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FORGOTTEN CAVALRYMEN.

• GENERAL EDWARD FRANCIS WINSLOW, U. S. VOLUNTEERS.

By J. H. W.

BRIGADIER General Edward F. Winslow, United States Volunteers, died of heart failure at Canandaigua, New York, on Thursday, October 22, 1914, aged 77, and was interred there on the Sunday following. "*Where the Oak falls, there let it lie!*"

He belongs to a group of American cavalrymen, Upton, Long, Croxton, LaGrange, Winslow, Alexander, Minty and Miller, remarkable for their military performances as well as for their civic virtues. A glance at his history will show how richly he deserved the success and the honors that he achieved.

The General was in the seventh generation, and the direct male line of Kenelm Winslow and Magdalene (Ollyver) of Droitwich, Worcester, England, who came to Plymouth with his brothers, Josiah and Edward, on the first voyage of the Mayflower. A younger brother, John, came on the second voyage and, after Carver and Bradford, ranked third among the signers of the Pilgrim Compact or Covenant of government.

The Winslows belonged to the English gentry, and well-to-do class, and John with his principal Pilgrim associates have

passed into history as the actual leaders of a great movement in the progress of human society.

The name of Winslow is an ancient one, the source of which is not known, but there is a town of that name tracing back to the Doomsday Book, and the name is now conceded to have been of strictly English origin, although like many others of the same period, it has also been claimed as Danish. It has had the usual variants and many different spellings, the principal ones of which are Weneslai, Wyncelaive, Wynceloe, and Winsloe, which in the lapse of time have settled down into Winslow, as it has always been used in America.

The English family of that name wore coat armor, with the motto, "*Decoptos Floreo.*" They intermarried with people of like rank, and many of them became distinguished divines and successful men in the various callings of life. A member of the family became almoner to Queen Elizabeth, who in turn became godmother to his son. Another was deep in the Gunpowder Plot; while still another became one of the most distinguished physicians and surgeons of his day in Paris.

In America from the first the Winslows intermarried with their own class and the family counts within its ranks, in both the male and female lines, numbering in 1888 thirteen thousand three hundred and ninety names, and now many more, in all branches of professional, as well as in the various other callings of life. There have been from the earliest days, as might have been expected from such sources, ministers of the Gospel, professors, lawyers, judges, doctors, surgeons, artists, musicians, contractors, engineers, writers, builders, sea captains, naval and army officers, admirals, generals and governors, belonging to both the male and female lines, and it may be safely assumed that wherever the name of Winslow is found in the United States or Canada they are of kin and all descended from the Winslows of the Pilgrim Fathers. It is conceded that no American pedigree of greater distinction or of purer Anglo-Saxon blood, than that of the Winslows can be found in the annals and memorials of this country. It is also evident from the records that no name stands higher in the list to which it belongs than that of the subject of this sketch.

Edward Francis Winslow, the son of Stephen Winslow and Elizabeth Bass, was born at Augusta, Maine, September 28, 1837. He was seventh in direct descent from Kenelm, through Job, James, Benjamin, William and Stephen, and was educated in the common and high schools, of his native place. Having business aptitudes of no mean order he went West to Mount Pleasant, Iowa, for the purpose of going into a bank about to be established at that place. His uncle was at that time building the State Capitol at the city of Des Moines. This perhaps gave the young man's mind a different turn and he soon became a railway contractor, and was fast rising into prominence as a masterful and enterprising man, when the war for the Union broke out with the Southern States. In the midst of the excitement which now became intense he married Laura Berry, the daughter of Rev. Lucien H. Berry, D. D., and Adilene Fay, of Boston. The young couple were just settling down to married life, when the Confederates fired on Fort Sumpter, and as if by magic, called the patriotic young men of the entire North to the defense of the Union. Winslow was amongst the first to offer his services, and as Captain, Company F, Fourth Iowa Cavalry, then encamped at Mount Pleasant, he at once began his career as a commissioned officer. He of course had had no education or experience as a soldier, but his native intelligence and aptitude soon put him as it did so many other young Americans in the way of learning from the instruction of his Lieutenant Colonel Drummond (Captain of the Fifth U. S. Cavalry) and later from the rough school of experience. He soon knew how to render useful and increasingly brilliant services in the field. Anyone curious to know how discipline and soldiering were learned by these boys from civil life should read the exciting "Story of the Fourth Iowa Cavalry," by its Adjutant Henry Forse Scott.

Winslow's progress was rapid and his deeds were inspired by an ardent ambition, as well as by the prudent habits of the Pilgrim family to which he belonged, but the limits of this sketch will not permit the writer to recount them in detail. While they brought him to high rank and important command and enabled him to participate in some of the most important

events of the Civil War, as well as in some of the most remarkable undertakings which followed the country's recovery therefrom, they did not bring him the highest rank and distinction, nor the greatest fame, and hence his deeds and character have not received the public commendation to which they are entitled. While this is doubtless due, in part to the extraordinary war now deluging Europe in blood, it may be worth while to condense the principal events of his career in such a manner as to show that no ordinary man has been taken from us.

The Fourth Iowa was mustered into service late in November, 1861. Its first winter in service was a severe one which delayed the regiment from taking the field. But marching by the way of Springfield, Missouri, in the early spring of 1862, it joined Curtis's Army at Forsyth and took part in its demonstration on Little Rock, in which region, and at Helena on the Mississippi where it finally took part, it was constantly engaged in skirmishes and forays against the enemy. This service lasted about a year and was filled with vicissitudes. Captain Winslow displayed such activity and intelligence in the various operations, that he was made Provost Marshal, and soon afterwards promoted to Major of his regiment.

General Grant was, in the winter of 1862-1863, gathering his army for the campaign of Vicksburg, and through Winslow's home influence he succeeded in having his regiment transferred by river to the command at Millikens Bend where it arrived at the end of April, 1863. It was attached to Sherman's Fifteenth Army Corps and Major Winslow soon won his confidence and support. The regiment thenceforth took an active part in all the operations and battles through Port Gibson, Jackson and Champion's Hill, till Vicksburg was invested. During the siege it was naturally kept on outpost, picket, patrol, reconnaissance, skirmishing, and foraging duty, and as it was at that time the only cavalry regiment with the besieging army, its service was constant, toilsome and dangerous. It was during a pause in its activity that Grant's Inspector General made a close inspection of this hard worked regiment and recommended that its Colonel whom he found inefficient should be discharged from the service. His resign-

nation was rendered and accepted without delay and on the 4th of July, the day Vicksburg surrendered, Major Winslow was appointed Colonel. He was on that day two months less than twenty-six years of age, but as he had been found to be the best officer of his regiment, his promotion received general approval. From that day forth, and so long as Sherman remained in that region, Winslow was his Chief of Cavalry, acting as such till March, 1864.

During this period Colonel Winslow with increased force, commanded in the various cavalry movements which took place in Central Mississippi, but as Sherman's operations were inconclusive and his cavalry far short of the strength it should have had, Winslow was about the only cavalry officer that grew in the experience or reputation. It will be remembered that Grant's victorious army, nearly a hundred thousand strong, was scattered after the surrender by the authorities in Washington, as it was the year before, after the Shiloh-Corinth campaign. Grant himself shortly afterwards made a visit to General Banks at New Orleans, and while on his way to a complimentary review of the troops at Carrollton received a severe injury by a fall of his horse, which practically disabled him for three months. Meanwhile Sherman with the Fifteenth and Seventeenth Corps, made two short campaigns. One to or a little beyond Jackson, the State Capital, and the other, a few weeks later through Jackson and Meridian towards central Alabama. In the second of these he had planned to bring the departmental cavalry, serving several hundred miles north in Tennessee, to a junction with himself near Meridian. Winslow, covering Sherman's column after much successful fighting reached and captured the junction point, and then turned northward to unite his forces with those coming from Memphis. But the redoubtable Forrest, now growing rapidly into fame as the great Confederate Cavalry Leader, had by rapid marching and good management, interposed himself between the National cavalry columns and after defeating and driving General Sooy Smith with his strong division, northward towards Memphis he turned on Winslow and with superior numbers forced him to rejoin Sherman by way of Marion, near Meridian. This

reverse discouraged Sherman, and compelled him not only to give up his campaign, but assume a defensive attitude. The Ninth Corps had returned to Virginia, the Thirteenth had been sent to join Banks in Louisiana, the Sixteenth had collected again in Arkansas, while the Fifteenth and Seventeenth instead of hastening by river or railroad to reinforce Rosecrans in Northwestern Georgia, were left to hold central and western Mississippi.

Meanwhile the time had come for the three year regiments to reenlist or "veteranize," and as Winslow's regiment, under his active influence, was the first one to perform that patriotic act, it was late in December, 1863, granted a thirty days furlough, with permission for the reenlisted men to visit their homes in Iowa. Winslow availed himself of this privilege and at the end of his leave rejoined his regiment, at Saint Louis, where it was remounted and furnished with new arms and equipments. Reporting by telegraph to Sherman, then commanding the Department of the Tennessee at Nashville, he was ordered with eight hundred men to Memphis, where the non-veterans left at Vicksburg and the recruits coming from Iowa, reported to him and this brought his regimental strength to something more than thirteen hundred men and horses.

Here the regiment was brigaded with the Third Iowa, under Colonel Noble, and the Tenth Missouri, under Colonel Benteen, and a four-gun battery of rifled artillery, all under Winslow, but without the increased rank he had so richly won. His brigade, now of ideal size, equipment and character, was joined to another into a division under Colonel George E. Waring, Jr., which reported to General Samuel D. Sturgis, of the regular army, who was then gathering a mixed force of eight or ten thousand men with which he was expected to move against and crush Forrest, then occupying Guntown, south of Corinth, in northern Mississippi. Winslow's brigade was the first to encounter the enemy with success, but the next day the whole force including the infantry became engaged. This was on June 30, 1864. Winslow's brigade held the right of the cavalry and successfully repulsed two charges of the enemy, when he was ordered to withdraw and make way for the infantry, now

arriving on the ground. In doing this he took position in reserve, and was not engaged again till the whole line after a short and futile defense was driven from the field with the loss of a thousand killed, wounded and missing, and about twenty guns and two hundred wagons loaded with ammunition and supplies.

In this emergency Winslow was ordered to cover the retreat through Riply and Colliersville to Memphis, which he did effectually, but the affair was a great and unnecessary disaster to the National Arms, in which Winslow and his veterans were the only men to come out with honor. Their services and losses, both of men and horses were heavy, but they not only covered the retreating infantry successfully, but brought off the only two field guns that were saved from the enemy.

But Winslow's troubles were not at an end, for although he was not to command the division of cavalry, it was still without the brigadier's stars which he had fully won. His operations about Memphis under the orders of Grierson, now his superior, were still desultory. They enabled him to participate in the defeat of Forrest at Tupelo and in several inconclusive if not unnecessary expeditions in west Tennessee. The local commander finally compelled him with twenty-two hundred men, to cross the Mississippi at Memphis whence he made a long and tiresome march through the extensive swamps in southeastern Missouri and western Arkansas, to the relief of General Steele at Little Rock. This accomplished, he was ordered to General Mower's belated expedition in pursuit of the Confederate General Price, who was moving northeasterly on Pilot's Knob. Winslow's march was up the Black River by a circular route to Cape Girardeau and thence back to Saint Louis. This exhausting and useless work, through no fault of his own, was done in the hot and often sultry weather of July, August, September and the early days of October and covered one hundred and sixty miles through desolate, muddy and swampy country in which neither friend or foe could find adequate subsistence. It did but little harm to the enemy, and no good to Winslow or his men, except to tax their resources and endurance to their utmost limits. Mower, himself, was a fine soldier and gave Winslow great credit for the energy and

skill with which he led the advance, and for the way he made the roads passable by rapidly constructed temporary standing or floating bridges, from timbers and boats taken from the neighboring plantations or cut from the adjacent forests.

After only two days at Saint Louis, with his command now reduced to his original brigade, he reported to General Pleasanton, the regular cavalryman long in command of the cavalry of the Army of the Potomac, but lately transferred to the West, and under his orders, Winslow took the road westward across the state towards Kansas City on the Missouri River. On the way he overtook another brigade which he joined to his own and with the united force, he forced a most difficult crossing of the Big Blue River. His advance was a desperate, but successful charge through a difficult ford obstructed by fallen and floating trees, but in the moment of victory, Winslow was seriously wounded and forced to take an ambulance, though even that did not compel him to withdraw or to relinquish his command till darkness made all safe. His successor was Lieutenant Colonel Benteen* of the Tenth Missouri Cavalry, a most enterprising and gallant officer, who commanded the brigade during Winslow's absence on sick leave.

Winslow was taken at once to Kansas City, and thence by steamboat to Saint Joseph, further up the Missouri River, where he was in turn transferred to the railroad which took him through Iowa back to Saint Louis. Here he was rejoined by that part of his brigade coming from western Missouri, in November, and at once resumed command though not yet fully recovered from his wound. Having hastened to ship his troops by steamboat to Louisville, under orders from General Thomas, now commanding at Nashville, in Sherman's absence on the march to the sea, Winslow in person took boat for Memphis for the purpose of gathering up the large number of his men, mostly dismounted, who had been left at that place, and sending them to join the others at Louisville, but before he could carry out this arrangement he was provokingly gathered in by his former commander Brigadier General Grierson, and ordered as second in command with all the men he had collected

*For many years Captain 7th U. S. Cavalry.

to accompany him on an expedition from Memphis to destroy the northern section of the Mobile and Ohio Railroad. This thoroughly accomplished, he was finally permitted to march with this detachment through the country, to Vicksburg. This was the fourth time he found himself, in obedience to legitimate orders, at Vicksburg on the Mississippi, now permanently in the hands of the United States and "flowing unvexed to the sea."

But Winslow was at last free to rejoin his united brigade at Louisville, in obedience to the orders which made it a part of Upton's division of the great Cavalry Corps now gathering at Nashville to confront Hood. Although he moved as fast as steamboats and railroads could carry him, neither he nor Upton, both energetic pushers, arrived at Nashville in time to take part in turning Hood's flank, capturing his guns, and driving him south of the Tennessee River.

Winslow's brigade, after completing its remount, equipment and armament, at Louisville, was transported thence by steamboats down the Ohio, and up the Tennessee to Waterloo landing near the cantonment at Gravelly Springs, in northwestern Alabama. Here it joined and became the second brigade of Upton's division, one of the best of modern times.

