvt. Lt. Conrad 82nd F.A.

Class 42, Best Young Horse

1st Ken, Pvt. Lt. Frierson, 7th Cav.

Class 43. Best Polo Pony. Not decided in show

Class 44, The Military Trophy

1st 7th Cavalry, 86.
2nd 8th Cavalry, 42.
3rd 82nd F.A. 20.

Polo Tournaments

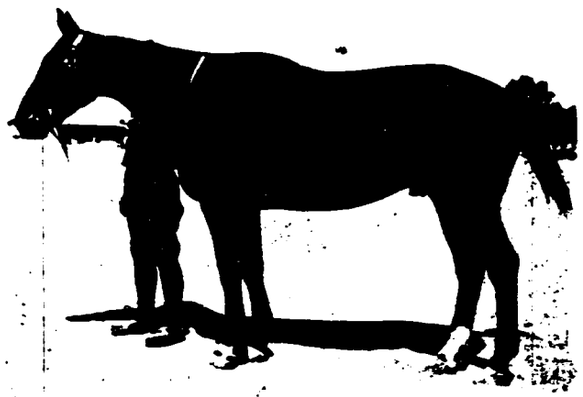
THE Senior Polo Tournament played at Fort Bliss on October 5th and 9th was participated in by teams representing the 1st, 7th, and 8th Cavalry Regiments and the 82nd Field Artillery. Results were as follows:

October 5th: 7th Cavalry 11, 8th Cavalry 7; 1st Cavalry 7, 82nd Field Artillery 13.

October 9th: 7th Cavalry 10, 82nd Field Artillery 4: Consolation Game: 1st Cavalry 9, 8th Cavalry 4.

The Junior Polo Tournament played at Fort Bliss on October 12th, 16th, 19th, and 23d, was participated in by teams representing the El Paso Reserve Officers, the 1st, 7th, and 8th Cavalry Regiments, and Special Troops, 1st Cavalry Division. Results of these games were as follows:

October 12th: 8th Cavalry B 4, vs. Reserve Officers 2



Top—Left to Right: Lt. A. A. Frierson, 7th Cavalry, with the U. S. Cavalry Association Cup. 1st Sgt. Walter Witaski, Troop B, 7th Cavalry with the General Howze Trophy: Lt. George B. Conrad, 82d Field Artillery, with the 82d Field Artillery Trophy.

Center—Lieutenant A. A. Frierson, 7th Cavalry on "Ken."

Bottom—"Pappy Weeks" owned by Lieutenant George B. Conrad, 82d Field Artillery.

October 16th: 8th Cavalry (A) 4, vs. 82nd Field Artillery 9; 1st Cavalry 4, vs. Special Troops 7.

October 19th: 7th Cavalry 17, vs. 8th Cavalry (B) 4; 82d Field Artillery 6, vs. Special Troops 8.

October 23rd: Special Troops 5, vs. 7th Cavalry 10.

On Sunday, October 30th, the 7th Cavalry team, winners of the Senior Tournament, met a picked All-Post team in a benefit game for charity sponsored by the Junior Service League of El Paso.

Line-ups of the teams in this game were:

7th Cavalry		All-Post Team
Lt. F. Wing	No. 1	Capt. H. B. Hester, 82d F. A.
Maj. T. M. Allen	No. 2	Capt. H. G. Culton, 7th Cav.
Lt. P. D. Harkins	No. 3	Lt. W. J. Reardon, 8th Cav.
Lt. H. H. Howze	No. 4	Lt. W. H Greear, Spec. Tr.

The All-Post team defeated the 7th Cavalry team 9-4.

Upper—Senior polo team of the 7th Cavalry, winners of the Senior Polo Tournament at Fort Bliss, October, 1932. Left to right: No. 1, Lt. F. P. Wing; 2, Maj. T. M. Allen; 3, Lt. P. D. Harkins; 4, Lt. H. H. Howze.

Lower—Junior polo team of the 7th Cavalry, winners of the Junior Polo Tournament at Fort Bliss, October, 1932. Left to right: No. 1, Lt. A. A. Frierson; 2, Lt. M. C. Johnson; 3, Capt. H. G. Culton; 4, Lt. R. M. Shaw. Lt. F. O. Dewey, 7th Cavalry, a member of this team, is not shown in the picture.

American Participation in Polish Horse Shows

AMERICAN officers attending the Polish Cavalry School at Grudziadz, Poland, have appeared in horse shows throughout Pomorze (Polish Pomerania) during the past spring and summer. They have made a very creditable showing and their performances have resulted in highly favorable comments from both the military and civilians who have witnessed them. The horses ridden in these shows were the regularly assigned mounts used daily by the officers concerned in their work at the school. They are the property of the Polish government. The American officers have appeared in the shows at Grudziadz, May 3d, 5th and 8th, at Torun, June 4th and 5th, and at Chelmno June 19th. All these shows were sponsored by the Pomeranian Society for the Advancement of Horse Breeding. This is a national organization, having about 15 districts throughout the country, and corresponds somewhat to our Remount Association.

The courses in all shows are extremely varied, with many changes of direction. It is seldom that more than two of the jumps are found in line and often not that. Some changes of direction are only slight, but others are often as much as 180 degrees. About 30% of the jumps have breadth as well as height, such as brush with a single rail beyond, double posts and rails, double oxers, stone wall with rail beyond, water jumps, triple bars and quadruple bars. The remainder include posts and rails, gates, stiles, railroad gates, in and outs, of many varieties, banks of all descriptions, etc. Time is always an element in the selection of the winners. Of two or more horses with clean performances, the winner is the one with the fastest time. There is also always a minimum rate of speed permissible, and when a rider uses up the maximum time he is blown, signalled off the course.

In the Grudziadz show Captain R. C. Winchester rode the same horse in two events, in both of which he had clean performances, but he only won 3d place in one and 6th in the other. There were over 60 entrants in each event.

At the Torun show Captain Kent G. Lambert rode two horses in one event and one horse in a second one. He received the 6th prize in the first and the 1st prize in the second event. He had a clean score as did 5 other entrants, but his time was a full 2 seconds better than his nearest competitor. There were about 90 entrants in this class.

At the Chelmno show Captain Lambert rode in one event and won 6th place. The course there although not extremely difficult was very tricky and there was but one clean score. This was most unusual for Polish horse shows.

The policy of the Polish School is very liberal about permitting student officers to attend the local shows and the military attaché, Major Emer Yeager, G. S. C., has encouraged our officers to take advantage of every opportunity to participate in order to secure the experience in competition with the high class of horsemen which is encountered in these events.

Professional Notes and Discussion

Preserving Combat Effectiveness in the Cavalry Division

IT is believed that the methods employed by the Cavalry Division to preserve its combat effectiveness in the face of frequently changing authorized and recruiting strengths, will be of considerable general interest to the cavalry at large.

The Tables of Organization referred to in following General Orders are not furnished on account of the variations in strength among the border, interior and school regiments.

General Orders No. 9. Headquarters 1st Cavalry Division. Fort Bliss, Texas, July 18, 1932.

1. The frequent changes in the authorized and recruiting strength of the Cavalry Regiments have led to variations in organization, armament, and equipment as between the several regiments of this division.

2. While it is not desired to cause unnecessary transfers of enlisted men nor to change the number of grades and ratings now allotted to regiments, it is essential that certain uniformity in organization, armament, and equipment, be maintained, and that brigade and regimental commanders give constant consideration to that utilization of their reduced personnel which will best preserve the combat efficiency of their organizations.

3. With these objects in view the following will govern in organizing the Cavalry Regiments and will be habitually observed when these regiments take the field for any purpose:

a. The auxiliary fire power must be maintained as strong as practicable consistent with the reduction in personnel. It is accordingly directed that:

(1) Each rifle troop carry 4 light machine guns and 2 machine gun ammunition packs.

(2) Each machine gun troop carry six water cooled machine guns and six machine gun ammunition packs; two 37 mm guns and two 37 mm ammunition packs; the combat escort wagon be used exclusively for carrying ammunition; and the ammunition train of eight packs be omitted.

b. Every effort must be made to have the maximum practicable number of men available for combat duties. Measures to insure this will include:

(1) That troop cooks and saddler lead the three troop packs (cooking outfit, ration, and picket line.

(2) That water packs be omitted unless especially authorized from these headquarters.

(3) That demolition packs be omitted.

(4) That packs for chemical munitions be omitted, unless especially authorized from these headquarters.

(5) That drivers of ammunition and troop packs be taught to couple their animals and be prepared to advance ammunition by hand.

(6) That men riding on wagons be limited to wagoners, personnel section, and sick or wounded personnel not otherwise provided for.

(7) That, of the authorized motor transportation but one truck per regiment be assigned thereto. The chauffeurs now allowed each regiment, in addition to their training as chauffeurs, be trained for combat duties. All except one of these chauffeurs be assigned combat duties.

c. Communications are vital. The regimental headquarters troops will be so organized as to maintain an efficient message center and to transport and operate three radio pack sets, the necessary economies in personnel being effected in other sections of those troops.

d. Wheeled transportation will be limited per regiment as follows:

1 Truck, 1½ ton.
6 Spring wagons 4 line horse teams.
15 Escort wagons 4 line mule teams.

e. Regiments will be prepared to supply each officer assigned thereto and not owning a private mount with one mount.

4. Each regiment will be prepared to furnish horses and equipment for attached personnel as follows:

a. Horses and horse equipment for:
3 Medical and Veterinary Officers.
1 Chaplain.

b. Horses and horse equipment for:
10 Medical and Veterinary enlisted men. (4 ride on spring wagons).

c. Two horses suitable and trained for carrying medical packs.

d. Eight horses suitable and trained for light draft in four line teams, for the medical and veterinary wagons.

5. *a.* Present authorized tables of organization are not adapted to a uniform organization of the regiments in this division under *present* authorized recruiting strength.

b. The attached tentative tables of organization have been prepared in accordance with the above considerations for the information and guidance of brigade and regimental commanders.

c. These tables show a standard distribution of the present authorized recruiting strength 483 enlisted men, exclusive of the band, the duties to be performed by the personnel and the requirements in horses, mules, and transportation.

By command of Brigadier General SHORT:

E. H. HUMPHREY,
Colonel, General Staff Corps,
Executive Officer.

OFFICIAL:

B. Y. READ,
Major, Adjutant General's Department,
Adjutant.

Exercise A, The Cavalry School, '32-33

FOR the purpose of demonstrating to the students at the Cavalry School the correct technique of marching, a reenforced cavalry brigade in a tactical situation, simulating as nearly as possible actual war conditions and the methods of supply incident thereto, the Cavalry School Brigade, Reenforced, participated in a march from 10:00 AM, October 17 to 11:30 AM, October 20. The brigade, reenforced, consisted of Brigade Headquarters and Headquarters Troop (organized from the 9th Cavalry), the student officers organized as a troop, the 2d Cavalry (with an experimental organization wherein half of the machine guns, .30 caliber water-cooled, were replaced by .50 caliber machine guns, and the addition of an armored car platoon. Reconnaissance cars were used to simulate armored cars), the 13th Cavalry, Battery D, 18th Field Artillery, Detachments Medical and Veterinary Service, Detachment Quartermaster Corps. Total strength, 855 officers and enlisted men, 1147 animals. Flight D, 16th Observation Squadron on the first two days acted as hostile attack aviation and on the last two days acted as friendly observation aviation.

The tactical situation showed the brigade, reenforced, detached from the Division, which was not ready for active service, and with the umpire controls was such as to bring about the following operations: the first day a march toward the enemy with necessary reconnaissance and security on the march and in bivouac, attack by aviation and a change of direction. The second day the same except the air attack and change of direction. The third day a march with rear and flank guards to establish a river line defense in an assigned sector. The defense of the river line was conducted by holding the river line lightly and the main body well back from the river. The fourth day a relief from the defense of the river line and a march to join the rest of the division. The exercise was continuous throughout. Since the purpose of the problem was one principally of technique, combat was avoided. The lengths of marches were as follows: first day 23 miles; second day, 28 miles; third day, 39 miles and fourth day, 18 miles.

Conditions were as close to actual war as could be made. The prescribed allowances for ammunition and Class I Supplies for field service were carried. Supply was conducted in strict accordance with the teachings of the Cavalry School contained in the new text "Tactical Principles and Logistics for Cavalry" and coordinated with the teachings of the Command and General Staff School. This proved to be a new experience to a great many of the officers and it is believed they learned a great deal from this. Supplies were forwarded from Fort Riley by a detachment of the Quartermaster Corps, acting as the motor element of the division train to designated distributing points where distribution was made to the field trains of the several units of the brigade. Supplies were distributed in bulk to regimental and separate supply officers, being broken up for issue by them after arrival in bivouac. The first day distribution varied from the normal in that hay was supplied. The second day the distribution and issue were normal, requiring the grazing of animals. On the third day the field trains were detached from the command by umpire control and sent back to the post. This necessitated the using of the individual reserve ration on the morning of the fourth day. Distribution was suspended and hay procured locally. Water was procured locally for both men and animals from streams and springs in the immediate vicinity of the bivouacs. This necessitated in some instances a resort to the watering equipment carried in the combat train for the watering of the animals.

The communication problem was one of great interest. The headquarters brigade was equipped with an experimental command car designed and built upon a Cadillac chassis at the Cavalry School. It was equipped with radio with a self-contained antenna in the top, which permitted continuous radio communication, both at a halt and while moving. This proved to be valuable in communicating with the armored cars and radio pack sets of detachments. The armored cars were sent on distant reconnaissance missions and by means of radio communication they were directed at will at anytime. The car was used, in addition to radio communication, as a command car and proved invaluable for the brigade commander in supervising the conduct of the march. It emphasized the great necessity for such transportation for a brigade commander in conducting the march of a cavalry brigade at the increased rates of march now prescribed. It is believed there should be at least two such vehicles for this purpose in every cavalry brigade.

Each day the brigade occupied a concealed bivouac. This gave the students and troops an opportunity to observe the technique of occupying such a bivouac. However, due in a great measure to the fact that the only trees are along the stream lines in this locality, it was not very difficult for the aviation to locate the bivouacs. This was done without any knowledge beforehand on the part of the aviator as to where the troops were going.

The conduct of the march was an application of the new technique of marching developed at the Cavalry School to the several above mentioned tactical situations and further confirmed the soundness of this technique.

The battery attached to the brigade is not horse artillery but a horse drawn battery. It is interesting to note that it was able to keep up with the cavalry at the increased rate of march throughout the exercise. The fact that enough space was given it in the column to allow it to take advantage of the level or down hill road for its trot periods is in a large measure responsible for this accomplishment. Trotting up hill in draft is what exhausts the teams more than anything else.

The Foreign Military Press

Reviewed by Major Alexander L. P. Johnson, Infantry

CANADA—*Canadian Defence Quarterly*—July, 1932.

"Intelligence Liaison Between the Army and Air Force," by Sqn. Leader C. M. McEwen, M.C., D.F.C., Royal Canadian Air Force.

The obtaining of information is a duty to which the military commander must give special care. It is the duty of the air force commander to supply information. The military commander is interested in obtaining information on all matters which primarily affect his own immediate plans. Such information will be of value to higher and subordinate commanders, hence there results a constant stream of information passing from one commander to the other, with the bulk of it going from front to rear. In the case of the air force, the author points out, the situation is the reverse. Since the greater portion of information gathered by the air force is of value to the ground forces only, there is less concern with the proper dissemination of the same within the air force. In order to obtain information, the author states, it is necessary that the air force be at all times fully informed as to the intentions of the military commander. Air force personnel must know the general and special situation which confront them so that observers might know what to look for, what it looks like and where to find it, and consequently how to deal with it. Such information must come from the higher echelons beginning with the C-in-C's directive.

The author outlines the organization and functioning of the Intelligence Liaison, touches upon the essential qualifications of the personnel engaged in this important work and, in conclusion, observes that even with good communications and officers possessing the desired attributes there still is need for the closest touch and mutual confidence not only between intelligence officer and pilot, but also between the services.

ECUADOR—*El Ejercito Nacional*—No. 64, 1932.

"Honor, Action, Modesty—Washington," by Alejandro Andrade Coello.

A vibrant, eloquent tribute to the Father of Our Country, who, the author states, possessed the three great attributes which are characteristic of men chosen by destiny for great purposes. "Washington with sublime patriotism and infinite modesty founded a model republic," the author writes. "What he has wrought is immense. It stands in the forefront of nations. If we evaluate human acts by the fruits they bear, then none may obscure the brilliant lustre of the country which owes its mould to the virtuous genius of Washington."

URUGUAY—*Revista Militar y Naval*—July-August, 1931.

"Organization of the General Staff College."

Established at Montevideo, this institution is under the direct control of the Chief of the General Staff. The faculty, as far as practicable, is composed of senior officers of the army. Duty as a member of the school staff, the faculty or as student officer, counts as duty in command of troops. Student officers are selected by competitive examinations from among captains and majors not more than 38 years of age on the date of admission. They must have had at least two years command duty with troops of their respective arms. The course of instruction comprises two years. The first year is devoted to the study of the infantry division, the second year is given to the cavalry division and the army. In addition, student officers during the second year of their attendance perform tours of duty with the different sections of the general staff and with troops of arms other than their own. The latter periods coincide with the field training period of the army. The curriculum is comprehensive and conforms to the general plan of similar institutions in other countries. It is interesting to note, that tactical problems are first solved on the map, and subsequently on the terrain either as a terrain exercise or tactical walk. As far as practicable the study of each problem involves the solution of all pertinent command and staff considerations and requirements. Each problem affords the student officers a valuable opportunity to carry the "campaign" to a logical conclusion in all its aspects.

AUSTRIA—*Oesterreichische Wehrzeitung*—August 12, 1932.

"Russo-Japanese Relations," by O. W.

Although the war clouds over the Far Eastern horizon lifted for the time being, the danger of war between Japan and Soviet Russia, in the author's opinion, still exists. He believes, China will remain the bone of contention. There are actually three distinct Chinas, the author states. 1. Official China, member of the League of Nations, American protégé, represented by the Nanking government whose authority barely extends over two maritime provinces or less than one-eighth of Chinese territory. 2. Manchurian China with its center at Mukden, although formally independent, owes its present status to Japanese arms. 3. Anarchic China, thoroughly bolshevized, centers largely in the populous middle Yangtse valley.

Japanese conservatism, the author states, is thoroughly opposed to bolshevism, hence the Russo-Japanese difficulties which will inevitably lead to war. The trans-Siberian railway situation has not improved materially since 1904-05, hence the Soviet Government, in the author's opinion, is unlikely to risk war on its own initiative unless the general world situation should be favorable to such an enterprise. It is to be expected, however, that Soviet Russia will seek to embarrass Japan when and wherever possible. Japan, on the other hand, the author thinks, will resolutely ad-

here to her Manchurian policy even though such course might compel the Island Empire to withdraw from the League of Nations. Japanese imperialistic policy in Manchuria, the author states, is opposed by China, the League of Nations and the United States. Intervention by these, even though it might only assume the form of economic pressure, might conceivably encourage Russia to venture a decision by force of arms.

The author states, that according to a diplomat at Geneva, the White House fully expects that Japan will be the first among civilized states to be drawn into a

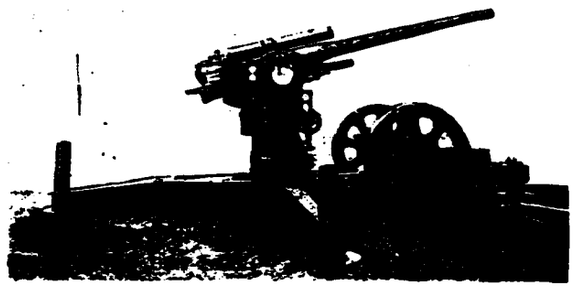


Fig. 1. 80 mm A. A. Cannon in Firing Position Showing the Right Side

conflict with Soviet Russia, and that the impelling force behind such conflict will most likely emanate from Paris. France consistently advocated a crusade against the Soviet. Bolshevism menaces French interests in Indo-China where two years ago serious uprisings occurred. France and Japan have recently concluded an accord relative to the French position in Indo-China. According to rumors, this accord contains secret military clauses. Be that as it may, the author points out, French support of Japan in her recent Shanghai adventure is well known. Japan and France likewise acted in complete accord at the recent Disarmament Conference. The author expresses the belief, that French policy in the Far East is but additional evidence of France's determination to destroy Germany in the interests of her hegemony over Europe. A Russo-Japanese conflict would leave Poland free to deal with Germany without danger to her open eastern frontier.

FRANCE—*La Revue d'Infanterie*—May, 1932.

"Brief Notes on the New Organization of Small Units in the German Army," by Captain de Senneville.

A recent circular of the German Reichswehr Ministry effected important changes in the organization of small units in the German Army in conformity with the German theory of "fire" and "shock." These, in marked contrast to the French concept, the author states, do not merge one into the other. The German idea of differentiation, the author believes, is in some measure the result of the weight of the German light machine gun (17 kg), which prevents its keeping up with the rifleman. In the old organization the light machine gun squad of eight men and one gun constituted the fire unit. The service of the piece required only four men; the others carried rifles equipped with telescopic sights which enabled them to augment the fire power of the light machine gun squad. The shock unit consisted of the rifle squad armed with grenade, automatic pistol and rifle. Each of the three platoons of the infantry company consisted of two light machine gun squads and two or three rifle squads. Fire and movement were regulated by the platoon leader, who employed his squads in conformity with his mission and the situation either as homogeneous or mixed combat groups.

Under the new organization the infantry platoon will consist of three identical and interchangeable groups, each with a leader and assistant leader. The group will contain a light machine gun squad of four men, a rifle squad of 7 to 9 men and 1 runner. The group leader will normally command the light machine gun squad while his assistant takes charge of the riflemen. The new platoon organization will thus have an effective strength of 44 men, 3 light machine guns, 30 rifles and 9 pistols, compared to 42 men, 2 light machine guns, 20 rifles and 6 pistols of the old organization.

The German idea of differentiation of fire and shock action continues and the mechanism of the attack remains unchanged. Combat groups in the attack advance without firing behind the protective barrage of the artillery and the heavy infantry weapons (heavy machine guns, minnenwerfer, infantry cannon). The light machine gun squad forms the spearhead of the attack, the riflemen follow in column of files. Upon reaching assaulting distance, when the supporting fires must of necessity lift, the light machine guns go into action to cover the advance of the rifle squads, which must take advantage of the terrain and the support given by the fire of the light machine guns to drive home the charge.

The new organization simplifies the task of the platoon leader. It becomes his duty to coordinate the manoeuvre and assure the team-work of his three groups. The responsibility for the conduct of the fire and movement now rests upon the shoulders of the group leaders. "It is a grave responsibility," the author observes, "but it may well be entrusted to the remarkably well trained subalterns of a professional army such as the Reichswehr."

Another effect of this reorganization is the substantial increase in the fire power of the infantry. Each rifle company has now 9 light machine guns compared to the former six; or 27 to the battalion and 81 to the regiment. The light machine gun is of a new type referred to as Model F.M. Unfortunately no particulars are given concerning this weapon. It is noteworthy, however, that each company is equipped with three tripod mounts of great stability. These confer upon the light machine gun the precision of heavy machine guns. On the march, the light machine guns are moved by handcarts. A reserve supply of ammunition is carried in a cart drawn by two horses. Under the new regulation German infantry marches in column of threes like the French.

—*Revue d'Artillerie*—May, 1932.

"The Dutch A.A. Gun, Calibre 80 mm L 50."

The Dutch concern, "Hollandsche Industrie en Handelsmaatschappij 'Siderius' N. V.," produced an 80 mm antiaircraft weapon which is said to satisfy all expectations. Mounted on a cross-platform, the gun possesses great stability on any kind of soil irrespective of angle or direction of fire. The pointing devices permit easy and rapid engagement of targets moving at great speed. Firing data are transmitted to the gun electrically from a central fire-control post. In case of interruption of electric power, firing data may be transmitted either by telephone or by direct command to the gun crew.

The breechblock is semi-automatic with an automatic shell ejector. The gun fires normally 20 rounds per minute but may attain a rate of 25 and maintain it from 5 to 10 minutes. The maximum horizontal range is 15 kilometers. The maximum vertical range is 9000 meters with an initial velocity of 750 m/s. The projectile weighs 8 kilograms and contains a powerful high explosive charge. The gun has an all-around horizontal field of fire. Its vertical range extends from minus 5 to plus 80 degrees.

The wheels are rubber-tired and permit transportation of the gun at a speed of 35 to 40 km per hour. The gun can be placed into action in four minutes. It can fire 1,500 rounds without necessity of replacing the barrel.

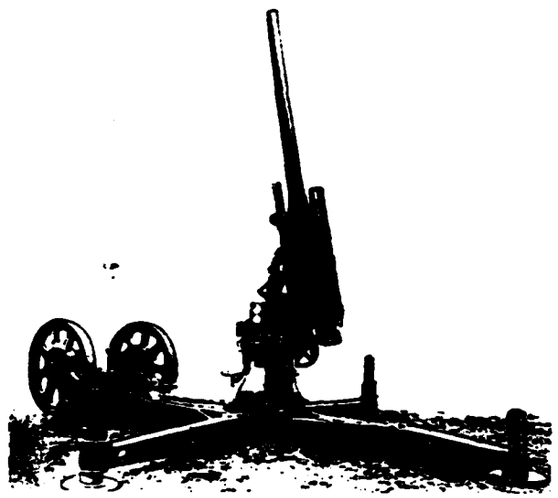


Fig. 2. 80 mm A. A. Cannon in Firing Position showing the Left Side

—*Revue d'Artillerie*—August, 1932.