But curiously enough Winslow had to go through another ordeal. Before he could receive the permanent command to which his services entitled him, his division commander found it necessary to personally present him to the Corps Commander, for the purpose of assuring the latter that he was not the Colonel of the Fourth Iowa, who had been reported the year before as incompetent. Fortunately a glance was sufficient for that and he was not only assigned to the command of the brigade, but as there were no vacancies in the grade of brigadier in the entire army, he was brevetted to that rank in the Volunteers by the President and by him assigned to command his brigade, now the first of Upton's division with the full rank. That ended his troubles and cleared his way to nearly a year's most active and valuable service which not only won for him the recommendation of those in immediate authority over him for the full rank of brigadier, but would have ensured him the rank of Major General had the Confederacy not broken down in the full tide

of his brilliant career. In the reorganization of the regular army after the peace, Winslow was offered the rank of major and finally that of colonel, but wisely declined both to pursue the occupation of a railroad builder and manager.

From the closing campaign through Alabama and Georgia to the end of the war, his career was most brilliant. Having by his extraordinary marches and operations in nearly every part of the central Mississippi Valley, learned his duties to the minutest details, there was nothing left for him but to lead his veteran brigade including a four gun battery, under the supervision of Upton, the accomplished division commander. This he and his fellow brigadier, Alexander, did so well, that when it was all over Upton, although he had commanded both infantry and artillery, in the Army of the Potomac with marked distinction, said he never knew what troops could do till he had lead his cavalry division over the entrenchments at Selma and Columbus. After that and the running affairs with Forrest, between those points, he declared that there was no place in the Confederacy he could not ride into or over, and nothing he feared to attack, except a man-of-war at sea.

Winslow and his veterans after a few weeks rest and drill began their final campaign from the northwest corner of Alabama, with the corps of three divisions and fourteen thousand men of which they were not a part, on March 22, 1865. After five days march towards the southeast during which Winslow and the rest of the corps threaded the forest and forded many rivers, his division first came within reach of Forrest's cavalry near Montevallo. While here it captured many supplies and destroyed the Red-Mountain, McIlvain, Bibb, Central and Columbiana Iron Works, five collieries and the Cahawba Rolling Mill. With this important work done, the three divisions were united at Montevallo, and a spirited action occurred just south of that place in which Forrest was outnumbered and driven rapidly from the field. The pursuit was immediate and pushed vigorously till night put an end to it.

The next day, April 1st, the corps, pushed on to the south, LaGrange to take and hold the Centerville bridge on the Cahawba, till Croxton moving through Tuscaloosa could reach it to rejoin the corps, while the remaining two divisions includ-

ing Winslow's brigade, overtook Forrest at Ebenezer Church and drove him rapidly beyond Bogler's Creek to Plantersville where the main body bivouacked for the night. Forrest completely overborne, continued on towards the strongly fortified city of Selma, only eighteen miles further south. LaGrange rejoined the main column at Selma, but Croxton after capturing Tuscaloosa rejoined by a northern route at Macon.

On Sunday, April 12th, the day on which Richmond fell, the Cavalry Corps closed in on Selma, the principal manufacturing city of the Confederacy, a thousand miles southwest of Richmond. As it was completely covered by earthen fortifications of strong profile, with a deep ditch and a wooden stockade laid out on a bastioned line from three to four miles long, and mounting thirty field guns with two of larger caliber, it was evident that a desperate struggle would ensue. Fortunately one of Winslow's officers had taken a prisoner two days before, who had on his person an accurate sketch of the works. With this as a guide the plan of attack was made during the morning of the advance on the city, and each division and brigade, Winslow's among the number, was assigned its proper place in the assault. Winslow took a route by the enemys' extreme right, and if successful it was hoped would cut off all retreat in that direction.

The attack was a most unusual one dismounted in open order, supported by the remainder of each division, and was everywhere successful. The entire attacking force was fifteen hundred and fifty men and officers, but the Union strength was about nine thousand five hundred men and twelve guns, while the enemy had inside the works a mixed force, estimated at from five thousand to seven thousand men and thirty-two guns, all under the personal command of Forrest. The first rush lasted not over twenty minutes, but before the mêlées which followed were ended darkness closed in. Twenty-seven hundred of the enemy were captured, but considerably over half escaped under cover of night. Winslow handled his men admirably, and carried the weaker part of the fortifications with but little loss, and, being the ranking brigade commander who was not wounded, he was assigned that night to the command of the captured city, the restoration of order and finally to the destruction of public

works, military stores and store houses, which were found there in great abundance.

Indeed no such capture had ever been made in a single action, from the Confederacy, and the injury done was irreparable. The work of destroying the public property took place the following day mostly under cover of darkness or in the rain and was carried on with excellent system and with no avoidable loss to private property. During the occupation the pontoniers were building new pontoons for the extension of their bridge so as to make it span the Alabama River, and thus enable the Cavalry Corps to continue its march through Montgomery, towards a junction with Sherman, six hundred miles further towards the scene of Grant's operations in Virginia.

Winslow being in command at Selma, with his staff, and his old regiment, was naturally the last to cross the river, and to bring up the rear, in the advance on Montgomery, the first Capital of the Confederacy. Everyone expected another sharp action at that place but the Mayor and principal citizens made haste to surrender, without resistance. The Stars and Stripes were promptly raised over the stately Capitol, and the victorious troopers, every man in the saddle saluted the "Old Flag" and cheered as he passed on towards the Chattahoochee, about half way to Macon in central Georgia.

The ground was rapidly covered, at Columbus another strongly fortified city, on the eastern bank of the river, Winslow in advance waiting in the dark by arrangement till nearly nine P. M., carried everything before him, in a rushing charge. His brigade was dismounted, every eighth man holding horses, while with the rest under cover of the night, with no glimmer of light but the flash of the enemy's guns, he carried the works and bridges, and without halting pushed through them into the city. The prisoners taken in the heat of the fighting numbered more than the men engaged in the charge. The victory, was not only complete, but one of the most remarkable ever gained by cavalry in modern times. The spoils were large for after Selma, Columbus was the next largest depot and manufacturing center of the Confederacy.

The defense was conducted by General Howell Cobb, who had been Secretary of the Treasury under President

Buchanan. He had been aided by Colonel Von Zinken, and by Colonel Lamar, who had commanded the Slave Yacht, Wanderer. Lamar was killed by a chance shot in the street. General Robert Toombs had also visited and counseled Cobb. But the General and several hundred men had escaped by train under cover of darkness, before the action was ended. Those who remained behind made the best fight they could in the dark, but their struggle was in vain. All were captured and Winslow, assisted by Noble and Benteen, under the supervision of Upton, whose shouts in the dark could be heard above the din of battle, was again in command and succeeded in restoring perfect order before midnight. This remarkable affair took place on April 16th, and was undoubtedly the last real battle of the war.

The next day Winslow completed the job by destroying one hundred and twenty-five thousand bales of cotton, twenty thousand sacks of corn, fifteen locomotives, two hundred and fifty freight cars, two bridges over the Chattahoochee, one navy yard, two rolling mills, the gunboat "Chattahoochee," the sea-going ram "Jackson," besides foundries, iron works, arsenals, nitre works, mills and factories, sixty-nine pieces of artillery and large quantities of arms, military and naval stores of every kind, constituting the last resources of the Rebel Army.

This put the crown to Winslow's military fame for although there was no more fighting, he accompanied the cavalry into northern Georgia and shared in the honors of reoccupying Atlanta, which finally placed him near the center of information, and enabled him to play an important part in dispersing the last hostile forces in that region and finally to advising in the dispositions which led to the capture of Jefferson Davis, the President of the Confederacy. His military services through the campaign were of the highest quality, but having been fully set forth in the "Official Reports" as well as in the history of the Fourth Iowa Cavalry, there is but little need towards their further explanation.

It is however worthy of note that Winslow's last remarkable performance was a transitional one during which he not only rebuilt the railroad which Sherman had destroyed from Atlanta to Chattanooga, but managed it so well after reopening

it, as to move all the detachments and supplies, for the Cavalry Corps and the suffering people as well as to collect enough charges for freight and passengers, not only, to enable him to repay the government all its expenditures, but to turn the railway over to its owners free of debt for its repairs.

The regiment and its honored Colonel after four years of honorable service were mustered out with congratulatory commendation from his superiors, at Davenport, Iowa, on August 24, 1865, at which place it immediately scattered for home.

It was his remarkable military service, including his railroad rebuilding, which led to Winslow's selection after muster out, to assist in establishing the National Express and Transportation Company through the United States, by which it was planned to find employment for the leading officers honorably discharged from both services.

Finally, it was still later, that Winslow, after building fifty miles of the Vandalia Railroad and selling his contract for the rest to the Pennsylvania Company, was selected for the actual construction of the Saint Louis and Southeastern and the Cairo and Vincennes Railroads, which he carried through with such unusual speed, that, notwithstanding the great financial crash of 1873, he was called to the receivership and management of the Burlington Cedar Rapids and Minnesota Railroads, for the next four years.

Meanwhile under appointment by President Grant he served as inspector for the Government of the Union Pacific Railroad on its completion.

In November, 1879, he took charge of the Manhattan Elevated Railway, and after a year, spent in unifying the control and management of the system, he accepted the Presidency and management of the Saint Louis and San Francisco and the Atlantic and Pacific Railway Companies, which he held for several years to the satisfaction of all who were interested in them.

During this period he became President of the New York, Ontario and Western Railway Company and the head of the organization which in connection with that company constructed the railroad now known as the West Shore Railroad. In 1885 he severed his connection with these interests and thereafter

devoted himself to the management of the Saint Louis and San Francisco until his retirement from all active business.

Winslow's services as a soldier might properly be regarded as constituting a most heroic episode in the life of any American citizen. An approximate calculation shows that his changes of station and his campaigns in the four years of his army service covered about five thousand miles, as the crow flies, and allowing for crooked roads, and daily scouts and movements, it is more than probable that his aggregate mileage should be increased to seven thousand, or seven thousand five hundred miles which could hardly have been surpassed by that of any other officer of his rank or period. His subsequent civil life covers about twenty-five years, during which he managed and controlled, or advised in the arrangement of many important lines and systems of railroad and received and disbursed many millions of capital.

He spent his last twenty years in Paris, where his handsome home was constantly open to his countrymen and friends. He gave much of his time to the American settlement and its interests, and especially to its church. He was the intimate friend of the pastor and congregation and helped liberally in every good work that either took in hand.

The diplomatic corps held him in high respect, and he had many friends among the foreign statesmen and public men as well as amongst our own who will mourn his absence and miss him from the places both at home and abroad that he graced with such unfailing amiability and benevolence.

While living in New York he became a member of the Union League, the Century, and the Metropolitan Clubs. Later he was elected a member of the Country and Automobile Clubs of Paris.

As he died without issue, leaving his fortune to his wife, and as no one has ever been heard to charge that it was excessive it may be safely assumed that "The work he did," in every station of life, "was better than the pay he got for it."

THE CAVALRY COMBAT AT KELLY'S FORD IN 1863.

BY MAJOR GENERAL GEORGE B. DAVIS, U. S. ARMY.

IT not infrequently happens that officers of our cavalry, in discussing a proposition which has been accepted by us for a generation or more, feel a little more certain about it if they can bolster it up with a citation from a German writer of acknowledged standing in military affairs. This is all very well, but it should not be forgotten that the German is giving us—not a current criticism—but a historical conclusion, and it is not infrequently a generation or more after the fact. I find in the JOURNAL of November, 1913, a citation from von Bernhardi, who is often cited—always with cogency and generally with propriety—in which he goes on to say: "I believe that only in exceptional cases will a purely cavalry combat take place. It will by no means always be a matter of choice whether we fight mounted or dismounted. Our opponents will compel us to use dismounted action by himself dismounting and seizing the rifle. Cavalry will generally act dismounted, but small bodies may effect surprise by shock action." Lord Roberts, in speaking of our cavalry in the Civil War, declares that: "Its achievements were far more brilliant than those of the Germans of 1870." My memory may fail me to a certain extent, but at the time of writing I am unable to recall a single operation of the German cavalry in that war which, in the remotest degree resembles the brilliant mounted and dismounted work done by Buford and Averell, Stoneman and Gregg, Sheridan, Merritt, Wilson and Custer in the last three years of the Civil War. In the years following the Civil War the operations and exploits of the Federal and Confederate cavalry were discussed by continental writers with badly disguised contempt; they were as harshly criticised as they are now generally and intelligently commended by European writers; indeed, it is

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sufficient to say that while they have received academic approval abroad, no European commander has had sufficient confidence in his own capacity as a leader of cavalry, or in the intelligence and resourcefulness of his men to attempt them, not only upon a large scale, or indeed, upon any scale whatever. The great Moltke himself rarely alluded to them; they never received commendatory notice from the great German commander by whom they were not fully understood, being contrary to his inclination which was to conduct the operations of war in a dignified way, with some assurance that he should not be vexed by the annoying and unprofessional harassment of bodies of cavalry that declined to do business in conformity with ancient practice.

Colonel Gresham, the able author of the article in the November, 1913, number of the CAVALRY JOURNAL, whose work is worth the closest reading and study, wisely favors the retention of the single rank formation and goes on to say what we may expect from the adoption of a double rank—I do not say the retention of that formation, for our practice has been to use the single rank upon all possible occasions: "If we set ourselves to thinking about a charge in double rank, and try to picture the effects of accidents of ground, green mounts, green volunteers, running on the heels of front rank horses, casualties from fire, smashing of front rank at contact, resulting smashing of rear rank, chaos in both, are we not disposed to shrink away, and turn with hope to the order and cohesion of single ranks coming on in swift succession, but far enough apart to escape at least all avoidable disasters?"

The War Records tell us of a cavalry combat, pure and simple, which occurred on Saint Patrick's Day, 1863. The generals in command of the opposing forces went into the combat with no prejudice in behalf of either formation; their sole idea was to get at each other on horseback, and see who was the better man and which was the better cavalry. But the engagement has importance for another reason, as will appear from a study of the facts in the case. There is a widely accepted view that the Cavalry Corps of the Potomac came into being as a result of General Averell's operations on the upper waters of the Rappahannock, which preceded the Stoneman raid, of

1863; there is a briefer statement of the same fact in the assertion that the cavalry of that army "*found itself*" in the spirited combat at Kelly's Ford on March 17, 1863. Both statements are to some extent true. The cavalry of the Army had been undergoing a process of development; the Stoneman raid, in the later spring of the same year, demonstrated what cavalry was capable of doing when acting independently under an efficient and resolute commander; its later efficiency was the result, rather than the cause of its improved condition, and was due in part to its superior organization but, in greater part to its dearly won experience in the game of war as played by General Stuart—an acknowledged leader in its marvelous and surprising development.