"The Problem of Centralization of Command in A.A. Fire," by Art. Sqn. Cmdr. A. Worbe.

Experience of the past number of years in night firing tests against aircraft leads the author to believe that aircraft may be combatted successfully under all circumstances by the simultaneous action of several batteries with the fire properly distributed in the horizontal as well as the vertical plane. He likewise believes, that centralization of command, which is provided for night firing, is equally applicable to daylight firing. In developing his thesis, the author analyzes and discusses the following propositions:

1. Advantages that may be derived from the concentration of command in the matter of fire.
2. Factors which are responsible for the effective-

Fig. 3. 80 mm A. A. Cannon in Traveling Position

ness of concentration in night firing, and means to improve the results obtained.
3. The possibility of obtaining a concentration in daylight firing by employing with the greatest efficacy methods employed in night firing.

The concentration of the fire of several batteries upon the same target increases the efficacy of the cone of dispersion and correspondingly the vulnerability of the target within that cone without sacrificing the effect of surprise which is essential in A.A. firing. Centralization of command over these batteries permits their proper and advantageous emplacement. It makes for better fire control and facilitates effective use of listening and other mechanical devices.

There are two principal methods employed in A.A. fire, the author states: (1) pre-arranged barrages across the probable lanes of approach, and (2) bursts of fire against airplanes appearing suddenly over any other route. The first of these presents no difficulties whatever. The employment of the method of cotangents to determine the probable route of flight further simplifies this problem. In the second case the use of the method of horizontal intersection becomes necessary which is not very accurate at night. The author discusses this method in detail giving concrete examples of its application.

Inadequacy of antiaircraft equipment, the author states in conclusion, compels a scattering of materiel in order to increase its radius of action. In his opinion, adequate equipment would permit a closer emplacement of guns with a corresponding increase in the overlapping zones. In that event, he believes, concentration of fire will become the rule rather than the exception.

GERMANY—*Militar Wochenblatt*—August 11, 1932.

"Cavalry the Decisive Arm," by "No. 80."

The author discusses the employment of the British Cavalry Corps in the decisive battle in Palestine, September 19-21, 1918. The successes of the Anglo-Egyptian Expeditionary Force in Palestine at the close of

1917 and early in 1918 convinced the British War Council that the elimination of Turkey from the war would bring about the early defeat of the Central Powers. Developments on the Western Front, however, drew heavily upon the British forces in Palestine, and the contemplated action necessarily had to be deferred to the closing days of the war. Nevertheless, this operation contributed materially to Turkey's collapse.

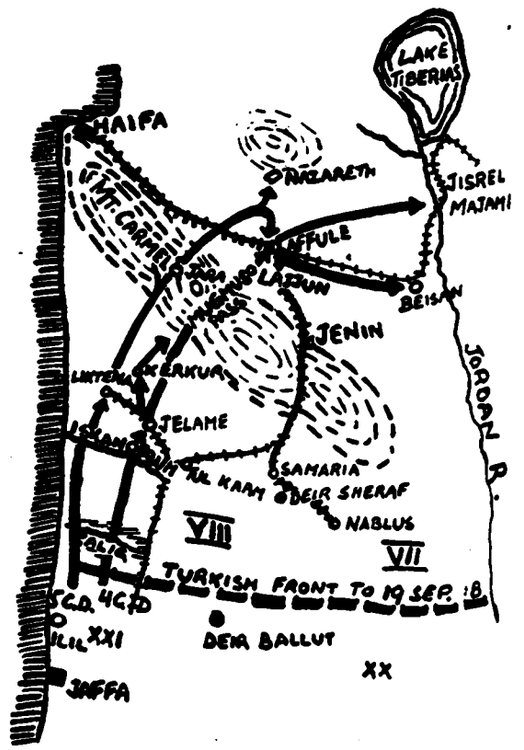
General Allenby had under his command 42 infantry battalions and 37 regiments of cavalry. The plan of his attack, based upon a correct estimate of the enemy situation, was exceptionally bold. The XXI Corps with five divisions and the Desert Mounted Corps were directed to attack the Turkish positions without artillery preparation, advancing behind a rolling barrage to the line: Deir-Sheraf-Samaria-Tul Karm and the Nablus-Jenin railway. As soon as the swamps of the Faliq were taken, the massed cavalry consisting of the Desert Mounted Corps (the 4th and 5th Cavalry Divisions and the 5th Australian Cavalry Division) was to break through the hostile line, cross the Carmel Mountains by two passes, capture and hold El Affule on the second day of its advance and occupy Beisan. The possible capture of the Turkish High Command at Nazareth (General Liman von Sanders Pasha) was also expected.

The success of this bold plan, though executed with true cavalry esprit by a comparatively small force, must be attributed to the lamentable state of affairs in the Turkish Army. The Turkish front between the River Jordan and the sea was held by two armies of 12 divisions. These had been, however, reduced to 1,300 rifles each. Turkish battalions mustered 100-180 effectives. The troops were starved and in tatters. Desertions in the Turkish Eighth Army during the last month of the campaign had reached 1,100, or almost the equivalent of a division. Horses, gravely undernourished, could hardly pull a load a distance of 100 yards. Six German battalions presented the only formidable force in front of the British. Although replacements failed to reach them since the preceding spring, the morale of these German troops still remained unimpaired. General Allenby's command numbered 57,000 rifles, 12,000 cavalry and 540 guns. He estimated the Turkish force at 26,000, 3,000 and 370 respectively. These estimates were in excess of the actual strength.

The plan of manoeuvre designated Jelamie as the first objective of the 4th Cavalry Division; thence it was to advance without regard to the progress of the battle in the Tul Karm sector to El Affule via the Musmus Pass, cut the railroad in that vicinity and send a detachment to seize the railroad bridge across the Jordan near Majami. The remainder of the cavalry advancing rapidly had the mission of closing the highways from Nablus and the Jordan valley—the 5th Cavalry Division in readiness at 5 a. m.; first objective Liktena, thence advancing rapidly paralleling the route of the 4th Cavalry Division across Carmel to El Affule, leaving a security detachment at Jara to cover approaches from Haifa. From El Affule the 5th Cavalry Division was to send a contingent to Nazareth to effect the capture of important personages and documents, the remainder remaining in readiness for action against Jenin and Beisan—the 5th Australian Cavalry Division, in reserve, prepared to march upon orders on Jenin.

The British infantry jumped off at 4:30 a. m., September 19, and reached its first objective, the northern bank of the Faliq, without difficulty. The 5th Cavalry Division was the first to move out. The advance guard regiment covered the 9.5 km to the mouth of the Faliq at a trot. Continuing the advance, it brushed aside easily the feeble resistance offered by the Turks from time to time. The division covered the distance of 15.5 km to the Iskandrun in 2 hours, 15 minutes including the time taken up by skirmishes. The remainder of the distance to Liktena (7 km) the division covered in 45 minutes. The pace was so rapid that the brigade commander, riding at a gallop, was unable to stop the head of the column. As a consequence, the advance guard regiment was thoroughly tired by the time it had covered one-third of the total distance to its ultimate objective.

The 4th Cavalry Division passed through the infantry at 8:40 a. m. Advancing echeloned to the right, the division encountered no resistance. Turkish troops were taken by complete surprise. By 4.30 p. m. the



division had reached its objective, having covered a distance of 30 km in seven hours. The Australian Cavalry Division advanced to the Iskandrun. At 8 a. m. all communications between Turkish G.H.Q. and the two field armies were completely severed by the British occupation of Tul Karm. Between 10 and 11 a. m. Turkish G.H.Q. received information from the Seventh Army concerning the advance of British cavalry. General Liman von Sanders notified Haifa and dispatched six companies with 12 heavy machine guns under German command to block Musmus Pass. News of the collapse of the Eighth Army did not reach Turkish G.H.Q. for several days.

The 5th Cavalry Division resumed the march from Liktena at 6:15 p. m. leaving one brigade less one regiment at Liktena in charge of the baggage. The command reached the Mt. Carmel divide at 1 a. m., September 20, after having left two troops at Jara for flank protection against Haifa. The march over the narrow trails was made in column of troopers. The 13th Brigade in lead reached Nazareth at 4:30 a. m. Entering the town with drawn sabres at a gallop, the troopers were stopped within 200 meters of the quarters occupied by General Liman von Sanders. The 14th Brigade being unable to support the attack, the column was ordered to fall back upon El Affule which it reached at 7:15 a. m. The 4th Cavalry Division arrived half an hour later having accomplished its mission without encountering serious opposition.

The Cavalry Corps, on September 21, held Beisan and Jisr el Majami with the 4th Division, and Jenin-Affule-Nazareth with the 5th and the Australian Cavalry Divisions, with a covering detachment near Haifa. On the same day, the British infantry divisions reached the line Nablus-Samaria-Tul Karm.

The Desert Mounted Corps carried, in addition to the ration for September 18, three rations on the saddle and a fourth ration in the rear echelon.

The operation resulted in the annihilation of the Turkish Eighth Army, the capture of 25.000 prisoners, the entire artillery and baggage. The remnants of the Eighth and the Seventh Armies, finding their line of retreat towards the coast as well as towards the north cut off, were compelled to hack their way through British Cavalry and hostile Arabs, and retired across the mountainous country northeastward.

—*Deutsche Wehr*—June 24, 1932.

"The Motorized Brigade," by Colonel M. von Wictorin, Austrian Army.

Prevailing military opinion generally agrees upon the fact, the author states, that both horse and motor will, for some time to come, remain indispensable. With that in view the author endeavors to determine where and to what extent the motor may displace the horse. Staffs, auxiliary arms and rear area installations being tied to the roads will no doubt prefer the motor to the horse. Combat troops, on the other hand, especially under artillery fire, operate over terrain at a distance from highways. There, the author believes, the horse continues superior even to the tractor. It is, important, he holds, that the strategic mobility and speed of the motor and the tactical mobility of the horse be exploited to the limit. This concept, the author states, is responsible for the plan of light and mixed divisions. A few experiments, however, clearly demonstrated the great difficulty involved in the proper coordination and cooperation at the critical moment of two so vastly different elements as the motor and the horse. The next step in the solution of the problem logically consisted of the separation of the motorized and mounted troops, and their employment in accordance with the situation, mission and nature of the terrain. The employment of large bodies of motorized troops presupposes suitable terrain with a good and ample road net, a well-developed motor industry and provision of adequate supplies of motor fuel either by means of peace-time accumulation and storage, or by means of developing a suitable fuel substitute.

The paramount advantage of the motor is its capacity for high speed and its great strategical mobility. Excessive optimism is, however, likely to prove disappointing. The necessity of moving by bounds, unexpected road obstructions and obstacles may considerably slow up the progress of a large motor column. The actual average speed is not in excess of 20 kilometers per hour for daylight travel and only 15 kilometers per hour at night. Although the daily total mileage for a motor column is likewise far below what might be expected, it still is considerably in excess of that of an infantry or cavalry division. Another advantage of the motor is that it does not require any fuel while at rest, and it certainly is not subject to fatigue to the same extent as man or beast. Nevertheless, regular rest periods are necessary not only for the personnel serving the motors, but also for overhaul and repairs.

An outstanding disadvantage of the motor is its decreased mobility in cross-country travel. This disadvantage may be overcome to some extent, the author believes, by adapting at least combat vehicles for cross-country travel. For this purpose, he believes, artillery should be provided with tractors and handcarts. Another serious disadvantage of motor columns is their great length, vulnerability and the complicated march-technique involved in their movement. Strict march discipline is essential. Special protective measures against aerial and flank attacks while enroute must also be provided. Dust clouds, the noise of the motors, and at night, headlights disclose truck movements and to that extent prevent secrecy. This, of course, is likewise a serious disadvantage.

The author believes, that the employment of motorized units will not be unlike that of large cavalry commands. Owing to their great mobility, they are, in his opinion, particularly suited as G.H.Q. reserves. French experiments, the author states, showed that the motorized infantry division is too unwieldy. English tests with motorized brigades proved more practicable. Actually the brigade in these tests was merely a reinforced regiment with the necessary transportation, supply equipment and installations. In the author's opinion, motors within a single command should be of uniform type and capacity of performance. There must be an adequate supply of motorcycles with and without sidecars. The command must be well equipped with heavy machine guns and anti-tank weapons. Pioneer units are likewise indispensable.

—*Deutsche Wehr*—February 12, 1932.

"The Basic Causes of the Manchurian Conflict," by Lieut. E. Golling.

When Japanese artillery, on September 18, 1931, from positions within the Japanese concession, opened fire upon the Chinese arsenal at Mukden, the Manchurian question suddenly became a matter of world interest. Twice the size of Germany, Manchuria is the ancient homeland of China's last imperial dynasty. Rich in natural resources and blessed with fertile soil. Manchuria is indeed a worthy prize. As the focal point of the clashing interests of China, Japan and Russia, Manchuria is, in the author's opinion, a potential powder barrel which only requires the spark to set the world ablaze. While in 1905 there were approximately 5-6 millions of Chinese domiciled within this province, there are now, the author states, more than 30 millions. In addition to these, the Manchurian population includes some 800,000 Koreans, and about 200,000 Japanese.

Manchuria is served by the following principal railways:

1. The Mukden-Peking railway, along the narrow coastal strip. Constructed with British capital, this railroad is Chinese owned, and serves as the only connecting link between Manchuria and China. It is an economic artery of great strategic importance.

2. The South Manchurian Railway serves as the connecting link between the Russian sphere of influence in the north and the Japanese in the south. Considered the vital artery of Manchuria, this railroad with all its branches is Japanese property.

3. The Chinese Eastern Railways, part of the Russian trans-Siberian system, are under joint Chinese-Russian administration.

Since Great Britain opened China's doors to the Western World in 1842, the Celestial Kingdom had to submit to numerous humiliations. Disastrous foreign wars and internecine strife, as well as devastating floods and famines contributed materially to China's weakness. Nothing is more natural than the desire of imperialistic world powers to acquire a slice of this vast territory held by an enfeebled and militarily impotent nation. In recent years, however, China gave indications of growing strength. By means of economic weapons China began to recover her freedom of action. Japan, which sends 27% of her exports to China, suffered particularly from the effect of these periodic trade boycotts. China's effort to construct additional railways in order to make herself independent of the Japanese lines, also the Chinese tariff policy and growing Chinese nationalism contributed their share to the growing tension between China and Japan. The arrest and execution as a spy of an officer of the Imperial Japanese General Staff by Chinese troops in Manchuria incensed Japanese public opinion. Leaflets dropped by military aviators in Tokio demarded war on China. Reports of the destruction of a railroad bridge in Manchuria by Chinese troops finally prompted General Honjo, Japanese commander in Korea, to take drastic action. He promptly occupied Mukden and with action the military party once more set the pace for a "positive" foreign policy.

Three factors determine the foreign policy of Japan:

1. Territorial expansion to accommodate the growing population which increases at a rate of 900,000 per year.

2. Creation of markets for Japanese industries.

3. Acquisition of sources of raw materials which will render Japan independent of foreign countries and which would be capable of sustaining Japan in case of war.

A powerful navy is a prime necessity for the attainment of these objectives.

Manchuria has been virtually a Japanese possession since the Russo-Japanese war. Chinese sovereignty was at the best nominal. Japanese investments in Manchuria are in excess of a billion dollars. Japan has built schools, hospitals and factories. She maintains in Manchuria 22 consulates, 387 police stations and an army of 18,000 men. Her nationals enjoy extra-territorial rights. A strip of land, 15 kilometers wide along the right of way of the South Manchurian Railway is completely under Japanese jurisdiction and is policed by six railway guard battalions.

Japan's strategic interests in Manchuria are no less important. Manchuria is Japan's concentration area for military operations in the event of war with Russia. Possession of that province also confers upon Japan great possibilities of influence in Chinese affairs. Thus, for political, military and economic reasons the possession of Manchuria is indispensable to Japan, and she is prepared to risk her national existence for it.

GREAT BRITAIN—*The Cavalry Journal*,—April, 1932.

"The Rurales of Mexico," by Perry Cross Standing

The guerilla warfare which ravaged Mexico during the middle sixties produced numerous outlaw bands that considerably outlived the civil war which brought them into being. After his second election to the Presidency, General Porfirio Diaz caused the arrest of the leaders of some of the most notorious bands that ravaged the countryside. He then hit upon the expedient of giving them their choice of being shot or taking service under him as captains of a rural police, pledging themselves to assist in riddling the country of the robber organizations. It was the beginning of the famous Rurales, corresponding to both authority and discipline to the Mounted Police of Canada.

The Rurales were mounted upon small, hardy, spirited horses of Mexican breed. They were equipped with sabre and carbine. They were carefully recruited, well trained and dependable. As a reserve of the National Army of Mexico they were under the control of the Ministry of War although their pay came from the Ministry of the Interior.

The new constitution promulgated on February 5, 1917, converted Mexico into a federal republic which left the right of managing local affairs to the individual states. As a consequence, the corps of Rurales was disbanded and ceased to exist as an armed organized contingent of Mexico's public service.

Organization Activities

1ST CAVALRY DIVISION
Fort Bliss, Texas

Brigadier General Walter C. Short, Commanding
Evan H. Humphrey, G. S. C. (Cav.), Chief of Staff
Major William Spence, G. S. C. (F. A.), G-1 and G-4
Major William Nalle, G. S. C. (Cav.), G-2
Lieutenant Colonel Alexander M. Milton, G. S. C. (Cav.), G-3
Major John F. Crutcher, A. G. D., Adjutant General
Lieutenant Colonel Edgar King, M. C., Division Surgeon
Captain Robert J. Foster, V. C., Veterinarian
Lieutenant Colonel Mark L. Ireland, Q. M. C., Quartermaster
Captain H. Woodberry, O. D., Ordnance Officer
George J. B. Fisher, C. W. S., Chemical Officer
Lieutenant Clifton T. Hunt, 8th Engrs., Engineer Officer
Lieutenant Verne D. Mudge, A. D. C. to General Short

2ND CAVALRY BRIGADE
Fort Bliss, Texas

Brigadier General Walter C. Short, Commanding
Major Pearl L. Thomas, Executive

Headquarters Troop, 2nd Cavalry Brigade, Fort Bliss, Texas

Captain M. H. Ellis
1st Lieutenant D. H. Nelson
1st Lieutenant V. D. Mudge

Special Troops, 1st Cavalry Division, Fort Bliss, Texas
Major F. Gilbreath, Commanding

Major C. A. Palmer
1st Lieutenant J. B. Cooley
1st Lieutenant J. L. Ballantyne
1st Lieutenant C. V. Bromley, Jr.
1st Lieutenant W. H. Grecar

Troop A, 1st Armored Car Squadron, Fort Bliss, Texas

Captain H. G. Holt
1st Lieutenant H. W. Ketchum, Jr.
1st Lieutenant J. L. Ryan, Jr.

1ST CAVALRY BRIGADE
Fort Clark, Texas

Brigadier General Hamilton S. Hawkins, Commanding
Major J. A. Weeks, Executive
Captain T. E. Boudinot, Plans and Training Officer

Headquarters Troop, 1st Cavalry Brigade, Fort Clark, Texas

1st Lieutenant W. S. Conrad
1st Lieutenant T. T. Thornburgh
1st Lieutenant D. G. McBride

THE CAVALRY SCHOOL
Fort Riley, Kansas

Brigadier General Abraham G. Lott, Commandant
Colonel Bruce Palmer, Assistant Commandant
Lieutenant Colonel J. M. Wainwright, Director of Instruction
Major E. E. Willoughby, Secretary

Cavalry Board

Colonel Samuel McP. Rutherford
Lieutenant Colonel Edgar M. Whiting
Major Lawrence C. Frizzell
Captain Kennard Wilson, O. D.
Captain Giles Merrill
Captain Leslie D. Carter
Captain Lowell A. Elliott, C. W. S.

Department of Tactics

Major John Millikin (Chief)
Major Ira T. Wyche, F. A.
Major Kenna G. Eastham
Major John F. Stevens
Major Thomas L. Martin, Inf.
Major James W. Barnett
Major E. L. Creed
Major A. W. Roffe
Major J. L. Phillips
Major Kramer Thomas
Major R. B. Trimble
Major Frank Whittaker
Captain V. L. Padgett
Captain Burton C. Andrus
Captain Ross F. Cole, A. C.
Captain Lowell A. Elliott, C. W. S.
1st Lieutenant Samuel D. Sturgis, Jr., 9th Engrs.
1st Lieutenant William L. McEnery, S. C. (Cav.)

Department of Weapons

Major Lester A. Sprinkle (Chief)
Major M. Daly
Major W. T. Bals
Major [illegible] Coe
Major [illegible] Daly
Captain T. J. Heavey
Captain H. P. Stewart

Department of General Instruction and Publications

Major James C. R. Schwenck (Chief)
Major [illegible] S. Perry

Department of Horsemanship

Major [illegible] DeWitt (Chief)
Major [illegible] P. Thayer
Major [illegible] T. Cole
Captain [illegible] C. Lambert
Captain [illegible] B. Cox
Captain [illegible] H. Morris
Captain [illegible] C. Smith
Captain R. T. Maddox
Captain Hiram E. Tuttle, Q. M. C.
1st Lieutenant F. P. Tompkins
1st Lieutenant C. C. Jadwin
1st Lieutenant I. P. Swift
1st Lieutenant E. F. Thomson
1st Lieutenant C. W. A. Ranger
1st Lieutenant P. C. Hains, III

Supply Officer, Academic Division

Captain A. B. MacNabb

Post of Fort Riley

Lieutenant Colonel William C. Christy, Executive
Major Thomas M. F. Cowhill, Assistant
Captain John A. Hettinger, Assistant
Lieutenant Colonel Max A. Elser, Q. M. C., Quartermaster
Major Charles A. Wickliffe, J. A. G. D., Judge Advocate
Captain Harry A. Patterson, Post Exchange, Recreation and Post School Officer
Captain Manley F. Meador, Provost Marshal, Police and Prison Officer
Captain Vernard O. Wilson, O. D., Ordnance Officer
Captain Charles A. Dissinger, Adjutant
Captain Perry O. Wilcox, Chaplain
1st Lieutenant William L. McEnery, S. C., Signal Officer
1st Lieutenant Charles J. Moehlman, A. D. C. to General Lott
1st Lieutenant Ralph T. Carver, C. O. Misc. Troops
2nd Lieutenant Loren D. Pegg, Range Officer
2nd Lieutenant Basil A. Dusney, A. D. C. to General Lott

Students, Advanced Class

Major Sam G. Fuller
Captain William E. Barott
Captain Heywood S. Dodd
Captain John E. Selby
Captain Alfred L. Bayles
Captain Charles W. Burkett
Captain Chas. G. Hutchinson
Captain Edwin M. Sumner
Captain Harold deB. Bruck
Captain Hans C. Minuth
Captain Ceylon O. Griffin
Captain Gene R. Mauger
Captain John N. Greene
Captain Redding F. Perry
Captain William L. Hamilton
Captain Garnett H. Wilson
Captain Oscar W. Koch
Captain Federico Darna, Cuban Army
1st Lt. Esteban Ferrer, Cuban Army

Students, Special Advanced Equitation Class

Captain Edwin M. Burnett
Captain Ralph E. Ireland
1st Lieut. Charles H. Noble
1st Lieut. Edwin C. Greiner
1st Lieut. Thomas E. Lewis, F. A.
1st Lieut. Daniel De Barbe-leben
1st Lieut. Paul G. Kendall
1st Lieut. James T. Dawson, Jr., F. A.
1st Lieut. Edward L. Rhodes
1st Lieut. Prentice E. Yeomans
2nd Lieut. Alexander M. Miller, III
2nd Lieut. Thomas J. H. Trapnell
2nd Lieut. Robert G. Lowe
2nd Lieut. Charles P. Bixel
2nd Lieut. Henry M. Zeller, Jr.
2nd Lieut. Royce A. Drake

Students, Troop Officers' Class

1st Lieut. Harry W. Johnson
1st Lieut. Stanley M. Nevin, V. C.
1st Lieut. John G. Merrick
1st Lieut. John F. M. Kibler
1st Lieut. Edward J. Doyle
2nd Lieut. John L. Hines, Jr.
2nd Lieut. Raymond W. Curtis
2nd Lieut. Leander LaC. Doan
2nd Lieut. Theodore Kalakuka
2nd Lieut. Theodore S. Riggs
2nd Lieut. Thomas F. Van Natta, III
2nd Lieut. Nelson [illegible] DeLany
2nd Lieut. Clayton J. Mansfield
2nd Lieut. Thomas [illegible] Brennan, Jr.
2nd Lieut. Samuel L. Myers
2nd Lieut. Joseph A. Michela
2nd Lieut. James L. Hathaway
2nd Lieut. George A. Brookman
2nd Lieut. Powhatan M. Morton
2nd Lieut. Carroll H. Dewey
2nd Lieut. James J. Mathews, Inf.
2nd Lieut. Yuan [illegible] Tsi-Hsi, Chinese Army

First Cavalry
Fort D. A. Russell, Texas

Colonel William A. Austin, Commanding

Lieut. Colonel Joseph C. King
Major Arthur T. Lacey
Major Isaac W. Walker
Captain Harold B. Gibson
Captain William Kenahan
Captain Gersum Cronander
Captain Donald R. Dunkle
Captain John C. Macdonald
Captain William H. W. Reinburg
Captain Herbert L. Jackson
1st Lieut. Lawrence O. Smith
1st Lieut. Arthur N. Willis
1st Lieut. Edwin P. Crandell
1st Lieut. Logan C. Berry
1st Lieut. Rogers A. Gardner
1st Lieut. George V. Earhardt
1st Lieut. Basil L. Riggs
1st Lieut. Grant A. Williams
2d Lieut. Woodbury M. Burgess
2d Lieut. Paul W. Shumate

On June 30th, Troop A and Troop F, using the same circular route, but in different directions, left the post for a sixty-mile march, to be completed in one day.

allowing one hour for the noon halt. The object of the march was to test the condition of animals in the organizations.