The mounted regiments of the Army of the Potomac were composed of very intelligent material, quick to learn or, to speak more accurately, quick to teach themselves the proper use of the cavalry arm as an integral part of a great army in the field. Prior to its reorganization by General Hooker it had been used for escort purposes and for small reconnaissance work, forms of employment which hindered its development, diminished its power and greatly impaired its usefulness. The experience of the campaigns of 1862 had been most illuminating; to none more than to the officers and men of the corps itself; they had become an efficient force and, in the spring of 1863 had gotten to know it. It was equally well known that there were those among them who were capable of commanding large bodies of mounted troops successfully; Stoneman, Buford, and Gregg, Pleasanton and Averell, in the handling of their brigades had proved themselves to possess the qualities that made for success in the handling of divisions; behind them Grimes, Davis, McIntosh, and Bayard, to name no others, were handling brigades with skill and resolution. Merritt and Custer were to be discovered later, by Hooker himself, on the march to Gettysburg, and were to prove themselves cavalry leaders in every sense of the word. Sheridan who had reached the command of an infantry division and Wilson whose ability had been discovered by General Grant were contributors from the Western Armies and proved their capacity to do great things when the opportunity to do was so afforded them. In-

deed, the organization of the cavalry corps, of the necessity for which Hooker, Halleck and the President himself were fully convinced before the order went forth creating the new command and placing General Stoneman at its head—probably the ablest, and certainly the most experienced commander of the corps during the entire period of its official existence. It will thus be seen that large things were about to happen to the cavalry when Averell set out on his expedition to the upper reaches of the Rappahannock, in March, 1863.

The immediate cause of the movement will be found in the annoying and persistent activity of General Fitz Lee, who commanded a strong and efficient brigade of cavalry in the vicinity of Bealeton and was giving Hooker and Halleck great concern; less perhaps on account of what it was actually doing—though that was disconcerting enough—than for what it might do should General Lee take counsel with Mosby and transfer his operations to a field of activity considerably nearer to the city of Washington. It was the idea of Hooker to send a superior force of cavalry to the vicinity of Culpepper, which was Fitz Lee's base of operations, and the place to which he returned from his forays along the line of the Orange and Alexandria Railroad, and into the territory in rear of the Army of the Potomac, lying between the railroad and the river.

The forces employed were about equal. Averell started with 3,000 men, including an excellent battery of horse artillery. Lee had five regiments of cavalry which were then composed of about five hundred men each. Averell, after getting under way, was obliged to detach nine hundred men at Catlett's Station to observe the fords of the Rappahannock and deal with a considerable force of Confederate cavalry that was operating north of the river. The forces engaged were therefore approximately equal; it goes without saying that the Union cavalry was better mounted and equipped, but the Confederates made up for this by a thorough and detailed knowledge of the country and an extensive acquaintance with its residents, who were entirely in sympathy with them.

Averell left his camps at Acquia Creek on the morning of March 16th; his destination was Fitz Lee's command, wherever it might be encountered; he was to seek it out and demolish

it; the injunction of the order being that he was "to rout or destroy the enemy," and we are to see how near he came to the accomplishment of the task required of him by the commanding general of the army. Averell differs from many commanders who, when they attack the enemy and find themselves somewhat the worse for the encounter, belittle the importance of the duty required of them in their orders; not so Averell, here, as always, whether successful or otherwise, he tells you in his report just what he ordered or expected to do, and just what he achieved, or failed to achieve in the execution of his instructions.

Kelly's Ford, some distance above Fredericksburg on the Rappahannock River, is one of the more difficult crossings of that stream, when that term is used in a strictly military sense. The river for a considerable part of its course lies well below the surface of the surrounding country; considerably below the general level is the rim; though not a cañon formation, its immediate banks are steep and high, especially at a full stage of the river. The ford itself is not wide nor particularly deep; not deep enough, indeed, to constitute a serious obstacle, or to require a resort to hasty bridge construction, or the employment of pontoons. A crossing may be resisted by artillery placed on the opposite bank as the command descends to the actual crossing. Resistance may also be attempted when the attacking force reaches the ford itself; a more efficient one may be put forth when the enemy, after affecting the passage of the ford, attempts to ascend to the high ground on the opposite bank of the river. The crossing may be protected, to some extent by artillery fire until the attacking force begins its ascent; when the advantage passes to the offensive until the ascent has been completed; once over victory will rest with the best mounted and best handled command.

General Averell encamped at Morrisville at the end of his first days march, where he was joined by the 6th New York Independent Battery under Lieutenant Brown. The ground was heavy and progress had been distressingly slow. During the night of the 16th camp fires were seen by scouting parties between Kelly's and Ellis' Fords and small detachments of the enemy appeared in front of his outposts later in the evening. One item in his orders required him to rid the country

of small raiding parties between Rappahannock Station and Bealeton. To accomplish this Lieutenant Colonel Doster was sent out with a detachment of three hundred men; the expedition was completely successful and Colonel Doster returned to the bivouac on Elk Run the same afternoon.

Averell set out from Morrisville at four o'clock on the morning of the 17th with what remained after the detachment to Catlett's Station had been made, some 2,100 in all. The head of the column reached the high ground in the vicinity of Kelly's Ford at about eight, where the crossing place was found to be obstructed by fallen timber. The ford itself was defended by less than a hundred dismounted men who occupied the Kelly farm buildings and some improvised rifle pits on the right bank of the river; this made the crossing difficult, as the ford was also commanded from the higher ground. To force a passage two squadrons were dismounted and formed in an abandoned mill race on the river bank. Protected to some extent by their fire an attempt was made to "rush" a crossing to the opposite shore, which failed of success. Two attempts were then made to cross with the assistance of pioneers, but both of these were failures; an effort was made to cross a quarter of a mile below the ford, but this was found to be impracticable, due in part to the depth of the stream and in part to the steepness of its banks. Reading between the lines it is easy to see that, in none of the efforts thus far put forth, was there that determination to cross which could alone succeed in effecting a lodgment on the opposite shore.

After these abortive efforts, Major Chamberlain of the First Massachusetts Cavalry, who was in immediate charge of the crossing arrangements, selected twenty men, put them under the command of Lieutenant Brown, of the First Rhode Island Cavalry, with orders to cross the river and *not to return*. This seems to have been regarded as a new way of putting it, but the arrangement was fruitful of results. Brown and his party passed the abatis, rushed the ford and captured twenty-five of the enemy. After Major Chamberlain had reached the scene of activity, he was seen from the heights above to approach an officer and give him an order; the officer either hesitated or refused to obey, whereupon the Major was seen to raise his

pistol and shoot him from his horse. This seems to have done much to expedite the crossing of the river. This resolute action, though observed by many, cannot be verified by the reports, as the brigade commander submitted no account of the operations of his command during the engagement. There are occasions when such work as this is necessary, especially upon so critical an occasion as confronted General Averell at the instant.

Save for the opposition encountered by Major Chamberlain at the ford, no further resistance was offered by the enemy; Duffié's brigade crossed, accompanied by one section of the New York Battery and was placed in position to cover the passage of the remainder of the division. The ground seemed to be unobstructed on the south bank of the river, and Averell hoped to meet Fitz Lee in the open somewhere between the ford and his camps. Not desiring to be attacked at the crossing with a divided command, the other brigade passed the ford and, at noon, the entire command moved out in order of battle to meet the enemy wherever, and in what force he might be found.

A fringe of timber, a quarter of a mile in width, extended for some distance in front of Averell's command and assisted materially in screening his preparations for attack. As the head of the column reached the outer edge of the timber the enemy was discovered advancing rapidly in line of battle covered by skirmishers. One regiment, the Fourth New York, was directed to the right and another, the Fourth Pennsylvania, to the left, with orders to form line to the front at the edge of the wood, opening fire as the several squadrons succeeded in completing their formation. McIntosh's brigade was formed in line of battle on the right of the timber, supported by three squadrons of the Regular, or Reserve Brigade, under Major Reno. The Pennsylvania and New York regiments which were to open the combat were thrown into some disorder in their attempt to form in the timber under the fire of the enemy; order was restored, however, as the result of the efforts to that end which were put forth by the division commander and his staff, and they soon opened an effective fire upon the advancing enemy.

The country road, after passing the ford ascends to the

higher ground to the south and runs in a direction a little south of west toward the upper crossings of the Rapidan. To the left of the road there was a cultivated field ending in a piece of marshy ground which precluded all operations in that direction. To the right of the road were open fields, several hundred yards in width, ending in a stretch of timber which screened the advance to some extent but did not permit of efficient fighting on horseback. In front of the wood the main body of Fitz Lee's brigade was encountered in line of battle, perpendicular to the road. To meet this situation McIntosh advanced in line, inclining to the right, and supported by Reno; Duffié formed his brigade on the left of the line, on both sides of the road which intersected the scene of the encounter.

The initiative was taken by the enemy, who advanced against Duffié. He, with the true soldierly instinct, immediately formed his brigade in line and charged the force in his front. His attack was, at first, without support until Averell ordered Reno to his assistance; two squadrons of the Fifth Cavalry dashed across the field in Duffié's support; at the same instant McIntosh attacked the left of the advancing column, pushing it back into and beyond the woods from which it had been delivered.

After such a mêlée some hasty reorganization is always necessary. Had the troops been a little more experienced, the readjustment would have taken place substantially as the command was again put in motion, but Averell's men had not yet reached this stage in their military development. In any event, however, such rearrangement as is possible must be quickly accomplished, lest the enemy should gain time to readjust his own lines and form for attack; it should be carried no farther than to make a quick shifting and straightening of the lines, and give an attacking column time to discover its true point of attack. General Averell found his lines in so much disarray, however, after their initial success, as to require some modification to prepare them for the next stage of the combat. Such stragglers as could be collected quickly were driven toward their commands; the wounded, who had become somewhat numerous, were also attended to. This com-

sumed something more than half an hour and gave Averell an opportunity to complete his preparations for the next attack.

To the right of the road and beyond the ground over which he had passed was a belt of timber which thinned out as it approached the river. The ground to the left of the road was so marshy as to constitute a military obstacle, and on this General Averell established his left flank. Advancing in line of battle for about three quarters of a mile, he succeeded in driving the enemy before him through the wood; at its further edge he found himself again confronted by the main body of the enemy, in line of battle mounted, supported by three pieces of artillery, one in the road itself and one on either side. But the marshy ground had now been passed, so that operations on both sides of the road had become possible. The enemy's line could now be seen drawn up on the farther side of the open field, evidently ready to receive anything in the shape of an attack that Averell might see fit to deliver.

But the initiative was not to be left to the Union commander. No sooner had he emerged from the wood than he was attacked on both flanks by the enterprising enemy. The attack on the right was repulsed with little difficulty, as the ground on that side was more favorable to the Union defense. The attack on Averell's left seems to have been delivered before he was fully able to meet it and the last stages of his formation in that direction were subjected to a heavy artillery fire and to the searching discharges from the enemy's carbines who, on this part of the field, was in considerably greater force. Severe as this attack was, Averell supported by three pieces of the New York Battery, was able, first to check it and then to push it slowly back in the direction from which it came. While he was crossing the open, beyond the second belt of timber, the enemy added to his troubles by setting fire to the stubble field which his men beat out with their shelter tents without seriously diminishing the volume or continuity of their fire. Pelham's guns now opened viciously on the Union left; under their powerful support the Confederate cavalry, strongly reinforced, advanced on the extreme Union right; the attack was repulsed with great difficulty by McIntosh, who used for this purpose a squadron of the Fifth Cavalry under Captain Liecester

Walker. A dismounted force of the enemy which was endeavoring to gain the cover of some farm buildings on McIntosh's right was met and repulsed by dismounted skirmishers who gained and held possession of the place. McIntosh finally formed his squadron in column and drove the enemy back, seeking, but in vain, for a position from which to deliver a mounted charge. In this advance Gregg and McIntosh inclined to the left until they came to the improvised rifle pits near which Pelham's admirably served artillery had been established; as they were unable to drive him out of his defences, they were shortly compelled to halt.

The engagement had lasted from noon until five in the afternoon, and darkness would fall before the lines could be rearranged for further aggressive action. Averell had also discovered some evidence that reinforcements were approaching, as trains could be heard moving on the road in rear of the Confederate line of battle. In that view of the case General Averell determined to withdraw. The reserve was advanced to mask the withdrawal of the artillery which then crossed to the north bank of the river, followed in succession by the several brigades; the reserve passed the ford as soon as the command had reformed on the north bank of the river. The retirement was accomplished in perfect order and without the loss of a single man.

General Lee's report, in so far as it relates to the details of the combat, is extremely brief. He concedes that Averell's arrangements for crossing the river were so well timed and so skillfully made that, although he knew that the enemy was advancing, he was completely in the dark as to what General Averell's purposes were and as to the place where he proposed to cross the Rappahannock. As a result Averell succeeded in crossing to the south shore without opposition. Lee, like Averell, reached the conclusion from a distant view of the field that the terrain was one which presented opportunities for the mounted action of his arm; upon close approach, however, he found that his judgment in that regard was in error, due to the peculiar nature of the obstacles to the free movement of cavalry with which the field was covered. The ground was heavy, due to incessant torrential rains; there were too many fences and

stone walls, too many bunches of timber and too much undergrowth to permit of attacks of the kind that each commander desired to deliver.

But in spite of this the engagement was a cavalry action from beginning to end, though no opportunity presented itself for a charge with sabers. The fighting was done with the carbine, fired from horseback; the nature of this form of combat is well illustrated by the table of casualties. General Lee sets his loss at 133; Averell's was considerably less, amounting to about 78, most of which was in Duffié's brigade, which did the greater part of the fighting. This is a tribute to sound training. Colonel Duffié was a cavalry officer of excellent reputation in the French Army. He knew what a cavalry charge was and, on this occasion, did all that could be done to achieve success with the incompletely trained troops which composed his brigade. The Governor of Rhode Island made no mistake when he selected Duffié to command the First Regiment of cavalry which was furnished by that State in response to the President's call for troops in 1861. The casualty lists gives cogent proof of the fact that mounted carbine fire furnishes plenty of noise but is otherwise barren of results.

A loss which General Lee shared with the entire Confederate Army was that of Major John Pelham who was killed during the combat. Pelham spent some time at the Military Academy but resigned at the outbreak of the Civil War to share the fortunes of his State in that undertaking. He was appointed to the artillery and had reached the grade of major in that arm some time previous to the engagement at Kelly's Ford. Though hardly more than a boy in years, he had shown the greatest capacity as a soldier and as a commander of artillery and had achieved fame and distinction as an officer of horse artillery which was not surpassed in either army. And so in the very springtime of youth the gallant Pelham passed to "fame's eternal camping ground," before the fortunes of his arm began to wane under the relentless hammering of the more numerous and better equipped horse artillery of the United States Army. Strikingly handsome, of distinguished appearance, and most engaging manners, he was easily a master in the handling of

horse artillery—an arm which attained a remarkable development during the period of the Civil War. The battle reports from the beginning of the Peninsular Campaign to the hour of his untimely death abound with references to his gallantry as a soldier and to his skill as a commander of artillery. In the order announcing his death General Stuart speaks of him as "young in years, a mere stripling in appearance, remarkable for his genuine modesty of deportment, he yet disclosed on the battlefield the conduct of a veteran, and displayed in his handsome person the most imperturbable coolness in danger. His eye had glanced over every battlefield of this army from the first Manassas to the moment of his death, and he was, with a single exception, a brilliant actor in all. The memory of the gallant Pelham, his many manly virtues, his noble nature and purity of character are enshrined as a sacred legacy in the hearts of all who knew him. His record has been bright and spotless, his career brilliant and successful. He fell, the noblest of sacrifices on the altar of his country, to whose glorious service he had dedicated his life from the beginning of the war."