The conditions under which this test was undertaken are worthy of note. At 3:00 P. M., June 29th, the organization commanders of Troops A and F, without previous warning, were handed their orders for this march. Maps were issued at this time. A tactical situation in friendly territory was issued. A radio section of Headquarters Troop was set up at the halfway point, from which troop commanders were required to report their arrival.

The following men and animals made the march: Troop A, one officer and forty-six men, fifty-two horses; Troop F, two officers and thirty-three men, forty-one horses.

Each troop, without noise or confusion, marched at 5:00 A.M., June 30th. Animals were watered twice during the march and unsaddled, rubbed down and fed grain at the noon halt.

Troop F arrived at its stables in the elapsed time of 11 hours and 11 minutes, averaging 5.22 miles per hour. Troop A arrived at its stables at 4:40 P.M. in the elapsed time of 11 hours and 40 minutes, averaging 4.89 miles per hour.

Upon completion of the march all animals and men were in good condition; one horse with an old splint showed lameness on the march and was brought in by a short cut at the walk; he was not lame upon arrival at the stables. One front shoe was stripped just out of Fort D. A. Russell on the return trip. At the inspection of animals at 8:00 A.M., July 1st, all animals were in condition to continue the march.

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In order to instil a friendly spirit among the officers and to give a personal touch to the life of the enlisted men, recognition of the birthdays of officers and enlisted men was instituted. An appropriate present from the other officers of the command is presented to the officer whose birthday is current. Each enlisted man, on his birthday, is presented, by his mess, with a special birthday cake decorated in seasonal colors. This has proved to be an excellent means of increasing the morale of the command.

• • •

On August 11th a Regimental Review, followed by a Black Hawk ceremony, was held in honor of a group of the 4-H Club boys, visiting and inspecting the ranches and cattle of the Big Bend District as guests of the Highland Hereford Association. Members of the Regiment were guests at a barbecue given at Mrs. Childers' ranch at noon this date.

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September 15th marked the day of meeting of the Order of the Back Hawks. At this meeting all new officers of the regiment and Mr. John Robinson, Secretary of the Marfa Chamber of Commerce were initiated into the Order. The Black Hawk Order, adjunct of the First Dragoons, is exceedingly popular in the Big Bend and has become quite well known to the residents of the district.

The Regimental Baseball Team, by defeating all opponents at Fort Bliss, won the First Cavalry Division Championship, the series ending September 26th. The team returned with the Division Trophy and immediately disbanded to await another season.

• • •

The Regimental Rifle Team returned on October 2nd from the Far Southwest Matches at Fort Bliss with a very creditable record. Sergeant William T. McGimpsey, Troop B, won the Navy Cup. Staff Sergeant Leslie H. Hedglin, Headquarters Troop, won the Coast Guard Match and the team won the Five-Man Team Match.

Detachment, First Cavalry Mechanized

Fort Knox, Kentucky

Colonel Daniel Van Voorhis, Commanding

Lieut. Colonel Adna R. Chaffee	Captain William T. [illegible]
Major William G. Simmons	1st Lieut. Frederick W. Feng
Major Robert W. Grow	1st Lieut. Harrison D. Heiberg
Captain Richard W. Carter	1st Lieut. James H. [illegible]
Captain Cornelius F. O'Keefe	1st Lieut. William P. Withers
Captain Carl J. Rohsenberger	1st Lieut. Hayden A. Sears
Captain James I. Gibbon	1st Lieut. Francis L. [illegible]eady
Captain Andrew J. Wynne	1st Lieut. Isaac D. White
Captain Richard E. Tallant	1st Lieut. Frank G. Trew
Captain Richard N. Atwell	1st Lieut. C. Stanton Babcock
Captain Wallace C. Steiger	1st Lieut. Milo H. Mat[illegible]
Captain Hal M. Rose	

Second Cavalry

Fort Riley, Kansas

Colonel Selwyn D. Smith, Commanding

Major Joseph Plassmeyer	1st Lt. Henry L. Kinnison, Jr.
Major Clinton A. Pierce	1st Lieut. Hugh B. Waddell
Captain Frank Nelson	1st Lieut. George G. Eims
Captain Charles S. Kilburn	1st Lieut. Henry C. Hine Jr.
Captain Lathan H. Collins	1st Lieut. Basil G. Thayer
Captain Lloyd W. Biggs	1st Lieut. Bailey G. Maddox
Captain James B. Taylor	1st Lieut. Joseph M. Williams
Captain Harry E. Dodge	1st Lieut. Thomas J. Randolph
Captain Manly F. Meador	1st Lieut. Thomas D. Roberts
Captain Lawrence Patterson	1st Lieut. George W. Bisbey
Captain Thomas J. Heavey	2d Lieut. Loren D. Pegg
Captain Clarence A. Shannon	2d Lt. John G. Minnich, Jr.
1st Lieut. Henry M. Alexander	2d Lieut. Joseph F. Haskell

September 1-15 was devoted to a practice march of 244 miles, 23 officers, 324 men and 418 animals participating. Tactical work enroute consisted principally in development of dispositions to meet mechanization including aircraft. Considerable experimentation was made with modified marching methods, and with use of friendly aircraft to aid in locating hostile mechanized forces. In addition to purely military duties the regiment participated in the American Legion Parade in Topeka and put on a diversified military and horse show in various towns. The Regimental Ball Team won three of their four games enroute.

October 17-20 the regiment formed a part of the Cavalry School Brigade and spent four days marching under continuous simulated war conditions. Details of this march will be found elsewhere in the JOURNAL.

Machine Gun Troop represented the regiment in the Goodrich Trophy Training Test. Officers: Captain Lathan H. Collins, commanding, 1st Lieut. Basil G. Thayer, and 2nd Lieut. Joseph F. Haskell.

The following summary indicates the high standard of proficiency in arms attained during the Target Season:

Weapon	*Percentage*
Rifle	96.49
Pistol dismounted	92.88
Pistol mounted	94.96
Saber	96.33

Regimental permanent trophies were won as follows:
For rifle, Troop E
For mounted pistol, Hq. Troop

Troop A with Captain Lloyd W. Biggs, commanding, 1st Lieut. Thomas D. Roberts, and 50 enlisted men went by bus to Medicine Lodge, Kansas, October 3rd where they participated in the Indian Peace Treaty celebration.

Sixty-eight remounts have been received from Fort Reno and are receiving training under 1st Lieut. H. L. Kinnison, Jr. Seven mules were also received.

The opening of recruiting, and 547 reenlistments, somewhat alleviates the shortage caused by 125 discharges since January 1st.

A Regimental Board of Officers consisting of Major Rene Lawrence, Major Clinton A. Pierce, Captain Frank Nelson and 1st Lieut. Thomas D. Roberts has been appointed to study, direct experiments and submit recommendations as to Experimental Organization of the 2nd Cavalry. In the Regimental Advanced Officers School each week all officers receive the report of the Board on work done during the preceding month and thus are in constant touch with accomplishment. Open discussion aids both the Board and other officers and insures constructive and accurate progress.

Equitation, jumping, polo and steeple chasing training continues throughout the winter under supervision of Lieutenants Waddell, Thayer, Maddox and Captain Nelson respectively.

All troops underwent an intensive course of training in swimming horses both in the Kansas River and in a specially constructed place in Three Mile Creek, with the result that all men and animals perform this important exercise quietly and confidently.

Troop B won their league baseball championship and in a close three-game series with the other league champions won two out of three for the Post Championship.

In football Troop B again won its league championship, the final standings being still to be determined.

Other fall and winter sports are still in process of organization. Each troop will however be represented in basketball, bowling, boxing, wrestling and horse shows.

Departures of officer personnel: Lt. Colonel William C. Christy, (C. O., 9th Cavalry, and Executive Officer, Post of Fort Riley), Major Benjamin F. Hoge, Major James W. Barnett, Capt. Ralph E. Ireland, Capt. Garnett H. Wilson, Capt. Carl J. Dockler, Capt. Robert M. Graham, 1st Lieut. Eugene C. Johnston, 1st Lieut. Hayden A. Sears, 1st Lieut. Granville V. Morse, 1st Lieut. George W. Read, Jr., 1st Lieut. Harry W. Johnson, 1st Lieut. Prentice E. Yeomans, 1st Lieut. John G. Merrick, 2nd Lieut. Edward J. Doyle.

Third Cavalry (Less 1st Squadron)

Fort Myer, Virginia

Colonel Harry N. Cootes, Commanding

Major George S. Patton, Jr.	1st Lieut. Willard G. Wyman
Major Alexander D. Surles	1st Lieut. Kenneth G. Hoge
Captain John W. Weeks	1st Lieut. George A. Rehm
Captain James T. Menzie	1st Lieut. Leslie M. Grener
Captain George I. Smith	1st Lieut. Eugene L. Harrison
Captain Thomas W. Ligon	1st Lieut. Wilbur E. Noel
Captain Lucian K. Truscott, Jr.	1st Lieut. Clarence W. Bennett
Captain Calle H. Palmer	1st Lieut. William A. Fuller
Captain Marion Carson	2d Lieut. Loren F. Cole
Captain Claude O. Burch	2d Lieut. John K. Waters
1st Lieut. Christian Knudsen	2d Lieut. George R. Mather
1st Lieut. Donald W. Sawtelle	

The Fort Myer Invitation Polo Tournament, held during the latter part of September, closed the season for most of the service teams in the vicinity of Washington. The bracketing was so arranged that there was plenty of polo for each team and that most of the games were between teams of approximately the same handicap rating. Entries included four teams from Fort Myer, three from the War Department, and teams from the 110th Field Artillery, Fort Humphreys, Quantico, and the Fauquier County Polo Club. The 16th Field Artillery won the high goal bracket, while the Marines won the Consolation trophy, and the team from the Fauquier County Polo Club won the low goal bracket for teams of four goals or under. This latter team, more popularly known as Marshall, then proceeded to beat the 16th Field Artillery 8-1, 5-1 on the flat. The members are J. E. Rawlings, R. A. Triplett, Richard Kirkpatrick, and Rodney Woodward and their very fast horses and accurate hitting provided the best polo seen at Potomac Park in some weeks.

The regiment participated in the annual Third Corps Area maneuvers from October 1st at Fort George G. Meade. The terrain was somewhat limited for extensive use of cavalry, but the two-sided maneuvers in which cavalry was employed and the very thorough evening critiques proved instructive for all members of the command.

1st Squadron, 3d Cavalry

Fort Ethan Allen, Vermont

Lieut. Colonel John K. Herr, Commanding

Major Gordon J. F. Heron	1st Lieut. Richard B. Evans
Captain Theodore B. Apgar	1st Lieut. John H. Claybrook
Captain Lawrence B. Wyant	1st Lieut. Thomas C. Harrold
Captain Robert H. Gallier	2d Lieut. Eric H. F. Svensson, Jr.
Captain Randolph Russell	2d Lieut. Charles G. Dodge
1st Lieut. Robert J. Merrick	

The Squadron spent the period August 15-September 15, in conducting a march, participating in musketry and combat exercises, being attached to the 18th Inf. Brig. for this purpose; and the annual 1st Corps Area Maneuvers and Tactical Inspection. While no figures were published as to the results of the musketry problems, the squadron maintained its high rating in this activity.

The record practice in pistol mounted and saber was completed on October 15, 1932. The training regulations governing the assignment of horses was carried out to the letter. Remounts received during the summer were ridden by personnel to whom they were regularly assigned. Results were 92.5% qualified with the pistol, and 88.8% with the saber. Al-

though this record is not particularly high, the results were satisfactory, all things being considered.

During the month of October a modified Olympic jumping course was constructed in rear of the riding hall. A series of jumps have been constructed on the side of the drill field. Open spaces along the bridle paths are being utilized for construction of jumps. A water jump will be added in the Spring. The post will then be amply provided with jumps of every description.

Informal horse shows will be held monthly during the winter training period. Winning horses in these events will be handicapped for the Post Horse Show, which will be held in the spring of 1933. This plan will encourage new entries in personnel and horses of the coming horse shows. Ribbons will be awarded to winners of first three places in these informal shows.

A night ride was held the night of November 18th in connection with the November horse show. This ride was over an unknown course of 20 miles, route was plotted on maps furnished contestants for the occasion at the riding hall. Several control stations were included along the route. Time from station to station was prescribed with penalties for or under time arrival of contestants. Twenty-two noncommissioned officers of the squadron entered this event, and seventeen from the 7th Field Artillery.

The weather was cold and there was a crust of snow on the ground making rather unfavorable conditions for the ride. Sergeant Carmon, Troop A, won the event, Sgt. Bellew, Troop A, coming in second and Sgt. George, C Battery, won third place.

Other events and results of the horse show were:

Enlisted Mens' Jumping

1st—Pvt. Paige, Combat Train, 7th Field Artillery.
2nd—Pvt. Kirschner, Troop A.
3rd—Pvt. Gormley, Troop A.

Bareback Vaulting

1st—Pvt. Melanson, Troop A.
2nd—Pvt. Butler, Troop B.
3rd—Pvt. Willey, Troop B.

Officers' Jumping

1st—Lt. Dodge, 3rd Cavalry.
2nd—Lt. Follansbee, 7th Field Artillery.
3rd—Lt. Claybrook, 3rd Cavalry.

Troop B won the Post Soccer championship for the year 1932, and the Squadron is particularly well represented on the Post Team which has a series of games scheduled with the Canadian garrison at St. Johns, Quebec. The first game played on November 13th at St. Johns was won by the post, 1-0. The second game will be played at Fort Ethan Allen, on Thanksgiving Day.

The 7th Field Artillery held a gymkhana for the post enlisted personnel on their organization day, October 21, 1932. Places were won by the squadron as follows:

Touch and out: 1st—Sgt. Nickerson, Troop B.
2nd—Sgt. Towne, Troop B.
3rd—Pvt. Plantier, Troop A.

Rescue race:
1st—Cpl. Crowell, Troop A
Pvt. Sampson, Troop A
3rd—Sgt. Kaminski, Troop B
Pvt. Butler, Troop B

Relay race, team of 4:
2nd—Troop A.

Slow horse race:
3rd—Pvt. Peace, Troop A.

Tug of war:
3rd—Troop A.

Polo, the training of green polo ponies, and the developing of jumpers have become important subjects in the squadron for the winter season. Great interest has been aroused in these activities and the training in these Officers' classes is personally supervised by the Squadron Commander, Lieutenant Colonel John K. Herr. With the hope of securing remount replacements soon, prospects for all mounted activities in the near future are indeed very bright.

Fourth Cavalry

Fort Meade, South Dakota

Colonel Otto W. Rethorst, Commanding

Colonel William R. Pope	1st Lieut. Charles E. Morrison
Major Karl S. Bradford	1st Lieut. John H. Stodter
Captain Carter B. McLennan	1st Lieut. Frank H. Hilton
Captain Charles Cramer	1st Lieut. Harold F. Walker
Captain Arthur H. Besse	1st Lieut. Richard H. Heidman
Captain Leo L. Gocker	1st Lieut. Rufus L. Lott
Captain Philip R. Upton	2d Lieut. Charles [illegible]
Captain Silas W. Robertson	2d Lieut. Hugh W. Sawyer
Captain Frank E. Berthelet	2d Lieut. Joseph R. [illegible]
Captain John H. Healy	2d Lieut. Robert W. [illegible]
Captain Oscar M. Massey	
1st Lieut. William L. Barringer	

The annual practice march of the 4th Cavalry, Colonel Rethorst, Commanding, was held from the fifteenth to the twenty-eighth of August. The march covered a distance of 211 miles through the Black Hills, under daily assumed tactical situations.

The annual tactical inspection was held on October 5th to 7th, with Colonel A. M. Miller, Chief of Staff of the 7th Corps Area, conducting the inspection. The regiment was rated satisfactory for field service, and was complimented for the development of an antiaircraft machine gun escort wagon mount and an improvised radio truck.

Troop A, Captain H. E. Kloepfer, commanding, assisted by the 4th Cavalry Band, gave an exhibition of Cavalry maneuvers and combat formations at the rodeos at Belle Fourche and Deadwood during the summer.

A new polo field has been built near the [illegible] garden, its official opening taking place in July, with a game with a team from Fort Warren. Fifteen officers played polo regularly during the season, the first string players consisting of Captains Upton and Healy and Lieutenants Morrison, Michela, DeLany and Born. Games were played with Pierre, Sturgis and Fort Francis E. Warren locally, and two trips were made to Cheyenne, Wyoming.

The Fort Meade Horse Show was held on October 14th. Winners in the events were as follows:

Children's Class, Seat and Hands—Miss Virginia Morrison; Children's Jumping—Miss Jerry Lee Cooper; Polo Pony—*Babe*, ridden by Lt. C. E. Morrison; Best Polo Pony trained by Officer or Lady—*Dina*, ridden by Lt. R. W. Porter, Jr.; Polo Pony Bending Race—*Dixie*, Captain J. H. Healy, up; Ladies' Class, Seat and Hands—Mrs. H. E. Walker; Officers' Charger—Capt. L. L. Gocker's, *Two-Step*, Lt. F. H. Bunnell, up; Jumping—*Foxy*, Major K. S. Bradford, up; Officers' Private Mount—*Mad Sister*, owned by Captain O. M. Massey; Best Turned-Out and Trained Troopers' Mount—*Chester*, Cpl. G. B. Scheuer, Tr. E., up; Enlisted Men's Jumping—*Mike*, Cpl. J. C. Keller, Troop E., up; Best Turned-Out and Trained Pack Horse—*Silver*, led by Sgt. Stafford Wade, Hq. Troop; Best Trained Remount—*Tarzan*, ridden by Lt. J. H. Stodter; Pair Class—*Sweetheart* and *Cupido*, ridden by Lt. and Mrs. J. H. Stodter; Pair Jumping—*Chester* and *Mike*, ridden by Cpls. J. C. Keller and G. B. Scheuer, Tr. E.; Best Escort Wagon—Troop A, driven by Private Donald Ellis; Best Spring Wagon—Troop B, driven by Private Lee Camp.

The Fort Meade-Sturgis Golf Club now has one of the best nine-hole courses in the Black Hills. The course has been lengthened to 3,000 yards, new tees and greens have been built and the fairways are greatly improved. Team matches with nearby clubs featured many week-ends during the summer, and local tournaments were won by Major Bradford, Mr. Woodie and Mr. Cruikshank.

The Headquarters Troop baseball team won the pennant in the post league and the post team won all their games with outside teams. Soccer was introduced as the fall sport instead of football, because of the lack of interest in the latter in this section.

The Headquarters Troop has constructed two large skating rinks near the entrance of the post, and a quarter-mile toboggan slide on Porcupine Hill. The gymnasium has been entirely refinished, and a balcony provided which will accommodate a major part of the garrison. The Post is constructing a riding hall just north of the War Department Theatre. Forms for the foundation are now being laid, and it is expected that the steel structure will be completed before Spring.

Several officers have rented a nearby lake for duck hunting and are being well repaid for their trouble. No large game has been reported to date.

Lieutenants J. A. Michela, N. J. DeLany, and C. H. Prentiss have departed to take the Troop Officers' Course at the Cavalry School, and Lieutenant C. F. Born is on detached service as football coach at the Military Academy.

Fifth Cavalry

Fort Clark, Texas

Colonel Thomas L. Sherburne, Commanding

[illegible] Colonel Edward G. [illegible]	Captain Malcolm [illegible]
[illegible] Stephen A. Townsend	Captain Walter W. Boon
[illegible] James G. Monihan	Captain Curtis L. Stafford
[illegible] James B. Wise, Jr.	Captain Carleton Burgess
[illegible] William A. Haver-	Captain Howard A. Boone
[illegible]	Captain Wilford R. Mobley
[illegible] James C. Ward	Captain John MacWilliams
	1st Lieut. David A. Taylor
	1st Lieut. Clarence C. Clendenen
	1st Lieut. Arthur K. Hammond
	1st Lieut. John B. Reybold
	1st Lieut. John K. Sells
	1st Lieut. Clark L. Ruffner
	1st Lieut. George P. Berilla, Jr.
	2d Lieut. Charles B. McClelland, Jr.
	2d Lieut. Edwin H. J. Carns
	2d Lieut. Charles C. W. Allan
	2d Lieut. Cornelius A. Lichirie
	2d Lieut. James B. Corbett
	2d Lieut. James C. Blannins

The main sporting interest of the regiment is still centered about the polo field. Although the isolation of Ft. Clark precludes the possibility of frequent outside matches, we expect to play a team from the Field Artillery from Ft. Sam Houston, on November 26.

A series of local horse shows will commence with the first show to be held on November 26, preceding the polo game. A new turf ring has been completed recently on the banks of Las Moras Creek, under the direction of Lt. W. W. Yale, aide-de-camp to General Hawkins. Private mount classes promise to be of unusual interest, owing to the large number of superior private mounts owned by officers of the regiment and the post. Officers here have taken advantage of the prevailing low prices in the horse market to provide themselves with mounts which compare favorably with horses which can be seen any place in the country. In fact, it is alleged that one officer is doing his own washing to pay for his recent incursion into the horse market. People are of the opinion, however, that it is well worth his while, for he has acquired a Thoroughbred which would attract attention in Madison Square Garden.

The officers' school is less dull this year than is customary. General Hawkins gives frequent talks on all phases of cavalry training. His mastery of the subject is without peer in the service. Captain Stafford recently discussed the Carrizal fight in the Punitive Expedition, and Major Townsend is giving a series of talks covering the entire Expedition.

Sixth Cavalry

Fort Oglethorpe, Ga.

[illegible] Gordon Johnston, Commanding

Lieut. Colonel Walter Gresham, Jr.	1st Lieut. Henry I. Hodes
	1st Lieut. John T. Ward
Major Roy O. Henry	1st Lieut. Paul M. Martin
Major James K. Crockett	1st Lieut. Walter F. Jennings
Major Walter E. Buckly	1st Lieut. Walter Burnside
Captain George P. Cummings	1st Lieut. Ralph M. Neal
Captain William V. Ochs	1st Lieut. Don E. Carleton
Captain Wilkie C. Burt	1st Lieut. Cary B. Hutchinson
Captain John O. Lawren[illegible]	1st Lieut. Zachary B. Moores
Captain Raymond C. Gibbs	1st Lieut. William J. Bradley
Captain Thomas W. Herron	1st Lieut. William H. Wood
Captain Harry Knight	2d Lieut. William F. Grisham
Captain Edward H. DeSaus[illegible]sure	2d Lieut. Scott M. Sanford
Captain George R. M. Elros	2d Lieut. William E. Chandler
	2d Lieut. Pogardus S. Cairns

Seventh Cavalry

Fort Bliss, Texas

[illegible] W. Bell, Commanding

Lieut. Colonel William W. Gordon	1st Lieut. Perley B. Sanscomb
	1st Lieut. Leo C. Vance
Major John A. Benson	1st Lieut. Andrew A. Frierson
Major Horace T. Aplington	1st Lieut. Ronald M. Shaw
Major Terry de la M. Allen	2d Lieut. Paul D. Harkins
Captain Roscoe S. Parker	2d Lieut. Donald M. Schorr
Captain Orland S. Peabody	2d Lieut. Hamilton H. Howze
Captain Donald A. Young	2d Lieut. Franklin F. Wing
Captain Edward M. Fickett	2d Lieut. William H. S. Wright
Captain Vance W. Batchelor	2d Lieut. Marvin C. Johnson
Captain Leo B. Conner	2d Lieut. Angelo Del Campo
Captain Samuel R. Goodwin	
Captain Hugh G. Culton Jr.	
1st Lieut. Frank O. Dewey	2d Lieut. Richard T. Colner Jr.
1st Lieut. Albert J. J. Stovall, Jr.	2d Lieut. Karl L. Scherer
	2d Lieut. William W. Culp

Eighth Cavalry

Fort Bliss, Texas

Colonel Carl H. Muller, Commanding

Lieut. Colonel Herbert E. Mann	1st Lieut. Robert Edwards
Major Daniel E. Murphy	1st Lieut. George W. Bailey, Jr.
Major Edward L. N. Glass	1st Lieut. Carl D. Silverthorne
Major Henry McE. Pendelton	1st Lieut. Lawrence R. Dewey
Major Thomas G. Peyton	1st Lieut. William J. Reardon
Captain Charles J. Booth	1st Lieut. Charles A. Sheldon
Captain John B. Maher	2d Lieut. George R. Sutherland
Captain Paul J. Matte	2d Lieut. Henry B. Croswell
Captain Fenton S. Jacobs	2d Lieut. Glenn F. Rogers
Captain Daniel B. Cullinane	2d Lieut. Philip H. Bethune
Captain Harold E. Eastwood	2d Lieut. William B. Frazer
Captain Jess G. Boykin	2d Lieut. Frank H. Britton
Captain Phillip B. Shotwell	2d Lieut. John R. Pugh
1st Lieut. Thomas Q. Donaldson, Jr.	