The dead cavalymen that General Hooker had so much desired to see had been on view on many hardly contested fields in which the cavalry had taken a distinguished part. Between February 1st and Saint Patrick's Day, a little more than a month and a half, there had been fourteen contacts in which the Cavalry of the Army of the Potomac had taken an important part and in some of which serious losses had been sustained. Properly regarded, these afforded visible, convincing testimony to the fact that the Union cavalry was undergoing a process of development, which was as rapid as was permitted by the conditions under which it served. The work of minor reconnaissance was now entrusted to platoons commanded by lieutenants, and regiments were no longer sent out to find whether particular fords were practicable—tasks now entrusted to subaltern officers or to sergeant's patrols. This development had reached a point where the separate employment of cavalry by brigades had become the rule; the operation which I have attempted to describe makes it clear that a division with its greater strength and more skillful handling can accomplish more

than two independent brigades had been illustrated by the action of Averell's Division in the Valley of the Rappahannock. To that extent the cavalry of the United States Army may truly be said to date the beginning of its widest development from the engagement at Kelly's Ford in the early spring of 1863.



A VOICE FROM THE ANTIPODES.

"WHAT HORSE FOR THE CAVALRY."

BY COLONEL SPENCER BORDEN.

A FEW days ago, there came from someone in Australia, whose name even was unknown, a copy of a book entitled "Pure Saddle Horses," by Edward M. Curr, published in Melbourne, in 1863.

In the Preface one reads:

"With regard to the possession of such experience as might be supposed to give the author some fitness to treat of the subject which he has undertaken, it may be allowable to state, that, a native of the colonies, circumstances have led me during twenty years to pass more time in the saddle than falls to the lot of most men; that the journeys I have made on single horses, extending from 100 to 1,000 miles each, are innumerable and that I have lived amongst people of similar occupations, and have had the benefit of their experience. To this I have added some personal experience of the horses of England, Ireland, France, Belgium, Spain, Italy, Switzerland, Turkey, Syria, Palestine, Greece, Egypt, the Ionian Islands, the Cape Verde Islands, Brazil and New Zealand, as well as those of Tasmania and Australia."

It seems probable, therefore, that, if the author is not qualified to express an opinion about saddle horses, it cannot be because of lack of experience.

Certain portions of the book may be of interest to the readers of the JOURNAL of the U. S. Cavalry Association, and these are appended herewith.

To cover the ground as thoroughly as possible, it opens with a review of two other books, which sixty years ago, were the standard works on the horse—Youatt and Stonehenge.

The first named, he disposes of on a single printed page. Stonehenge had recently issued his "Horse in the Stable and in the Field," and to him the writer devotes more attention. Referring to the claim of superiority put forward by Stonehenge for the English thoroughbred horse, he says:

"In the meantime let me ask in what does the superiority which we so often hear claimed for the English horse consist? It cannot be on the score of racing—in which he is without a rival—because the speed of the race horse serves no useful purpose of life, it is too costly in its attainment, is debarred to all but boys and dwarfs, and indeed is a means, not an end." (p. 20.)

"Then, if 'like begets like,' on what principle is the racer used as the sire of hunters, hacks or chargers, in which horses qualities very different from his own are necessary? In truth, this is a direct contradiction of the very principle on which is founded the whole theory of breeding. Let us go a little into particulars. In hacks, hunters and chargers, we are told (and who can deny it?) that 'soundness of feet and legs are all important, together with a capacity to bear a continuation of severe work.' In other words these horses must be sound and stout. To be so, they must—like begets like, remember—be got by horses that are sound and stout; they are, we have seen, got by the thoroughbred or racer. Well! Is he sound and stout? Whatever *he* is, *they* must be to a considerable extent, and as such you must receive them, or cast aside the received theory and substitute another on the subject, different from that received either in England or anywhere else." (pp. 22 and 23.)

"Has then the racer sound feet and legs? Is he sound and stout? Listen to Stonehenge, speaking of English horses (p. 81.) 'But how many of the fashionable sort,' says he, 'will bear constant use on the road without becoming lame and how many sound horses are there to be met with out of a hundred, taken from the ranks of any kind tolerably well bred? Every horse proprietor will tell you scarcely five per cent., and some will even go so far as to say a sound horse is utterly unknown.' The same author (p. 80) further says, 'One chief difficulty of the trainer now is to keep his horse sound, and unfortunately as disease is in most cases hereditary, and too many unsound

stallions are bred from, the difficulty is yearly on the increase. Without doubt, roaring is far more common than it used to be, and the possession of enlarged joints, and back sinews is the rule instead of the exception. During the last ten years, the Derby has five times been won by an unsound animal, which the trainer was almost immediately afterwards obliged to put out of work, either from diseased feet or a break-down, and yet few breeders think of refusing to use such horses as these.' (pp. 23 and 24).

The author then, for three pages of his book, continues to quote the lamentations of Stonehenge, beginning:

"Our present breed of horses is undoubtedly less healthy than that of our ancestors"—(this in 1861), and ends by asking: "What will an admirer of English horses think of all this."

He continues (pp. 27 and 28):

"In training, the superfluous fat used to be removed from racers by sweating gallops with cloths on. For the gallop the Turkish bath has now been substituted, with the object of sparing the animals' legs. 'No wonder, therefore,' says Stonehenge, page 264, 'that trainers eagerly resort to the use of the bath, as every year their horses seem to be getting more liable to break down.' But this is not all, nor the worst; so delicate and frail is the English high-bred horse, that we find, that not only is he unable to sustain his sweating gallops and his races uninjured, as we have seen, but he can no longer even be entrusted loose on his summer pasture ground. 'Not only,' says Stonehenge, page 276, 'is his stomach pinched, but his legs and feet are damaged by being battered on the dry soil. The feet of wild asses, and even native Arab horses, may be able to bear the blows and friction of the wastes over which they travel, but those of English horses are undoubtedly not formed of such strong and tough materials, so that it is utterly unwise to leave them exposed to the risk.'"

The review of Stonehenge occupies forty-three pages of the book, and is similar in its array of facts and compilation of the logic of those facts. One or two more quotations, and we will leave this part of the argument.

"With regard to Stonehenge, it will not be needful to press further the consideration of his work. His enthusiastic admir-

ation of the thoroughbred leads him into inconsistencies. He upholds him as the first of horses, and yet, allows it to leak out that he is delicate, unsound, and useless. To his agency as a sire (added to 'grass so admirably fitted to the delicate stomach of this animal' that it renders him too fat in summer and autumn and too poor to work the rest of the year, joined to a climate so excellently suited to him as to be hourly guarded against) he attributes that fine breed of horses, which he himself considers to have been long deteriorating, and which he in fact shows us will in future require Government support, with the help of sires from France, Belgium, Prussia and Hungary, to preserve from even a fuller decrepitude. But even this partiality and folly might have been passed over and must be esteemed but a venial offense compared to his great and radical contradiction—that of first singing the praises of pure blood in horses of every description, and yet holding up as the acme of possible perfection as a saddle horse the bastard offspring of the thoroughbred.

"In two words, I can only estimate this author as an able exponent of an utterly untenable system."

Having devoted several pages to comparison of the horse known as the thoroughbred, with his progenitor the Arab, the author says:

"That the Eastern horse in England is still an exotic, a hot house plant, and has become degenerate and not acclimatized, he owes in a great measure to the turf. As a rule in England the higher the breeding the more useless the animal; amongst the Eastern the purer the blood, the more capable the horse."

Having disposed, as he thinks, of the claims of the English thoroughbred, as a desirable source from which to breed useful and desirable horses for any purpose other than racing; and shown that horse racing as carried on universally in connection with gambling schemes, is potent as a force to injure and not improve horseflesh, the author develops his ideas in various directions. One is of interest to all cavalymen, especially in these strenuous times when cavalry horses are being destroyed by the thousands. Let us, therefore, reproduce, complete, the

chapter dealing with that subject. (We will omit quotation marks, and here follows pp. 54 to 70 inclusive of the book.)

CAVALRY HORSES.

Captain Nolan on Cavalry and its Tactics.

"Our Cavalry horses are feeble; they measure high, but they do so from length of limb, which is weakness not power."
—Nolan.

From what has been submitted to the notice of the reader in the preceding chapter, I trust that his faith in the advisability of breeding saddle horses from English racing sires will be somewhat shaken. But if such breeding is an error, it is not without many kindred ones. In fact a sort of fatality seems to have attended the management of horses by Englishmen and Europeans generally.

In the last seventy years we have done wonders for some at least of our other domestic animals. The produce of our sheep for instance, both in meat and wool, has been much increased in quality and bettered in description, and so in other things. We have gone on perfecting old sciences and creating new ones; thinking, weighing, and reasoning, we have gone on road making, steaming, manufacturing; disseminating our people and language on all sides; we have bettered and multiplied our material products; all that requires peace and security to grow has flourished. And so again in the art of destruction; our armies and volunteers have so increased in numbers and efficiency that it might almost be said, that the labor saved by steam to the hands of man, has been concentrated on the means of defense or aggression; but whilst our navy and artillery have armed themselves with a deeper thunder and a more deadly bolt, whilst our infantry has become infinitely more efficient than it once was, it would be difficult to show that our cavalry and their horses have not absolutely retrograded in every useful qualification. To make, however, the magnitude of our systematic mismanagement of saddle horses, more unmistakably evident, I must bring forward

further evidence on the subject and expose abuses and follies of another class. In the management and breeding of the thoroughbred horse in England, when his real purpose is considered, viz., no improvement in, or keeping up of the quality of the saddle horses of that country, which does not for a moment enter into the purely commercial, and in no wise patriotic calculations of the breeder, but the production of an animal that shall stand a chance to fill his owners pockets by success on the race course, there is undeniably displayed an immense amount of experience and sound knowledge of the real means to attain the result sought. This I have never denied; what I have endeavored to point out, is the extravagant folly of a system which assigns to these racers the office of sires for saddle horses, in the face of every experience and of every rule, the result of experience on this subject. I must now, however, go a step further, and show my reader that when the absolute necessity for proficiency in his undertaking, *that is the money test*, which is forced upon the racing man, is removed, the skill which distinguishes him in his particular branch of horse management, at all events, disappears likewise, and ignorance and folly usurp the places of knowledge and common sense. A remarkable exemplification of the truth of what I advance was found in the doings of George IV; nobody ever denied (for there is no denying racing results which are expressed but by two words, on which indeed the fate of too many depends—*success or failure*) his perfect capability for directing the management of his racers and racing stud, any more than his contemptible failure when he turned his royal attention to the management of cavalry.

Of no class of horses have we the same opportunity for forming a correct estimate as in that of the cavalry. Here we have many horses, treated on certain well authenticated principles, arriving at well known results. In turning to accounts of cavalry, one would expect to find, that however much the breeding of horses may have failed, that the management of such as have been selected for army purposes would have approached to something like perfection. Where the great national interests and honor of a people has so often fallen and will again in all probability fall to the lot of a few squadrons of cavalry to decide; where crowns, kingdoms, and colonies, where the fate of

those who sit at the fireside has been so often delegated to the arbitrament of the saber; where so many intellects and for so long a time have been concentrated, we may suppose on that very important subject, the horse-soldier and his horse, it will be difficult to believe that anything but a judicious treatment, almost the perfection of horse management, has not long since become traditional in the service. With so much skilled labor at command, with the experience of ages to guide it, and the paramount importance of the subject itself intimately connected with the very being of a nation, here if anywhere we must expect to meet the results of a full and enlightened experience. As the remarks of a civilian on cavalry horses and their management might be looked down on as wanting the seal of professional knowledge to give them value, I will retire from the scene and allow the soldiers to speak for themselves.

General F. de Brack, in his preface to his work on "Light Cavalry," says: "War, said General Lasalle to me one day, is to the soldier who has not previously quitted his garrison, what the world is to the young man, who is leaving the forms of his school, *it is the application of the theory.*"

How does the British soldier and his horse stand this test? Lord Wellington, in his despatch 8th November, 1810, says: "Neither the Dragoons nor their horses are capable of performing much service, in the first year after their arrival; and many horses are lost, being unaccustomed to the food of the Peninsula, and from want of *experience in the mode of taking care of them.*" So the theory fails in practice! and a new experience is needed. In "Cavalry, its History and Tactics, by Captain L. E. Nolan, 15th Hussars," we get a pretty clear insight both into the doings of our cavalry authorities as well as into the worth of our cavalry horses. In introducing this work to such of my readers as have not read it, it may be well to premise, that Captain Nolan had service in the Hungarian Cavalry, and was well acquainted with that arm in France, Austria, Russia, England and India; was an enthusiast in his profession, by the members of which his book was well received. "The most hopeless condition to which an arm or science," says Nolan, "or an art can attain, is that where its professors sit down with perfect self-satisfaction, under the conviction that it has

reached perfection and is susceptible of no further improvement." A very proper and pertinent remark from an author who is just going to demonstrate, that the whole state of the arm of which he treats is rotten, root, stem and branch. Speaking, for instance, of the Indian troops who did such good service, when fighting in their own fashion with their feet in short stirrups, and sharp blades in their hands, he says: "There is scarcely a more pitiable spectacle in the world than a native trooper mounted on an English saddle, tightened by his dress to the stiffness of a mummy, half suffocated with a leather collar, and a regulation sword in his hand, which must always be blunted by the steel scabbard in which it is encased."

I could multiply such instances and reflections, but will pass on to what chiefly concerns us, the horse. Lieut. Gen. Sir Charles Napier, as quoted by Nolan, says: "The hardships of war are by our dressers of cavalry thought too little for the animal's (the horse's) strength; they add a bag with the Frenchified name of *valise*, containing an epitome of a Jew's old clothes shop. Notably so if the regiment be Hussars, a name given to Hungarian light horsemen, remarkable for activity, and carrying no other baggage than a small axe and a tea kettle to every dozen men. Our Hussar's old clothes bag contains jackets, breeches of all dimensions, drawers, snuff-boxes, stockings, pink boots, yellow boots, eau-de-cologne, windsor soap, brandy, satin waist-coat, cigars, kid gloves, tooth-brushes, hair-brushes, dancing spurs; and thus, a light cavalry horse carries twenty-one stone. (294 lbs.) Hussars our men are not; a real Hussar, including his twelfth part of a kettle, does not weigh twelve stone (164 lbs.) before he begins plundering."

"Without a system," says Nolan, "and a good system, it is impossible to make good troopers; at present we have none."

Many follies and mishaps, and amusing ones, might be transcribed from the pages of Captain Nolan, accounts of men armed with swords which will not cut, saddles on which it is impossible to sit, placed on the loins instead of the back, and girthed round the belly instead of the brisket, might be brought forward. All these and a hundred other such absurdities, which are not accidental but parts of a system instilled into our sol-

dier, and which send him to battle rather a victim than a combatant, might be adduced as proof of the empiricism to which the horse and all concerning him has been consigned. This, however, is apart from my subject, and I will at once hasten to place before my reader the results of Captain Nolan's experience of the stoutness and soundness of the English horse. The chapter is transcribed complete.

"Before I left India, some very interesting trials were made at Madras, by order of the Commander-in-Chief, General Sir George Berkeley, the object of which was to test the capabilities of the troop horses, as well as the relative merits of entire horses and geldings for the purpose of war.

"Three trials were made. The first with two regiments of Native Regular Cavalry, one of stallions, one of geldings. The next with two troops of Horse Artillery. The third, and last, with two hundred English Dragoons (15th Hussars) one hundred riding stallions, and one hundred mounted on geldings.

"This squadron marched upwards of eight hundred miles, namely from Bangalore to Hyderabad, where they remained a short time to take part in the field days, pageants, etc. They then returned to Bangalore, four hundred miles, by forced marches; only one rest-day was allowed them, and the last six marches in were made at the rate of thirty miles a day. They brought in but one led horse; stallions and geldings did their work equally well, and were in equally good condition on their return. The question was, however, decided in favor of the latter, because they had been cut without reference to age, and only six months before the trial took place. The English Cavalry in India is well mounted. On an emergency any of these Indian regiments would gallop fifty miles in pursuit, leave few horses behind, and suffer but little from the effects of such exertion. The horses on which they are mounted are small but powerful. The Arab, the Persian, the Turcoman, the horses from the banks of the Araxes, are all unrivalled as war-horses. I have seen a Persian horse, fourteen hands, three inches, carrying a man of our regiment of gigantic proportions, and weighing in marching order twenty-two and a half stones (315 lbs.); I have seen this horse on the march above alluded

to, of eight hundred miles, carrying this enormous weight with ease, and keeping his condition well. At the crossing of the Kistna, a broad, rapid, and dangerous river, the owner of the horse (Private Herne, of 'C' troop) refused to lead the animal into the ferryboat to cross, but saying 'an Hussar and his horse should never part company,' he took to the water in complete marching order, the gallant little horse nobly stemmed the tide, and landed his rider safely on the opposite bank.

"An officer in India made a bet that he himself would ride his charger (an Arab little more than fourteen hands high) four hundred measured miles in five consecutive days, and he won the match; the horse performed his task with ease, and did not even throw out a wind-gall. The owner, an officer of the Madras Artillery, died shortly afterwards.

"General Daumas relates that the horses of the Sahara will travel, during five or six days, from seventy-five to ninety miles a day, and that in twenty-four hours they will go from one hundred and fifty to one hundred and eighty miles, and this over a stony desert. Diseases of the feet and broken wind are almost unknown amongst them.

"What would become of an English cavalry regiment if suddenly required to make a few forced marches, or to keep up a pursuit for a few hundred miles! Their want of power to carry the weight, and want of breeding, makes them (the horses) tire after trotting a few miles on the line of march.

"Our cavalry horses are feeble; they measure high, but they do so from length of limb, which is weakness, not power.

"The blood they require is not that of our *weedy race-horse* (an animal more akin to the greyhound, and bred for speed alone) but it is the BLOOD OF THE ARAB and Persian, to give them that compact form and wiry limb, in which they are wanting.

"The fine Irish troop horses, formerly so sought for, are not now to be procured in the market. Instead of the long, low, deep-chested, short-backed, strong-loined horse of former days you find nothing now but long-legged, straight-shouldered animals, *prone to disease* from the time they are foaled, and *whose legs grease after a common field day*. These animals form the staple of our remount horses.

"Decked out in showy trappings, their rider decorated with feathers and plumes, they look well to a superficial observer; *but the English cavalry are not what they should be*. If brought fresh into the field of battle, the speed of the horses, and the pluck of the men, would doubtless achieve great things for the moment; *but they could not endure, they could not follow up, they could not come again*.

"All other reforms in our cavalry will be useless, unless this important point be looked to. It is building a house on the sand to organize cavalry without good horses. Government alone could work the necessary reform by *importing stallions and mares of Eastern blood*, for the purpose of breeding troop horses and chargers for the cavalry of England.

"It is said that a Government stud is opposed to the principle of competition. What competition can there be amongst breeders for the price of a troop horse, when by breeding cart horses they obtain £40 for them when two years old? How could they possibly afford to rear animals with the necessary qualifications for a cavalry horse of the first class? To breed such horses a cross must first be obtained with our race-horses. This would entail a large outlay of capital, and when a good troop horse was produced, the breeder could not obtain his price for him.

"The rules of our turf encourage speed only, and that for short distances. *Horses are bred to meet these requirements, and from these weeds do our horses of the present day inherit their long legs, straight shoulders, weak constitutions, and want of all those qualities for which the English horse of former days was so justly renowned*.

"I had heard of fine horses in Russia, but I complacently said to myself, 'Whatever they are they cannot be as good as the English.' However, I went to Russia—and seeing is believing. Their horse-artillery and cavalry are far better mounted than ours, and their horses are immeasurably superior in those qualities which constitute the true war-horse, namely: Courage, constitutional vigor, strength of limb, and great power of endurance under fatigue and privation.

"The excellent example set by Sir George Berkeley, in India, might be followed up at home with great advantage

to the service; the capabilities of our cavalry horses of the present day should be severely tested, and the saddles should be tried, and experiments made to ascertain how sore backs may be avoided."

And yet how are we to reconcile this with the following assertion in an earlier part of his work, where he writes: "I have heard it said that English horses are not adapted, like the Arab and other horses of Eastern blood, to skirmishing, to pulling up from speed, and turning quickly. The better the horse the more adapted to all feats of agility and strength. No horse can compare with the English, no horse is more easily broken into anything and everything, and there is no quality in which the English horse does not excel, no performance in which he cannot beat all competition."

This I at least put down as a rhodomontade which he has not failed to correct in his more serious mood when the subject came formally before him, and on several occasions. Nothing can be stronger or more contradictory than the former passage from Nolan. Here we have his estimate of the thoroughbred, of the English saddle-horse, and of the Arab. Stonehenge, too invokes Government aid, and asks for sound and stout sires for the turf; Nolan calls for Eastern sires for the cavalry horses of England, and yet neither of them appear to me to have arrived at the pith of the subject, or to have seen the yet very obvious fact, that if "like begets like," that if the foal follows the sire, it is monstrous to expect good saddle-horses from racing sires, be those horses good or bad of their sort, and, of course, still less when we know how weedy, delicate and unsound they really are.

For the amusement of the reader, I will add a few more particulars of cavalry and its management, from the same writer.

For example, he says: "When I was in India an engagement between a party of the Nizams irregular horse, and a numerous body of insurgents took place, in which the horsemen, though far inferior in numbers, defeated the Rohillas with great slaughter.

"My attention was drawn particularly to the fight by the Doctor's report of the killed and wounded, most of whom

had suffered by the sword, and in the column of remarks such entries as the following were numerous, 'Arm cut off from the shoulder,' 'Head severed,' 'Both hands cut off (apparently at one blow) above the wrist, in holding up the arms to protect the head,' 'Leg cut off above the knee,' etc., etc.

"I was astonished. Were these men giants to lop off limbs thus wholesale, or was this result to be attributed (as I was told) to the sharp edge of the native blade, and the peculiar way of drawing it? I became anxious to see these horsemen of the Nizam, to examine their wonderful blades, and learn the knack of lopping off men's limbs. Opportunity soon offered, for the Commander-in-Chief went to Hyderabad on a tour of inspection, on which I accompanied him. After passing the Kistna River, a squadron of these very horsemen joined the camp as part of the escort. And now fancy my astonishment! The sword blades they had were chiefly old dragoon blades cast from our service. The men had mounted them after their own fashion. The hilt and handle, both of metal, small in grip, rather flat, not round like ours where the edge seldom falls true; they had an edge like a razor from heel to point, were worn in wooden scabbards, a short sling held them to the waist-belt, from which a strap passed through the hilt to a button on front, to keep the sword steady and prevent it flying out of the scabbard."

Again, says the same writer: "At ———, on the Continent, X showed us the royal stables, and the horses broken in at the riding school. One of them had no shoes on; we asked the reason. Answer, 'He never works out of the riding school.' Question, 'How old is he?' A. 'Fourteen years old.' Q. 'Is he quite perfect in the riding school work?' A. 'Not quite, but very good at it.'

"We were shown a 'Springer.' A groom led in a horse with his tail tied on one side (I presume to give a better opening for the whip of the riding master), a cavesson on, and a young man in jack boots riding him, his legs drawn down and unnaturally far back, a cutting whip upright in one hand, and the reins divided in both hands. The horse was placed against the side wall, the groom in front with the cavesson line held up to prevent the horse springing forward. The animal was evidently

uneasy and looked back. No wonder! for presently the riding master stepped up behind, and crack! crack! went the whip into the 'springer's' unprotected hind-quarters. He sprang in the air and back to his place, for he could not get forward. This was not enough. It appears that the perfection of this performance consists in getting the horse to kick out behind at the moment he is off the ground with all fours; and what between the groom pulling the iron band against the horse's nose with all his might, and the riding master giving him the whip with a practiced hand, he succeeded in getting the *Capriole* required, sending the man in boots to the horse's neck at the same time. The riding master, pleased at the success of his experiment, turned to us to explain how difficult it was to get a horse to do it. I asked how long the horse had been at it. 'Oh,' said he, 'he has been a springer for several years. In fact, he was a lucky beast and got his promotion early in life.' "

With these extracts from Nolan, I will leave the reader to form his own idea about the management of cavalry horses, etc. by Europeans, and yet, at the same author remarks, "It doubtless requires great liberality and freedom from prejudice and preconceived opinion to admit that a system, on which the talent and experience of practical men has been expended for ages can be a bad one." May not these words be applied to many things in connection with our horses.

So ends the chapter on Cavalry horses, in this book of more than fifty years ago. It is followed next by a discussion of the merits of Arab horses. This I refrain from reproducing, for the reason that so much in this line has already appeared in the JOURNAL of the Cavalry Association, and also because the data of the Australian writer is largely derived from the book of General Daumas, then lately published. Daumas' acquaintance with Abdul Kadir, then an exile at Damascus, had opened sources of information hitherto unknown, but these were much amplified within the succeeding twenty years, through the investigations of Roger Upton and the Blunts.

The dreadful contest now going on in Europe is again making acute the question of horse supply for military purposes. In this war the average useful life of the horses is said to be but four days:

Where are the replacements to come from, and what will they be like when secured?

How much longer will we of the United States continue the suicidal folly of *laissez faire*? Will our luck hold forever?



REPORT UPON YEAR SPENT WITH FRENCH CAVALRY.

BY A CAVALRY OFFICER ABROAD.

I SAILED from New York on September 14th, and, arriving in Paris, ascertained through the Military Attaché that I was to join to the Sixth Dragoons stationed at Evreux, a small town in Normandy an hour and a half by express train from Paris.

Accordingly, I reported as directed to the Colonel of the regiment on the first of October.

My experience leads me to give the following advice to officers about to enter upon similar duties:

Go to France at least three months before time directed to report to your regiment and spend such time with a French family where no English is spoken. If officer has a family, it is better to separate during this time, or as much of it as possible. It is very necessary to be able to speak and understand the language, for the French officer will not speak slowly for one's own benefit, and one must be able to understand as the language is actually spoken.

Of course, take over nice uniforms. There is no need for khaki. Some very thick, warm olive drab clothes should be taken for winter and spring with perhaps a lighter (but not too light) suit for summer. One suffers from the cold, damp climate and our ordinary olive drab is not warm enough. For most of one's mounted work he will not care to wear an olive drab overcoat, as it is too heavy and is not a riding coat, the skirts being so long that they get muddy and soiled by sweat from horse's sides, especially when using an English saddle, which will be generally the case. By English saddle I mean any flat, pig skin saddle, not military, whether made in England or not. The short riding coat, not uniform but worn by all mounted French officers by tacit consent, will be found very suitable,

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and although it is black, looks very well with our olive drab uniform, and with our blue dress uniform it is very handsome.

Do not take over any bedding roll or camping outfit.

One may defer to one's taste, but when it was necessary to use a military saddle I used the French, having a complete outfit made for me at Saumur. One needs also a flat saddle (not military). There is no officer's military saddle which can compare with the French officer's military saddle and our own service would do well to imitate it just as it is without alteration.

I found that it was not often necessary to wear our blue dress uniform, but occasionally it is so. I wore mine on holidays, in the officer's riding class, (reprises des officiers) in which I always rode, at indoor war games or lectures, when calling, (especially at first and then of course with long trousers), and at the inspections made by general officers, at hunts, etc. The social full dress was useful, and was, by the way, much admired. The full dress I wore but twice, on reporting and at military ceremonies of the 14th of July.

White kid gloves are needed and can be purchased cheaply in Paris.

I used soft top, mahogany colored, (Cordovan leather), boots and soft top black boots, all made in the United States. It would be a mistake to get them in France because their styles are so different from ours, even though sometimes they, can imitate ours for an American officer.

In going out with troops when you expect to be billeted, a dress suit case is sufficient, but it is wise to take along a suit of blue dress uniform, of course including blue cap and black shoes.

Take over one of the light brown pommel slickers issued by our Q. M. Dept. It will be found very useful, especially at maneuvers, and they have nothing as good in France.

Both heavy and light underclothing will be needed.

There will be no use for our olive drab flannel shirt, but a sweater may be useful and a woolen vest to wear under blouses may be very useful.

Before reporting to the regiment, a letter to the Colonel, telling him you have the great honor of being assigned to his regiment, and that you will arrive on a certain date, when you will give yourself the pleasure of reporting to him, or some other very polite phrases, will pave the way considerably for your reception.

Immediately after reporting, call in dress uniform on all the officers of the regiment. After that, if you have a wife, call again with her upon all officers' families. Freely ask French officers about all such customs.

They will consider you one of them and expect you to demand what you need, and if you don't ask for it you won't get it.

ENLISTMENT PERIOD.