Ninth Cavalry

Fort Riley, Kansas

Lieut. Colonel William C. Christy, Commanding

Major James W. Barnett	Captain James V. V. Shufelt
Major Lester A. Sprinkle	Captain Alexander B. MacNabb
Major Wilson T. Bals	Captain Charles R. Chase
Major Thomas McF. Cockrill	1st Lieut. Francis P. Tompkins
Major John T. Cole	1st Lieut. Ira P. Swift
Captain Kent C. Lambert	1st Lieut. Earl F. Thomson
Captain Paul H. Morris	1st Lieut. Carl W. A. Ragus
Captain Harry A. Patterson	1st Lieut. Peter C. Hains, 3d.
Captain James C. Short	
Captain Ray T. Maddocks	

We regretted very much to lose the services of Lieutenant Colonel Robert M. Campbell, regimental commander, who was placed on the retired list, August 12, 1932, because of disability, but are glad to get such good replacement in the person of Lieutenant Colonel William C. Christy, 9th Cavalry.

The following named officers have been relieved from assignment and duty with the regiment: Lt. Col. William W. West, Jr., Major Norman E. Fiske, Captains William K. Harrison, Ernest A. Williams, Rufus S. Ramey, James T. Duke, Wayland B. Augur, Gustav B. Guenther, Vaughan M. Cannon, Carleton Burgess and 1st Lieut. Joseph M. Williams.

Warrant Officer Elijah H. Goodwin, was on September 30, 1932, upon his own application retired from active service after more than thirty years service. Warrant Officer Goodwin was placed on the retired list of the Army with the rank of first lieutenant.

Master Sergeant Charles Vanhook and First Sergeant John Bowman were placed on the retired list on July 31, 1932. First Sergeant Washington A. Hayes was retired on October 31, 1932.

Headquarters and 1st Squadron, 10th Cavalry

Fort Leavenworth, Kansas

Major Pearson Menoher, Commanding

Captain John H. Irving	Captain Marcus E. Jones
Captain Paul C. Febiger	Captain Charles H. Martin

Training

The 10th Cavalry Training Year, 1932-1933, has been announced. Beginning October 1st the year's training will include chemical warfare training, defense against aircraft, military courtesy and customs, and rifle marksmanship, in addition to the regular disciplinary drills. The Training Objective includes, in addition to maintaining a thorough state of discipline, the efficient operation, maintenance, and Supply of the Command and General Staff School.

Polo

The Fort Leavenworth Polo Team, with Major Pearson Menoher, Regimental Commander, as No. 1 participated in the Open Tournament held at Fort Riley, Kansas, October 20-30, 1932. Of the four games played, Fort Leavenworth broke even, winning two and losing two as follows:

Ft. Leav.	*Opponents*	*Opp. Scores*
10	2nd Cavalry	4
10	Academic Green	4
6	Academic Black and Gold	10
6	13th Cavalry	10

Horse Show

The opening of the American Royal Horse Shows at Kansas City, Missouri, November 12-19, promises more laurels for the old reliable hunters and jumpers of the 10th Cavalry Stables. *Dandy Dude*, *Prominent Tom*, and *Dynamite*, with *Bunker Hills* private will be shown in the various hunting and jumping classes with Captain and Mrs. P. C. Febiger and Captain and Mrs. John H. Irving up. *Dandy Dude*, distinguished as the mount of General Pershing with the A.E.F. is still a dependable jumper.

Hunting

The Fort Leavenworth Hunt, Maj. Pearson Menoher, M.F.H., and Capt. S. E. Jones, 10th Cavalry, Honorary Huntsman and Secretary, meets every Sunday for a Drag Hunt at 9:30 A. M. and Wednesday at 2:30 P. M. Live game is hunted on holidays and during the week when weather is favorable. The Fort Riley Hunt, Mission Valley Hunt and Denver Hunt have been invited to hunt with Fort Leavenworth on Sunday, November 20th.

The Tenth Cavalry has gone through the major part of the season with a very creditable football record. With less than half the regiment to pick from, the Buffaloes have developed a team second to none in these parts, and so far have lost but one game.

The Football Record

10th Cav. Scores		*Vs. Scores*
13	Slater, Missouri—Amer. Leg.	0
13	Ninth U. S. Cavalry	6
6	Sam's Taxi Wildcats (K. C., Mo.	6
4	Western U. (Quindaro, Kan.	0
18	Topeka A. C. (Topeka, Kan.)	0
0	Manhattan All-Stars (Man., Kan.	0
0	Lincoln U. (Jeff. City, Mo.	7
54		19

Machine Gun Troop, 10th Cavalry

Fort Myer, Virginia

Captain Clyde D. Garrison	1st Lieut. Paul R. [illegible]
1st Lieut. Gordon B. Rogers	

2d Squadron, 10th Cavalry

West Point, N. Y.

Major Frederick W. Boye, Commanding

Captain Frank L. Carr	1st Lieut. John W. [illegible]
1st Lt. Samuel P. Walker, Jr.	1st Lieut. Laurence [illegible] Lade

Eleventh Cavalry

Presidio of Monterey, California

Colonel Ben Lear, Commanding

Major [illegible] E. McQuillin	1st Lieut. T. F. Sheehan
Major H. Herman	1st Lieut. C. J. Harrold
Captain [illegible] G. Gibney	1st Lieut. C. K. Darling
Captain [illegible] S. Berg	1st Lieut. B. W. Justice
Captain [illegible] E. Larson	1st Lieut. H. W. Davison
Captain [illegible] S. Beecher	1st Lieut. P. A. Ridge
Captain [illegible] E. Merrill	2d Lieut. J. J. La Ppage
Captain [illegible] H. Cameron	2d Lieut. G. W. Cooling
Captain [illegible] S. Rodwell	2d Lieut. T. F. Taylor
Captain [illegible] V. Gagne	2d Lieut. J. M. De Riemer
Captain [illegible] W. Fenton	2d Lieut. J. H. Dudley
1st Lieut. [illegible] H. C. Mewshaw	2d Lieut. A. E. Harris

From June 21st to September 3, 1932, constituted the summer training camp period for the Presidio of Monterey. The Eleventh Cavalry assisted in the training of 350 ROTC—1,200 CMTC and 900 Reserve Officers.

The camp formerly held at Del Monte, California, was held on the Post this year due to the fact mess halls, tent floors and other necessary installations have been made at the Presidio of Monterey sufficient to care for the above number of trainees.

From September 8th to October 18th the 1st Squadron was camped at the Gigling Military Reservation engaged in range practice and combat exercises. A new target range having been recently completed there. The 2nd Squadron went to Gigling for the same purpose on October 21st and returned to the Post on November 18th.

This is the first time that rifle, pistol and saber practice has been held at Gigling.

The Machine Gun Troop commanded by 1st Lieutenant Harry C. Mewshaw, took part in the Goodrich Trophy Test on November 7-8.

For the first time in the history of the Post, Presidio of Monterey now has a sodded polo field on the reservation. Side boards and goal posts have recently been constructed and the field is now used for practice games.

The following officers were recently relieved from assignment to the 11th Cavalry: Lieut. Col. John Cocke, Major Barnum, Capt. Shea, Capt. Hutchinson, Lieut. Hernigan and Lieut. Hathaway.

Twelfth Cavalry (Less 2d Squadron)

Fort Brown, Texas

Colonel Francis W. Glover, Commanding

Lieut. Colonel Stephen W. [illegible]	1st Lieut. Robert L. Freeman
Major George S. Andrew	1st Lieut. Hugh F. T. Hoffman
Major Oscar I. Holman	1st Lieut. Douglas Cameron
Captain George A. Goodyear	1st Lieut. Charles H. Reed
Captain Harry W. Maas	1st Lieut. Clyde Massey
Captain Vernon M. Shell	1st Lieut. Raymond D. Palmer
Captain Clifford A. Eastwood	2d Lieut. Wayne J. Dunn
Captain Perry D. Taylor	2d Lieut. Brainard S. Cook
Captain Darrow Menoher	2d Lieut. Gerard C. Cowan
Captain Conners B. Vail	

All the target practice of the 12th Cavalry troops stationed at Fort Brown was completed with the final firing for record practice by the Machine Gun Troop on October 29th. The rifle troops and the Headquarters Troop fired annual rifle practice on the Fort Mcintosh range near Laredo, Texas, this season, as oil developments prevented the use of the range at Fort Ringgold, Texas. Pistol practice, dismounted, and mounted pistol and saber practice, as well as machine gun firing, were conducted in the vicinity of Fort Brown.

Both Troop B and Machine Gun Troop qualified 100% in all arms, thereby winning the right to fly a special streamer on their guidons throughout the present training year. The streamers are presented by the Regimental Commander, Colonel Francis W. Glover, to the troops qualifying 100% in all arms.

The extremely high stages of the Rio Grande which prevailed during September and October, caused little inconvenience to the Fort Brown command despite the alarmist reports which were broadcast over the nation about the territory inundated in the Lower Valley. The levees along the river around the Post received no serious test during the period of the floods.

Since the completion of target practice bi-weekly polo games under charge of Major George S. Andrew, have been resumed. On November 20th the 12th Cavalry Polo Team is to play the 13th Mexican Cavalry Team from Reynosa, Mexico, and it is expected that frequent matches will be arranged between the two teams thereafter.

Playground baseball has recently become very popular in Brownsville, with the result that a City League has been organized from the various civic organizations. Fort Brown is represented in the League by a team of officers which to date has won both games played, that is against the American Legion Team and the Elks Team. A Post League has also been organized among the troops at Fort Brown and is proving very popular.

Officers and men of the command who are fond of hunting are busily making plans and preparation for the opening of the duck and deer seasons on November 16th. Indications are that there is to be some excellent duck shooting this year, from the number of ducks already arrived in this section despite the mild weather. Deer are also reported to be fairly plentiful in the ranch country in Hidalgo, Willacy and Kennedy Counties.

2d Squadron, 12th Cavalry

Fort Ringgold, Texas

Lieut. Colonel Robert C. Rodgers, Commanding

Captain Henry M. Shoemaker	1st Lieut. Daniel P. Buckland
Captain Alexander C. Olsen	2d Lieut. Walter E. Finnegan
Captain Benjamin A. Thomas	2d Lieut. O'Neil K. Kane

The Squadron has recently lost two officers to details of interest. Lieutenant Egon R. Tausch, having been placed on duty as a language student in Madrid, Spain; and Lieutenant John L. DePew, having been transferred to the D. O. L., with station at Kansas City.

The first Horse Show of the season was held on November twelfth. Camel, Captain Olsen up, and Nettie, Captain Thomas up, won first and second in the Officers' Jumping. In the open class, Camel, with

Captain Olsen again riding, took first over a four foot triple bar course. Another show has been scheduled for the early part of January.

Thirteenth Cavalry

Fort Riley, Kansas

Colonel Alexander B. Coxe, Commanding

Lieut. Colonel Louis A. O'Donnell	1st Lieut. Lawrence E. Schick
Major Harold Thompson	1st Lieut. Frederick R. Pitts
Major Arthur H. Truxes	1st Lieut. Alan L. Fulton
Captain William T. Bauskett, Jr.	1st Lieut. John P. Willey
Captain John A. Hettinger	1st Lieut. Ralph T. Garver
Captain Stephen Boon, Jr.	1st Lieut. David E. Bradford
Captain Ernest A. Williams	1st Lieut. Wallace H. Barnes
Captain Roy E. Craig	1st Lieut. Morton McD. Jones
Captain Gilbert Rieman	2d Lieut. William H. Hunter
Captain Herbert W. Worcester	2d Lieut. Henri A. Luebbermann
Captain Vaughan M. Cannon	2d Lieut. Chandler P. Robbins.
Captain Harold P. Stewart	Jr.
1st Lieut. Elmer V. Stansbury	2d Lieut. Frank D. Merrill

The 13th Cavalry left Fort Riley on September 27th for a fifteen days practice march. At Abilene, Kansas, the regiment put on a show for the County Fair. Although the weather was very cold at times, it was a very pleasant march and a great relaxation to be out in the field for awhile.

On October 17th the regiment again left the Post for a four-day Field Exercise with the School. On this exercise the regiment performed the various duties of a cavalry command under war conditions, marching forty-seven miles one day as a flank guard. The question of supply was given special consideration.

Fourteenth Cavalry (Less 1st Squadron)

Fort Des Moines, Iowa

Colonel Charles E. Stodter, Commanding

Lieut. Colonel Talbot Smith	1st Lieut. William P. Campbell
Major Francis C. V. Crowley	1st Lieut. Jesse B. Wells
Major Willard S. Wadelton	1st Lieut. Murray B. Crandall
Captain Erskine A. Franklin	1st Lieut. Harry D. Eckert
Captain Daniel Becker	1st Lieut. William H. Sutter
Captain Glenn S. Finley	2d Lieut. Phillips W. Smith
Captain Henry H. Cheshire	2d Lieut. Jergen B. Olson
Captain Benjamin H. Graban	2d Lieut. Harry J. Fleeger
1st Lieut. Sidney C. Page	

A very successful range season has just been completed and it is hoped to finish Combat firing before the weather becomes too cold to make such work disagreeable.

Polo is very popular at the Post now. The local team having a full schedule of games, comprising Army teams from this section of the country, as well as collegiate teams.

The Post Football Team under the able coaching of Captain Slider, 18th Field Artillery, is practicing hard for the coming season, and from all accounts, should hang up another good record.