The French have now a three year term of service, but when I was with them the term was two years and their system was based on this fact. Their recruits arrive about the 1st of October and since they had two years service they arranged matters so that one-half of the total number needed to recruit the regiment for two years were received each year. Thus each October they found themselves with a little more than half the total strength of the command trained for at least one year and a little less than half new recruits. It is a little less than half, because there are always the reenlisted men.

Men are allowed to reenlist for any term of service which they and the Colonel agree upon, provided their total service may never exceed fifteen years.

Now that they have a three year term of service, they naturally by the same system will receive one-third of the recruits each year instead of one-half.

We would do well to adopt such a system, since no progressive years training can be had with our present system of recruiting. Also, such a system would prevent our losing all our old men at once, as sometimes now happens, leaving a troop with practically nothing but raw recruits.

French officers complained bitterly of the two year term of service, as inadequate to make efficient cavalry. German cavalry officers whom I met exulted over the French two year

system, claiming that it was impossible for the French to have cavalry as efficient as the German because of the French two year term of service, the Germans having three years for cavalry. Germans claim it is impossible, that they have tried it and found it so. French have come to the same conclusion.

It is not that you cannot train an average individual in two years, or even one year, to become a sufficiently good cavalry private soldier. Under advantageous circumstances, it might be done in one year. But this does not argue that one year should be the term of enlistment. If we discharge a man the first moment we consider him sufficiently trained to take the field, then we never will have a command fit to take the field. Furthermore, we never would have a command equal to the problems with which our maneuvers should train our officers and we never would have a man fit to make a non-commissioned officer. Troop officers could never get away from the detail and minutiae of recruit instruction, and field problems which might benefit officers could never be carried out. It must be remembered that cavalry is a peculiar arm which can do nothing unless trained, neither in war nor in the maneuvers of peace.

A still more serious objection to short enlistment periods for cavalry is the great wear and tear upon horses that recruit instruction entails. Horses devoted to instruction of recruits throughout the year were in France well worn when the time came for the yearly maneuvers, and by the end of the maneuvers they were greatly and too much fagged. They needed a rest of six weeks at least, but, instead of that, they had to start in again with recruits who arrived at the 1st of October.

Furthermore, by such a system of short service, no one would be available to train the recruits. Remounts receive, in both France and Germany, two years' training before being put into ranks for the regular work of the troop horse. We should also have this system, utilizing at least one year for such training. The Germans having a three year term of service are better able to assign trained men to this work than the French have been with their two year term. The result is apparent and in favor of the Germans, and this is freely admitted by French cavalry officers. Now that they have a

three year term of service, they expect to do better by their remounts. Compared with us they are already very good, for we have no system at all.

Therefore, to have good cavalry—a trained cavalry—at least three years is necessary as a term of service, no matter if a much shorter time than that might be considered sufficient to train the individual soldier.

MOUNTS, REMOUNTS, STABLES.

Remounts are received each year in the fall from remount stations and are immediately assigned to escadrons. They are generally from four to five years old. These horses must now have a two years course of training. An officer of each escadron takes charge of the horses in their first year and another officer of the horses in their second year. Thus they have but two classes, the five years old and the six years old. A very simple but thorough course of training is prescribed. They are ridden by older men, never by recruits. They are carefully bitted and taught to jump and to obey the aids, and it is this system which enables one to witness the maneuvers of large masses of cavalry without seeing a single bolter. In Germany, as before said, the results are still more remarkable.

All the French cavalry horses are well bred. Cuirassier and Dragoon horses are mostly demi-sang with many thoroughbreds scattered amongst them. The horses of the former are very large, while those of the Dragoons are medium sized, averaging possibly 15-1 hands.

The horses of the light cavalry, hussars and chasseurs à cheval, are much smaller. As many of these regiments as possible are mounted on the little Anglo-Arab horses, while others are mounted on small demi-sangs and thoroughbreds. Thus the light cavalry has a little more blood than the heavy, or medium.

The horses are fed twice a day. They receive about ten pounds of oats and eleven pounds of hay per day. They have a much larger allowance of bedding than ours.

Stables are paved with stone. Stalls are made by simply hanging a board partition by chains from the truss supporting the roof, very simple, but sometimes injures horses. Mangers

are of stone, including feed boxes. Hay racks are of iron above mangers. Horses are tied to mangers by chains fastened to the halters and other ends to a long staple fastened from top to near the bottom of stone mangers so that the chain run up and down the staples as horses raise or lower their heads—an abominable and dangerous scheme.

Horses stand in the stalls most of the time when not ridden. Weaving and wind sucking is therefore quite common. Lots of bedding is used and allowed to pile up from day to day, so that it is very soft, only the very worst of the soiled bedding being thrown away. This is very economical and a good arrangement. Urine drains through the straw and the stone floors catch it and drain it off into gutters. In our service the dirt floors become muddy and foul and the straw used just once is often for this reason unfit for further use. Horses have to be turned out to dry stables each day. Much labor is necessary to keep such stables in shape. The germs of thrush are liable to develop in the dirt, and in rainy or stormy weather, when horses cannot be turned out, the conditions with the very best of stable management are bad. In boiling hot weather with a pitiless sun, it is the custom in our service to turn horses out of stables and either tie them on the line or let them loose in corrals with no shade. And the terrific effects of the sun on their general constitutions and on their eyes is shown by their phlegmatic movements and dead looking coats. And our service has made itself believe that this is necessary, with all sorts of reasons assigned, whereas, the real reason is that we *must* get the horses out to dry the stalls and fill up holes with more dirt. We have been schooled to believe that stables with stone or even board flooring are unsuitable because too hard for horses to stand on. This is disapproved by every nation in Europe. They supply plenty of bedding and by not wasting it use it without extravagance, but the horse has always a nice soft bed to stand on, and their hard floors make for cleanliness and are a decided advantage instead of a disadvantage.

Horses are never *fed salt* in either French or German armies; except sick horses, which are sometimes fed salt to increase appetite or act as a tonic.

Shoeing seems to be very good as shown by results, but in watching their horseshoers one can see violated almost every caution or prohibition of our manuals. Shoes are fitted hot, at cherry red heat, the horseshoer becoming lost in a clod of smoke. A helper always holds the foot of the horse for the horseshoer, who cuts the walls down by means of a hammer and chisel instead of nippers. This is roughly done, and for the toe clip a notch is cut out of the toe big enough to lay in one's thumb. The foot is pounded by hard blows of the hammer, often making the horse wince. Yet in looking over the troops the horses feet always seemed in good condition. In other words, care in putting on the shoe so that it will stay, and frequent shoeing seems to be the most important consideration.

HORSE EQUIPMENTS.

Bridles and bits are superior to ours, even to our new patterns. In garrison, halters of raw hide, very strong, are used. In the field the halter bridle is made to suffice. It is very good. By using other halters in garrison the halter or halter bridle is kept looking well. Bits are of burnished steel. No nickel plating or composition bits are used. No trouble in care of bits when men understand it. Our nickel plating is an absurdity which on account of immediate chipping of the plate makes it impossible to properly care for a bit. We could do little better than copy *their bridles for our service*.

The French trooper's saddle is uncomfortable, and too high from horse's back. It has long padded bars and rests on a very good saddle blanket of dark blue, coarse, very coarse, well made material. *This coarseness is advantageous as it provides ventilation.* The material must, however, not be shoddy or loosely woven. It must be strong and durable. Our saddle blanket is very inferior to that of the French.

The French saddle makes as many sore backs as our saddle does and in other ways is not so good. It has advantage of having stirrups hung well back and makes the trooper sit rather well forward, thus giving him the seat with legs well back so noticeable in European Cavalry. Saddle is heavier than the McClellan. The packed saddle has a roll on cantle and small leather bag on offside containing horse shoes and nails. Saber

is hung on near side of cantel so as to point straight down. Saddle bags containing about same articles as our men carry hung on pommel, also one feed of oats in a long roll so as to fall equally on each side. Men carry three to four days rations in their bags, and, in addition to carrying grooming materials, underwear, etc., they always carry their stable clothes. These they don immediately upon dismounting to put up for the day or night. They are very thin and light and the men then wear them until the next day or the next military formation. Thus they protect their other clothes in performing all the cleaning of horses and equipment and other labors. They can be worn over the uniform like overalls, but except in very cold weather are usually worn merely over the underclothing. Being thin, they are easily wrapped up into small bundles for packing. *We could well adopt this idea.*

While the French trooper's saddle is not considered good, the officers saddle is very fine, perhaps the finest of all armies and we probably cannot invent anything better or as good. We would do well to imitate it just as it is without alteration.

Grooming is done better in some regiments than in others. Would not appear better than ours if our horses were kept from rolling in dirt.

Care of equipments about as good as ours, but not as good as ours now promises to be. They do not understand the care of leather as do English grooms.

Metal parts always kept in good condition. Bits, bridons, curb chains, and stirrups, all of burnished hand forged steel, are always kept clean and bright by means of a little powdered sandstone, oil and a burnishing chain. Although the climate is very damp, this care of metal parts is not considered a hardship.

ORGANIZATION.

The organization of a French cavalry regiment is well known to us and is not considered necessary to report upon here. Something may be of interest, however, concerning the fifth escadron or depot escadron.

The fifth escadron consists of a certain number of non-commissioned officers taken from the four active escadrons,

and a sufficient number of old soldiers to make a skeleton. These men include as many of the men detailed for regimental extra and special duty as possible. Thus relieving the active escadrons of the burden of furnishing such men and consequently of the large absentee list so common in our service at the drills and daily formations for instruction. The recruits which come, in spite of their system, at odd times during the year are generally assigned to the fifth escadron for instruction. The active escadrons do not, therefore, have to break up their progressive schemes of instruction. Older men who do not seem suitable for the work of active escadrons are usually assigned to the fifth escadron, where they are used as grooms, stable police, and other fatigue labors.

The horses of the fifth escadron come from active escadrons. They are usually the old, nearly worn out horses hardly up to the work of active escadrons, but suitable for recruit instruction, especially in riding halls.

The fifth escadron is occupied in drilling the odd recruits, furnishing orderlies to field officers, and attending to various fatigue duties of the regiment. It is commanded by a captain and has one or two lieutenants, as they may be available.

In time of war the fifth escadron stays at home to receive remounts and recruits. In time of peace its usefulness is a matter of variable opinion among French officers. The Germans have in a regiment five escadrons all on the same footing and simply designate one of them in time of war to act as the home or depot escadron.

BARRACKS AND RATIONS.

These differ quite a bit according to the situation of the regiment in France. At Evreux the barracks, all around a quadrangle is a sort of barrack square, were new and very good. They are made entirely of stone, stone floors upstairs and down, stone stairways. Squad rooms accommodate about fifteen men. No wall lockers as we have, but a few shelves on wall over head of bunks, bunks with board slats. * * * One large kitchen for two escadrons. * * * Food was carried over to dining rooms in barracks in large tin vessels. Food at dinner consisted generally of boiled or roast beef cut up in

chunks and several vegetables all boiled together. For supper they had some rice or beans and black or dark colored bread. Sometimes a vegetable soup was served at dinner. I never saw any dessert or any sweets. Coffee was only served in the morning after reveille and then without anything to eat. The ration costs almost as much as ours. * * *

DISCIPLINE.

There seemed to be no roll calls except at formations for drills and the "appel" (call) which was a roll call and assembly, the hour for which was fixed for each day by the Captain of each escadron and at which orders were read; and the captain gave such instructions and made any remarks as he desired to give to the escadron. Also orders for punishments were read.

Absence without leave was very uncommon, but was perhaps responsible for most of the punishments. Violations of regulations in and about the village in which stationed, insubordination to non-commissioned officers, and drunkenness were among the offenses I noted. Drunkenness was very rare. On the whole offenses were few and discipline good. Desertion is almost unknown owing, of course, to their conscription.

The system of punishments differ materially from ours. Of course, all serious offenses of criminal nature are dealt with by commissions of officers, but for small infractions of discipline the non-commissioned officers as well as officers have a certain power to administer punishment.

A corporal can give two days consigne (confinement to barracks).

A sergeant can give four days consigne.

A lieutenant can give eight days consigne and four days salle de police (guard house).

A captain can give thirty days consigne, fifteen days salle de police, and eight days prison (the common jail of the town).

All of them must be approved by the colonel. A captain may recommend disapproval but cannot disapprove of punishment awarded by his subordinates up to the limits given above. Lieutenants command their platoons in all matters relating to instruction and to a certain extent in administration. They

are responsible for the appearance of their men and horses, and sometimes of their portion of barracks.

The captain has funds for the purchase of food, clothing and equipment. He, like our captains, is the administrative officer and he also prescribes the schedules of instruction for his escadron, of course, under the supervision of his colonel. He gives his lieutenants considerable latitude and he is given great latitude by his colonel. I do not think higher commanders are permitted to interfere with the colonel in his scheme of instruction, provided the general principles as laid down in regulations are followed. The generals look for results alone at stated inspections which they make.

INSTRUCTION.

The great impressive thing which one immediately notes in the French service is the uninterrupted, careful, patient, unhurried, progressive scheme of instruction, commencing each year on the first of October and ending in the maneuvers in the following September.

Each lieutenant has his platoon, there being four platoons in the escadron, for four and perhaps five months' uninterrupted work before the platoons are united for work in the escadron. Then the captain works his escadron for perhaps two more months before the regular school of the regiment commences.

These periods are not inflexible. The captain may give his platoon commanders more than four months if he so desires. But the school of the regiment commences generally not later than the first of April. When the school of the Escadron commences, generally in February or March, the captain even then turns his platoons over to their commanders for two or even three days in the week. So also the colonel, after the school of the regiment commences, turns his escadrons over to the captains for two or three days per week.

Thus the work of the platoon and escadron continues even up to the very end of the instruction year.

THE FIRST FOUR MONTHS.

In the platoon the greater part of the instruction is individual throughout the whole year. During the first four months there is scarcely anything but individual instruction. During this time daily instruction in equitation is the most important duty. There is not room here to report on methods of instruction in equitation, but it is important to say that the character of instruction is very simple but very patient and thorough. The methods of equitation are found in French manuals on the subject.

Dismounted instruction in squads, calisthenics of a simple nature, grooming about two hours, care of arms and equipment complete the day's work for recruits.

The older men are occupied in training remounts, and about once a week are assembled for the school of the escadron or regiment. Sometimes even the brigade is assembled for instruction during this period. But the work of the recruits is uninterrupted.

Target practice is had once every two weeks all through the fall, winter and spring, but this not a hard and fast rule; some regiments seeming to have it once every week, and the allowance of ammunition to be increasing. The target practice was very simple and very similar to ours on known distance ranges. The practice was not very good, owing to the inferior carbine with a very short barrel with which the cavalry is armed. The main thing to remark is the principle of having a little practice several times a month during the whole year, instead of concentrating it as we do into a target season.

Platoon instruction includes what is called "Service en Campagne." This commences after a month or two of service or as soon as the new men can ride sufficiently well to go out of doors for this work, and to be entrusted with a horse alone; of course no high degree of horsemanship is involved. Instruction in service en campagne continues throughout a soldier's term of service. It consists in individual instruction of various kinds, such as transmitting messages; following back over a road just travelled; following a route indicated and prescribed; following a route across country to a point indicated and whose

direction is given by points of the compass; finding a movable point or column of troops marching in a determined direction; teaching the gaits and paces and the possibilities and limitations of horses by requiring troopers to march alone from one point to another in a fixed number of minutes—at first over simple routes and easy ground, then over more difficult; teaching a trooper how to orient himself by the sun or by stars; teaching the principle of observation; collective work as patrols; the platoon as a part or whole of an advance guard; reconnaissance of villages and woods; passage of streams, bivouacking, etc., etc.

For this purpose the details and methods of such instruction are laid down in a manual called "Practical Instruction in the Service of Cavalry in Campaign." All through the winter and spring and summer months from one to two mornings a week are devoted to this instruction.

Individual instruction along all lines is thus made very thorough.

At the beginning of each month the captain made out a schedule for his escadron. The schedules were weekly, and the hours for drills and grooming and theoretical instruction varied from day to day according to conditions such as the hours during which riding halls were assigned to that escadron; when it was to draw forage, etc.

Then tables of work were made out in a very simple and convenient graphical form. Habitually the men rose at 6 A. M., or 5:30 in summer, and worked till 10:00 or 10:30 A. M. Nothing but a little coffee for the men, was fed to either men or horses until morning work was over. The stable police fed horses at about 10:00 A. M. and again at 4:00 or 4:30 P. M. Men had dinner about 11:00 A. M., and supper at about 5:00 P. M. Work in afternoon commenced usually at 12:15 and was finished by 5:00 P. M. Not all the men, however, were working all this time. These hours merely comprised all the work of the day.

The men work no harder nor longer than ours do, but they accomplish much by a progressive system.

FENCING.

A skilled fencing master teaches officers and non-commissioned officers all during the year. Great interest was shown in this. It seemed to be optional with officers and compulsory with non-commissioned officers. I took these lessons with much interest and pleasure.

SPECIAL CLASSES IN EQUITATION.

Special classes in equitation for officers were instructed twice a week from November till June first. All lieutenants were compelled to attend, although all were graduates of Saumur, I always rode in these classes. The Instructor was the "Capitaine Instructeur" who is a captain not in command of an escadron and who is in charge of all special instructions, such as target practice, equitation, fencing, etc. He also acts as aide to the colonel in the school of the regiment. A lieutenant had charge of the special classes in equitation for non-commissioned officers for the same period.

SPECIAL INSPECTIONS.

The colonel inspected each platoon in January to ascertain the progress made. He also inspected each escadron a few months later.

The brigade commander inspected each escadron, also each platoon, in March.

In June, a major general of cavalry inspected the regiment, and this inspection included a performance by each escadron the school of the regiment, riding classes of officers and also non-commissioned officers, a field exercise by the regiment, and administration work, also fencing classes.

INSTRUCTION OF OFFICERS.

War games or terrain exercises and tactical rides were held twice a month. They were conducted by the colonel or by the brigade commander.

In good weather and when the regiment was up to such work, field exercises were conducted twice a month in lieu of the terrain exercises. These field exercises were often had in

conjunction with the battalion of infantry which was stationed in the same town.

It is notable that whenever a war game, terrain exercise, tactical ride, or field exercise included the handling or combination of infantry or artillery, an infantry officer or artillery officer, or both, drawn if necessary from neighboring garrisons, were always present.

There were no schools for officers resembling our garrison schools or post graduate courses other than the exercises mentioned above. In each escadron, however, non-commissioned officers schools were held similar to ours.

Both young officers and non-commissioned officers were instructed out of doors in giving commands. This was a voice culture in which they were taught to place the voice properly so as not to strain it and so as to make it most resonant.

Two days during the year were used in giving officers and non-commissioned officers instruction in demolitions. * *

I saw no instruction in map problems or writing of orders other than at war games.

ARMS.

The regiment was armed as follows: All soldiers with a short carbine carried on the back, and a straight sword with one cutting edge. Non-commissioned officers and officers in addition to swords carried revolvers. The carbine has too short a barrel for much accuracy and the revolver at twenty-five yards was very inaccurate.

Considerable practice was held in thrusting and cutting at heads but the men are trained to use the point of the sword almost exclusively. I did not think they handled their swords better than our men do their sabers. But their careful horse training and equitation gives better results in the riding at heads. Heads are placed on posts similar to our method, but instead of having them at the side of a straight track or path, these head posts are placed irregularly so as to require the trooper to keep his horse in hand. The gait taken is a collected gallop.

In order to give individual instruction in charging with the sword just *one* head is placed on a straight track or on ground without any track and the men are required to ride in the charg-

ing position, leaning well forward, arm and sword thrust well forward with hand in tierce. Each man rides thus at this head at full speed, shouting "Chargez" as he proceeds. It is important to note that only one head is used for this exercise as more than one head turns this exercise into a scrimmage instead of a charge and it is difficult to keep the horse at full speed.

Many dragoon regiments are now being armed with lances, largely, I think, because the Germans have lances.

While the non-commissioned officers are taught to be quite expert at fencing, no such instruction is given to privates who are taught only the simplest parries and to use the point of the sword in thrusting. The sword is too heavy for any quick or very expert work.

NIGHT WORK.

There are some exercises held at night. These were very simple and seemed mostly confined to teaching the connecting files between elements of a command to keep touch and insure the accurate following of rear elements along routes followed by the leading elements. A few tactical exercises of the simplest nature were attempted.

SUMMARY.

Thus throughout the year the individual work was kept up and collective work in the regiment increased slowly. Very little instruction in dismounting to fight on foot was given. Everything they do has the mounted attack in view. Even patrols are taught mounted tactics with the "*arme blanche*" as their principal means of offense and defense. However, there was more dismounted work in patrols than in larger bodies. I often thought that they dismounted when they should not have done so, and vice versa.

1 Their patrols, armed with the sword, would be playthings, in my opinion, in the hands of our patrols armed with automatic pistols. In hand to hand, or nearly hand to hand, fighting, such as patrols would often be called upon to perform against hostile patrols, the carbine is nearly useless because too unwieldy for quick work and management of excited horses.

Our men with automatic pistols would in every way have the advantage.

The equitation and horse training is good but not better than ours can easily be made to be, with the same patient, unhurried, progressive individual instruction. Their better horse training makes it possible to have faster and more active drills than are common with us, but as soon as our officers learn to instruct their men better in equitation this will not be so. *It is not organization, nor the question of single or double ranks which affects this point, but merely equitation.*

MANEUVERS.

In August the brigade, consisting of the Sixth Dragoons and the Seventh Chasseurs à Cheval, was assembled at a point one day's march from Evreux for a few days' maneuvers. On the march out the Sixth Dragoons had tactical exercises which involved the defense of a wood dismounted and handling of lead horses.

In marching on the road the French try to average five miles per hour under ordinary conditions.

The following are my notes made during these few days:

BRIGADE MANEUVERS.

Started at 5:45 A. M., August 21st, for Beaumont le Roger.

Marched thirty two kilometers in four hours easily. Made two halts. Beautiful pastoral country. Arrived at destination, this escadron, the 3d, is billeted at Beaumontel, one and one-half kilometers from Beaumont le Roger, where the état major and the 2d escadron are cantoned.

The first day, Friday, August 22d, both regiments of this brigade went out for regimental drill, principally to practice movements of attack against hostile cavalry, represented by men, or rather outlined by men, carrying fannions or small flags on staffs as tall as our guidon staff.

The grain in the field had been cut and stacked but not taken in. It thus bothered us and impeded our movements a great deal. We had better ground the next day.

The next day, Saturday, August 23d, the brigade was formed at six o'clock out in the fields some distance from Beaumont le Roger. The inspector General of Cavalry of the French Army, General Sordet, was present to watch the brigade go through its movements. Being, therefore, an inspection everybody was on his mettle. The brigade practiced the march of approach, sending out reconnoitering patrols to observe movements of the enemy outlined by some twenty troopers with flags commanded by a lieutenant colonel. These "*fannions*" were started perhaps a mile and a half or two miles away and maneuvered in line just as an attacking brigade. The country was flat but various obstacles existed in the form of roads with ditches on both sides, and fields where the crops had not been gathered. These necessitated constant changes of formation of the brigade which of course was good practice.

The General Corvissart, commanding, rode with his état major at the head and the brigade followed him. An officer from the dragoons and an officer from the chasseurs joined the état major and were used by the General to take orders to their respective regimental commanders. The General seldom looked back of him. Everything was reported to him by his état major captain who rode just back of him, and thus when a formation was completed reported it as *exécuté*. Thus the General kept his eyes to the front to observe the ground and the approach of the enemy. He indicated changes of direction by signal and moving in the desired direction, the same with gaits. Changes of formation were made by sending the two officers mentioned with orders to the colonels.

When the "*fannions*" appeared in sight, their movements had been constantly reported by the patrols, the General, who had galloped several hundred yards to the front, sent orders to the regiments, usually one regiment to move forward to the charge, the other to put two escadrons in reserve, the other two escadrons to move around to attack the enemy in flank.

After the movement was over, the officers' call was sounded and the critique made both by the General commanding the brigade and by the inspector general.

The morning was fine, the country beautiful, the movements inspiring and exhilarating. The Seventh Chasseurs

with their light blue tunics making a pretty contrast to the dragoons with their dark tunics and casques or helmets of steel. The morning ended with a *defilé* or march past for General Sordet.

August 24th. There is a lightness and flexibility and swiftness in the movements of the French cavalry which is charming to see.

The French do not pay as much attention to perfect alignment in the ranks; they in fact seem to be indifferent to it. They pay no attention to little things like mounting and dismounting all together. Their horses seem to be always under control; no bolters were seen in the brigade. Yet I know that in the third escadron there are some horses that pull hard.

August 25th. Today I wondered why I had written above that the French do not pay attention to alignment. The lines in the attack were so compact, "*bien soudé*" and the "*en bataille*" formation so handsome that there was little to criticise. However, it is at the front that the French critique watches the movement, as it approaches him, and not from the side to see the alignment. There we have it! If the ranks are solid, no holes in them, a general alignment is sufficient and the perfect alignment of heads as seen in a good infantry review is not necessary. Each platoon is lead by its own chief and *there is no general dressing throughout the troop as we have it.*

I think they are right. The final result with well trained individuals in the ranks is that they drop into a more or less perfect alignment without the effort that we make. *Each platoon follows its chief and the chiefs keep aligned; that is all there is to it.* The result is splendid.

A brigade drill here resembles a regimental drill with us. Their regiments are absolutely like our squadrons and since three of our squadrons are grouped and called a regiment, I do not see why for tactical purposes that is not just as good as a European brigade, and for administration purposes much better, since it is better to have one administration office for three squadrons than one for each.

The question of organization of the troop is open to argument; single or double rank, two or four lieutenants.

August 26th. The same kind of movements today as yesterday, except that we ended by the ceremony of the decoration of a captain of reserve—Ditville, and then a "*defilé*" of the brigade.

In the formation for attack, the "*en bataille*," the escadrons performed well and the ranks looked very solid and formidable.

In crossing a road, the brigade being in column of platoons, it was necessary to jump a ditch on both sides of the road. These ditches were not very wide but had one bank higher than the other, and the grass grew in them, hiding the approaches and concealing their real depth. Also the ground was scarred and rough. Two or three horses of each regiment fell, throwing their riders violently. I saw one chasseur fall and hit his mouth on the road or perhaps his horse's head. He was spitting blood as he ran to catch his horse. Also two officers, a chasseur and a dragoon, fell. * * *

The "*defilé*" was excellent; the escadrons were well aligned.

I noticed, in column of fours on a road, the brigade marching at a trot and remaining on this road for perhaps one-half or three-fourths of a mile before turning again into the fields, that there were considerable "*arrests*," backing and filling, some at the gallop, some having to halt momentarily. However, in a few minutes, it all seemed to straighten out and the march looked smooth.

The individual *sets of four* pay very little attention to dress so that in column of fours they always look ragged at the trot. At the gallop they do better as a whole.

At the *decoration* of the captain, the brigade was drawn up in line of masses. The captain and higher officers all formed a line in front of the center.

The officer to be decorated stood *dismounted* in front of the center of the line of officers just mentioned, facing the front. The General and his *Etat Major* were in front of the center facing the troops. The General commanded "*Draw*" and "*Present Saber*." Then he dismounted and approached the officer. Thus these two were the only ones dismounted. The General laid his sword on the shoulder of the Captain, then pinned the

medal of the "*Legion of Honor*" on his breast, then kissed him on both cheeks. The ceremony was then over, and the *defile* concluded the day's performance.

August 27th. We started this morning at six o'clock and returned at 10:30. Usually we have started at 5:15 or 5:30 and returned about 11:00.

Had a maneuver with infantry. The brigade attempted to cross an unfordable stream defended by infantry. Infantry did not know at what crossing within several miles the cavalry would make its principal effort.

A feint was made at one bridge and the main point of attack at a bridge a couple of miles farther up stream. This point was defended by a half company of infantry. Both regiments crowded in streets of a little village. Only the chasseurs got into action. Led horses were immediately behind them and exposed to fire. There was considerable confusion and the General criticised the movement rather severely.

August 28th. Marched back to Evreux. Averaged five miles per hour.

After the brigade maneuvers I joined the Eighth Hussars for the cavalry maneuvers near Reims. I had previously arranged this as I wanted to see more of a light regiment and to see the cavalry maneuvers to which the Sixth Dragoons were not going.

Three divisions of cavalry were present as well as a brigade of infantry. Each division was of course accompanied by its artillery and each brigade had its machine guns.

The following is taken from my notes at these maneuvers:

EIGHTH HUSSARS.

Debarked at St. Erme September 2d. Colonel Delaine met us and a captain showed us where to find a wagon for valises, and a carriage to take us to Montaigne. The Third and Fourth Escadrons cantoned there. Found our lodgings all ready for us. Very plain—little village—but good enough for us. Met officers of both escadrons—very nice fellows—very polite and cordial. Colonel inspected the cantonments this P. M. Everything very neatly arranged. Each squad billeted near its horses in such lodgings as can be found. Horses

all groomed very well, men clean, discipline evidently excellent and esprit good.

I mess with officers of the Third Escadron, ——— with Fourth. Horses all anglo-arabs or thoroughbreds, mostly former, small and nervous, small as polo ponies, but wonderfully strong and lots of bottom.