Much interest has been shown in rifle and pistol matches, and the representatives and teams from Fort Des Moines never fail to get their share of the medals and trophies in such matches.

The Fourteenth Cavalry Baseball Team walked away with the baseball trophy, winning easily from the Eighteenth Field Artillery and Seventeenth Field Artillery in a six-game schedule.

The ladies', gentlemen's and children's riding classes are about to start, and many of the civilians from Des Moines and vicinity will be out to enjoy this sport with the officers, ladies, and children of the post.

The social season is well under way, hops and bridge parties having been organized, and these affairs are being well attended by the officers and ladies of the Post, as well as our civilian friends, and the officers and ladies in Des Moines, and those stationed near Des Moines.

The new remounts are coming along nicely and will be trained in the Riding Hall during the winter months.

A Sewing Club has been organized by Mrs. C. E. Stodter and is being enthusiastically attended by the ladies of the Post.

1st Squadron, 14th Cavalry

Fort Sheridan, Illinois

Major C. C. Smith, Commanding

Captain T. G. Hanson, Jr.	Captain C. W. Fake
Captain C. A. Wildinson	1st Lieut. L. R. Rapp
Captain H. LeR. Branson	1st. Lieut. C. A. Burgess
Captain C. ap C. Jones	2d Lieut. J. B. Quill
Captain C. E. Davis	

Twenty-Sixth Cavalry

Fort Stotsenburg, Pampanga, P. I.

Colonel A. F. Commiskey, Commanding

Lieut. Colonel W. H. Cowles	Captain B. E. Shirley
Lieut. Colonel R. Blaine	Captain W. C. Scott
Major T. E. Price	1st Lieut. J. M. Bethel
Major W. C. Chase	1st Lieut. G. J. Rawlins
Major A. Q. Ver (PS)	1st Lieut. V. F. Shaw
Captain G. A. Moore	1st Lieut. K. O'Shea
Captain M. S. Williamson	1st Lieut. R. T. Wilson
Captain R. C. Blatt	1st Lieut. W. Blanchard
Captain L. G. Forsythe	1st Lieut. H. J. Theis
Captain H. H. Neilson	1st Lieut. A. D. Durgin
Captain J. R. Thornton	1st Lieut. G. C. Clausser
Captain C. A. Horger	1st Lieut. J. O. Murdaugh
Captain A. H. Seabury	1st Lieut. R. A. Browne
Captain R. C. Thomas	1st Lieut. G. W. West
Captain E. F. Dukes	1st Lieut. D. H. Braxton
Captain R. O. Wright	1st Lieut. C. H. Valentine
Captain W. R. Hamby	1st Lieut. E. S. Buckingham
Captain O. R. Stillinger	1st Lieut. J. S. Morris, Jr.

1st Squadron, 103d Cavalry, Pa. N.G.

Philadelphia, Pa.

Tenth Anniversary of Major Edward Hoopes

The Philadelphia Squadron held a review to commemorate the tenth anniversary of Major Edward Hoopes as Squadron Commander on October 10, 1932 at the 103rd Cavalry Armory, Philadelphia, Pennsylvania.

Preceding the review the squadron officers gave a surprise dinner at the "Arcadia," at which Lieut. Col. R. D. Newman, the Senior Instructor of Cavalry, P. N. G., was present.

Captain Kirk Swing, the senior troop commander conducted the evening events with the able assistance of Lt. Thompson, Troop A, as acting adjutant.

The Iron Division Trophy emblematic of the Champion 30 Cal. Rifle team of the 52nd Cavalry Brigade, was presented by Colonel Newman to Major Hoopes for the Squadron. This match was won in 1931 by the 3rd Squadron of the 104th Cavalry. This cup became the permanent possession of the Philadelphia Squadron in 1924 and was replaced into perpetual competition in 1931, and therefore it brings great satisfaction to have this cup returned to Philadelphia. Members of this team were Sgt. J. M. Williams and Corporal S. W. Rawlins of Troop C; Sgt. E. O'Brien of Troop A; Sgt. E. A. Elwell, Corp. R. N. Sangro and Corp. H. A. Rule of Troop B with Lt. R. V. H. Wood, Sq. Hq. and 1st Sgt. J. Rule, Troop B as Team Capt. and team coach.

The Cavalry Cup Match was at Sea Girt, N. J. this fall for competition with troop teams from the New Jersey National Guard was presented to Troop C Rifle Team of Sgt. J. M. Williams, Team Capt., Corp. Rawlins, Sgt. Sailer, Pvt. Grigalamus and Pvt. Stephens.

Major Hoopes presented the Second Troop P.C.C. Mounted Pistol and Saber Trophy to the team from Troop B: Capt. J. F. Neill, team Capt. Corp McKeaney, Corp. Sangro, and Pvt. 1cl. Slipp, Pvt. Dubois and Pvt. Mulgrew. This match is open to one team from each troop in the squadron and was won in 1931 by Troop C.

Major Edward Hoopes 30 Cal. Rifle Trophy for Mounted competition for the Squadron Championship was presented by the Squadron Commander to Troop C, Sgt. Williams team Capt., Corp Rawlins, Sgt. Sailer, Corp. Taylor, Pvt. Grigalanus and Pvt. Stephens. Troop C also won this match in 1931, the year it was placed into competition.

Certificates of proficiency from the 28th Division School of Marksmanship were presented to Pvt. Slipp, Troop B, and Pvt. Griffith and Pvt. Davis of Troop C.

Then followed the climax of the evening when Capt. Swing presented Major Hoopes with a specially engraved saber from the Squadron Officers as a memento of this occasion. This came as a great surprise and left the Major momentarily speechless. In a short address of appreciation he said, "the squadron has gained and retained its present preferment position due to the individual troop spirit which has now been formed into a strong squadron spirit. The friendly rivalries in the various troop competitions tend to keep this spirit alive and I hope that the next ten years will see the squadron still further in front of all the Cavalry Squadrons in the United States."

Following the presentation of these trophies Capt. Swing marched the Squadron in Review before Major Hoopes.

To close the evening events each troop executed different mounted drills; by a mock pig sticking contest by Troop A and a mounted balloon race for all units.

305th Cavalry

Philadelphia, Pa.

The 305th Cavalry has got well into the inactive training schedule and is now busily engaged in riding, range practice with pistol and rifle, drill with saber, and conferences covering instruction in tactical work.

Turnouts have been good for both the Wednesday Noon Conferences and Wednesday night practical training in the Armory of the Phila. City Cavalry. Special effort is being concentrated this year on training officers to become capable instructors. With this end in view every officer is getting a chance to conduct a conference or class of instruction.

The Annual Church Service of the Regiment will be held at Ithan, Penna., near Valley Forge, Pa., and it is hoped the Regiment will turn out en masse for this affair.

A week-end tactical ride is being prepared. This trip will be made before the end of November through the beautiful Wissahickon Drive area.

306th Cavalry

Baltimore, Md.

All signs point to a successful inactive duty training period. The number of students enrolled in the Extension Courses is greater than ever before, the attendance at the October conference was large, and more officers applied to enroll in the Equitation Class than the available horses will accomodate.

Although it involves a long motor trip to Fort Hoyle, Maryland, the Sunday instruction in equitation has aroused a great deal of interest and proved an attraction to officer candidates, as well as providing instructive and healthful recreation for the Baltimore personnel.

2d Squadron and Machine Gun Troop 306th Cavalry

Washington, D. C.

The 1932-33 Inactive Training Period began with a Conference, Thursday, October 6th. The encouraging turnout of 82 heard the Unit Instructor, Major Harley C. Dagley, D.O.L., outline plans for the ensuing year. The reserve officers will be given the opportunity to take a more active part in the instruction by discussing pertinent subjects under the supervision of the Unit Instructor.

Although no date has been set the equitation instruction will begin as soon as facilities are available at Ft. Myer, Va.

The promotion of Second Lieutenants Claude N. Ballenger and John S. Burgess to the grade of First Lieutenant and the appointment of Howard K. Baker, David E. Betts, Marshall H. Osburn, Ralph W. Powers, Harry L. Smith, Sydney B. Smith, George F. Sprague, Mangus Thompson and Wm. H. Warren to the grade of Second Lieutenant of Cavalry is announced with pleasure.

307th Cavalry

Richmond, Va.

The 307th Cavalry, began the inactive period of instruction with 50% enrollments in the Extension Courses.

Conferences on subjects of a general military nature have been scheduled for the period October to

February. Selected Reserve Officers have been designated to conduct the instruction. Particular emphasis will be placed on the cooperation of Cavalry with Armored Car and Air Corps units.

Second Lieutenant Joe T. Brodnax, 307th Cavalry, on duty as Instructor at V. M. I. was instantly killed in an automobile accident near Lynchburg on October 16, 1932.

Promotions:

1st Lt. Hugh Howard Jones, 307th Cavalry, to the grade of Captain.

Pvt. John F. Slaughter, 307th Cavalry, to the grade of Sergeant.

New Assignments, 307th Cavalry:

1st Lt. Grant R. Elliott, Med. Res., Box 95, Orange, Va.

2nd Lt. Frederick W. Okie, Marshall, Va.

Pvt. Richard F. Beirne, Jr., Covington, Va.

Pvt. John F. Slaughter, Putnam, Va.

Third Squadron and Machine Gun Troop, 307th Cavalry

Norfolk, Virginia

Inactive duty training for the winter 1932-33 has gotten away to a good start and indications are that more interest will be shown this year than ever before. At present 68% of the Officers of the Squadron are enrolled in the extension courses.

Tidewater Virginia and the Squadron had the pleasure of the company of Colonel and Mrs. George T. Bowman, during the period September 12 to 21, 1932. Colonel Bowman, who is Chief of Staff of the 62nd Cavalry Division and Liaison Officer for Organized Reserves for the Third Corps Area, took advantage of his stay to inspect the Newport News and Norfolk group schools, as well as the activities of the Squadron. Over fifty reserve officers attended the meeting of each group school and were well rewarded, as Colonel Bowman gave a very interesting and inspiring talk at each meeting. The Reserve Officers of Tidewater and especially of the Squadron thoroughly enjoyed having had Colonel Bowman with them for such a protracted stay and hope that he will be able to repeat his visit again.

General Paul B. Malone, Commanding the Third Corps Area, was the guest of the National Guard Convention held in Norfolk, Va., October 20, 21, and 22. General Malone gave a wonderful address before the convention of October 21st which was thoroughly enjoyed by many local reserve officers who attended.

The first troop school of the winter season was held at the home of the Squadron Commander, Major James R. Mullen, on Friday October 28. A conference on Map and Aerial Photograph Reading was given by the Unit Instructor, Major David H. Blakelock, Cavalry, (D.O.L.), which was well received. In addition details for the winter schedule were worked out and Reserve Officers were designated to assist in the instruction at future schools.

308th Cavalry

Pittsburgh, Pa.

On October 11th Lieut. Colonel Shenkel was toastmaster at a banquet held by the officers of the 308th Cavalry at the Hotel Schenley in Pittsburgh in honor of Brigadier General Casimir Pulaski, organizer of the American Cavalry during the Revolutionary War. Among the distinguished guests were Colonel G. T. Bowman, the Polish Consul, Mr. Byczewski, Colonel Landers, and Colonel Starzynski, a distinguished World War veteran of the Polish Army.

Representatives of five teams comprising the Pittsburgh Polo League met recently at the Hunt Armory and discussed plans for the coming season. A schedule was agreed upon, and a successful season is anticipated. The riding classes for officers and ladies have commenced and are well attended. A beginners' class, conducted by Reserve officers as instructors, has increased the attendance and interest. The average attendance at the officers' classes is over sixty and for the ladies about twenty-five. Training in preparation for the coming active duty season has commenced. The regiment is scheduled for C.M.T.C. training. Many of the officers have indicated their intention to apply for "Camp" next Summer.

862nd Field Artillery (Horse)

Baltimore, Md.

The regiment has resumed its inactive status training which will be directed primarily toward preparing the officers for their functions at the Citizens' Military Training Camp at Fort Hoyle, Maryland, next July. In addition studies will be made of the tactical employment of the regiment as the division artillery of a cavalry division.

During October one conference was held on the subject of the defense of the Philippine Islands. An interesting lecture on this subject was given by Lieutenant Colonel Philip H. Worcester, G.S.C. Also during this month the fortnightly classes in equitation were resumed at Fort Hoyle. The interest in these classes is well sustained and it is to be regretted that more horses are not available for this important instruction.

462nd Armored Car Squadron

Washington, D. C.

The 462nd Armored Car Squadron, Major Wm. E. Covington, Commanding, has been allocated as follows: Headquarters to Washington, D. C., Troop A to Philadelphia, Pa., Troop B to Richmond, Va. and Troop C to Pittsburgh, Pa. Captain Wm. J. Yetton and First Lieutenant Walter B. Gleason, formerly with the 306th Cavalry have been assigned to the Headquarters as Adjutant and Supply Officer, respectively.