September 3d. Brigade maneuvers. Attacks against *fannions*—very pretty—lines not as compact as dragoons—horses more nervous—never see a bolter—most horses seem quiet at walk, but some trot all the time.

September 4th. Division of cavalry in attack against *fannions*. Then one division against two divisions. Most superb spectacle I ever saw. Each division had two regiments hussars—two dragoons and two cuirassiers—eighteen regiments in all and two battalions of artillery to each division.

Each side had two or three aeroplanes for reconnaissance, while one of them was out on reconnaissance the division changed position and halted, massed near some trees. Aeroplane passed over it without seeing it and afterwards confessed great difficulty in finding it. Left at 5:00 A. M., and returned at 2:30 P. M. A most glorious day.

* * * *

Today, September 5th, rained all day, hard. Ground very heavy * * *. Were part of two divisions, third and fourth against fifth. Could not understand its problems as well as yesterday and maneuvers short. Started at 5:15, got back at 10:45. Seemed to have been some dismounted work on our right flank, but could not see it. None yesterday. No aeroplane today. Light cavalry in reserve as yesterday, except one regiment—Third Hussars—sent forward on our left flank, not very interesting after having seen yesterday. Little dismounted fire action.

The Fourth Escadron of eighty-five men were assigned as support to artillery. Charged by whole regiment of cuirassiers; they charged in their turn without result. They could have dismounted and used carbines—plenty of time to do so.

September 6th. There are three divisions here and two are always against one. The object seems to be for one division to

maneuver so as to attack one of the opposing divisions before other can come to its assistance. It seems difficult to handle two divisions so that one can always immediately support the other, though there are not present here more than 2,500 men to each division.

September 7th. Sunday. Rested.

In afternoon rode to Camp du Sissonne to see the "Concours de l'Emploi des Armes" and the cross country.

Concours very good—saber for cuirassiers and hussars—lance for dragoons. Number of posts set about irregularly without any track and several low hurdles—men required to get the greatest number of heads in the least time at the gallop in any order they wished. Heads arranged far enough apart so that men could get them all at a gallop by turning and circling in different directions—requires handy horse—not any better done here than that I saw in 6th dragoons at Evreux.

Much better than any similar thing I ever saw at home.

Many officers present—saw two Russians, one a general. Saw and talked with three English officers, one a captain of Scots Grays, also two English Generals, one in uniform, other *en civile*.

Racing very pretty over varied ground—no difficult obstacles—nothing solid higher than three feet. In fact, nothing really *solid*.

September 8th. Fine weather today. Two divisions and one brigade of infantry moved toward Reims with intention of seizing bridges across the river Aisne for the army supposed to be marching in rear.

One division cavalry and one brigade infantry, covering an army from Reims reach river Aisne and hearing of detachment sent to seize bridges determine to move forward and attack.

The resulting actions were spectacular and splendid to watch and mix in.

The two divisions moved forward to the attack in echelon, the artillery between. The artillery went into action as soon as enemy appeared. Mitrailieuse wherever they could.

Cantonned at Neufchatel on the Aisne for tonight.

September 9th. Today the northern army which is supposed to have attained on the 8th the river Aisne at the Points Berry au Bac and Pontavert, will continue its march towards Reims. On its left a corps of cavalry of two division and a mixed brigade have for their mission to act to the east of Guignicourt in the direction of Bourgogne-Reims.

The 8th Hussars were attached to the mixed brigade which acted directly along the grand route from Neufchatel to Aisne-Reims.

Was specially impressed with necessity for cavalry fire action both mounted with pistols or dismounted with rifle or carbines. European cavalry will never accomplish anything till they do, except against opposing cavalry with same ideas as themselves. But fighting against cavalry is not the end in view for cavalry. After beating enemy's cavalry, what then? It would leave free field for reconnaissance and action against enemy's infantry but would accomplish nothing unless trained and willing to use fire action as principal means of offense. * * *

September 10th. Got up at 3:00 A. M. this morning—started to rendezvous with the third escadron at 4:15. Morning very fresh—a little chilly—whole day fresh and beautiful after night rain.

Problem was as follows: Cavalry corps, three divisions, was to delay along the river Suippe the advance of an infantry division of two brigades.

While waiting dismounted at rendezvous, suddenly made aware that two escadrons of enemy followed by infantry was approaching. Barely had time to mount before part of our brigade, the Third Hussars, were charged by the enemy's cavalry. While the dragoons met this attack, the Eighth Hussars took gallop around to our left to take enemy in flank—caught them and a pursuit followed. Fine long gallop—enemy retreated through town on Suippe—our people followed pell-mell into streets of this little town or village—found the bridge over Suippe barricaded and with streets full of horses and men—we were fired on at close range by dismounted enemy along south bank of Suippe. Our people dismounted—great confusion in narrow street—horses subjected to close fire—our men lined our side of bank and opened fire—infantry company of

enemy came up and drove us back. Horses and men would have suffered terribly. Mistake to go into a town, through which it was known a stream ran, pell-mell without first sending patrol through and leaving horses outside.

We all withdrew to some high ground 1,500 yards. Took position and fired on enemy as they emerged from town. This was very well, but when enemy, a battalion of infantry, had gotten to 400 yards of us, our people mounted and charged as foragers. Infantry fired rapidly and would have decimated us. * * *

Then we withdrew to another ridge—but too leisurely. Infantry had plenty of time to fire on our retreating columns from the first ridge, but did not.

The same thing repeated—fired at deployed infantry at long range, then mounted and attacked mounted. * * * Would not appreciably have delayed infantry division.

* * * *

Fine review followed. Two brigades of infantry passed first, then artillery, then three divisions cavalry at gallop. * * The different regiments as usual all marched off with trumpeters playing at heads of regiments. Very pretty and very gay.

It is to be remarked that no barbed wire fences or high fences of any kind were present in the terrain of maneuvers. All Europe is fairly free from such formidable obstacles. Maneuvers such as I have witnessed here—at least the tactics of such maneuvers—would be impossible in our country on account of such obstacles. Our tactics should therefore be such as to take advantage of these obstacles so that while they might seriously interfere with the mounted tactics of an enemy they would be a positive asset to us.

Habitually the problems consisted simply in some situation which led one side to attack the other, or rather an encounter in which both assumed the offensive. One division was generally pitted against the two, and the object of this one division was to take advantage of its mobility to out maneuver the other two so as to attack one of the opposing divisions or even a portion of it before the other could come to its assistance.

The opposing sides started five or six miles from each other and by means of reconnaissance by patrols and aeroplanes marched across country toward each other, each taking up formations suitable for the march of approach. Each regiment for this purpose was generally formed into double column of platoons. The brigades were thus deployed in a line with perhaps one in reserve.

As soon as the opposing sides came within view of each other, the weaker side attempted to make the stronger deploy and then by a rapid flank movement to attack one wing of the stronger side. Artillery opened the combat from any convenient high ground and a support, generally too small, was always left with it. Machine guns usually were held out until that portion of the enemy's line to be encountered was determined, when the machine guns went immediately into action, wherever they happened to be, either in the center or on the flank.

When the lines charged each other, it was always at a rather slow rate of speed, full speed never being attained.

There being so many regiments engaged, eighteen in all, a regiment would often break loose, so to speak, after the attack had been driven home, and come charging down on the flanks of such portion of the enemy as still remained intact. A general mixup then occurred. But I was impressed with the fact that each side generally maintained pretty well, for the moment at least, its side of the field of combat, thus making use of the of fire arms, especially the pistol, entirely practicable without seriously endangering friends.

It also happened on several occasions that the opposing sides deployed so far from each other, but in full view, that one side might easily have dismounted to fight on foot and brought the full effect of its fire to bear upon the charging lines of the other, while still six hundred yards distant.

Such an attempt might have been dangerous for the whole command, but certainly a combination of mounted and dismounted action was often possible. Artillery was often charged by the enemy in superior numbers to the support, which latter should have and could have dismounted and brought very effective fire to bear upon the attacking forces. The artillery support usually waited until the enemy was close and then

charged even though greatly outnumbered, thus throwing its value away when it might have been firing upon the enemy, while the latter was traversing the last three hundred yards or more.

When unexpected encounters suddenly occurred in the woods the value of the pistol to that side which might have had the wisdom to issue them to their men, and the advantage such side would have had over men armed with sword or lance, was vividly impressed upon my mind.

In combination with infantry, the cavalry when not engaged with hostile cavalry, remained out on the flanks in the old, traditional, useless fashion.

MISCELLANEOUS REMARKS.

The French cavalry is splendidly mounted and each trooper is carefully trained, thus making the whole efficient.

No hobbies of individual officers seem to dominate their scheme of instruction.

A little practice was had in bivouacking, about which they know little compared with our troops.

A day was devoted to teaching the regiment to swim an unfordable stream. I believe this instruction varies in different regiments.

The French attempt no precision in mounting and dismounting and the result is that hurried or in an emergency great confusion occurs.

Half outposts were not insisted upon.

In every French cavalry garrison there are riding tracks out of doors for exercising horses. These tracks are as broad as ordinary roads and are made soft by use of sand.

Hurdles are always present on every drill ground for use of the troops. These are always low. They do not make the mistake of making them dangerously high or difficult.

There is an annual competition in the regiment for non-commissioned officers in work with saber at heads as described before.

No competition is permitted between escadrons or between platoons in the escadron. At least they are never graded for military proficiency because they believe this creates jeal-

ousy and accomplishes no good purpose. Emulation is encouraged and is believed to be a different thing. Competition is believed to lead to "stunts" and to interfere with the patient progressive training on which they depend for efficiency. There is however a standard below which an organization must not fall. This was explained to me by a French captain during the test of non-commissioned officers in running at heads. The heads were numbered and each worth a certain value. To qualify, a certain total had to be scored. Those who qualified were entitled to badges to wear, marking them as expert swordsmen. But they were not graded according to the escadron they belonged to, that is, the escadrons were not graded although everybody knew how many men each had qualified. This may vary in different regiments.

Troop officers are entitled to one mount each from the Government. They always own one or several others.

Officers do not play polo—say they have not time for it and that it is too expensive. But they hunt a great deal and own fine mounts for the purpose.

THE GERMAN CAVALRY.

In May I obtained permission from the German Government to inspect the cavalry school at Hanover and to visit and observe for ten days the German cavalry regiment. * * *

After a very interesting four or five days at Hanover where the annual horse show or test of the students was in progress, I accompanied Captain ——— to Schwedt on der Oder, where I was cordially received by the officers of the Second Branderburger Dragoons.

I was fortunate in being there during the inspection of the regiment made by the General Commanding the division on to which the regiment was attacked.

* * * *

The performance of the squadrons was of the highest order and the precision in the ranks was noticeable.

The horses in Germany were docile, obedient, and uniformly trained.

French give their horses more freedom, do not hold them up as tight on curb bits as do the Germans. It is characteristic that the Germans ride with tight curb chains and the French with loose.

The German seat appears less supple than French. Both ride with legs well back.

All German regiments are armed with carbine, saber and lance. But Germans, at least in this regiment, scarcely ever practice saber exercises, devoting all their time to the lance and rather despising the saber.

The French love the saber, but are adopting the lance because the Germans have it.

In war between the two, it is a question whether the French élan or the German regularity and method would gain the upper hand in a cavalry combat of equal numbers.

I cannot help believing that both are on the wrong track, and that opposed to equal numbers of our cavalry, if our horse training and equitation improves as it promises to, and if we hold to our own ideas of organization, increasing rather than reducing the size of our regiments, and using pistols and rifles for both mounted and dismounted work, the French or German cavalry would fail, and in three months would abandon every lance so that there could not be found one in either army. The saber might possibly be retained to use in combination with the pistol. In our service it should always be held in subordination to our fire arms.

Not in fifty years has European cavalry completely justified its existence. The cavalry failed to meet the expectation of its adherents in the Austro-Prussia War of 1866, in the Franco Prussian War of 1870-71, in the Russo-Turkish War of 1877, in the South African War of 1899-1902, in the Manchurian War of 1904-5. We have failed to hear from it or to learn that it has justified its existence in the Italian-Turkish War or in the sanguinary conflicts in the Balkans of 1912-13.

To say that it has not justified its existence is perhaps putting it very strongly, but it certainly has not done what was expected of it or what it could do if properly armed and trained. The lance and sword have certainly failed to justify their existence. Shock action is a myth. No example of it, authen-

tically recounted, can be found in the history of the last hundred years. Even in the days of Napoleon, when the *Arme Blanche* must be conceded some success, principally through its moral effect, there is no single instance of genuine shock action against cavalry, and I challenge anyone to find such an instance.

The French Cavalry Drill Regulations are most excellent if the basis of the system is correct. We could well adopt many of its features, especially the principle of leading, the wheel instead of our turn, the slight echeloning of lines, four platoons in the troop, etc. But I cannot believe that the basis is correct or applicable for our cavalry.

If we adopt French organization and French tactics, we shall abandon that peculiar superiority, at least for our special conditions and terrain, which we have developed accidentally or otherwise in this country, and we shall be taking a step backward instead of forward.



A RESERVE VOLUNTEER ARMY.

BY LIEUTENANT COLONEL W. H. WHIGAM, FIRST CAVALRY
ILLINOIS N. G.

INTRODUCTION.*

THE following introduction is respectfully offered believing that the only way to secure the *how* in legislation is to show the reason *why*. It is not mere legislation that is wanted, but constructive legislation that is practicable.

Assuming peace as the normal, then war must be acknowledged as the abnormal condition of nations in their relations with each other. Both conditions must be regarded as active elements affecting the destinies of nations. The science of government must provide for the exigencies of war as well as for periods of tranquility, otherwise no nation can long exist.

Our great diplomatists, famous scholars, eloquent divines, and the wishes of the people generally desire for peace. For years, decades, centuries, these great forces have combined and fought for the abolition of war. Still, wars have followed their greatest endeavors, and by analogy will continue to follow.

Of course, war has become less frequent as civilization has progressed, but in the same proportion they have become more destructive to property, and, therefore, more expensive. Shall we then say that wars are less frequent because of educational influences or because of the increased national burden?

Under present conditions the rich and commercially great nation is more liable to attack than a less prosperous one on account of the great commercial interests involved, and no nation can become great without great commercial activities. The poor nation has nothing to lose and everything to gain by going to war with a rich adversary, especially if the latter is unprepared.

*Written before the present war in Europe—Editor.

A RESERVE VOLUNTEER ARMY.

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This nation today has not recovered its maritime greatness lost during the closing years of the Civil War by the activity of a few cruisers that practically drove our commerce off the sea. We are today paying millions of dollars to foreign carriers that would, but for these few commerce destroyers, be paid to the account of our own carriers.

Because of present existing conditions, arbitration will settle many claims and differences, but let a people once imagine that they are being deprived of personal rights, or becoming enslaved, and nothing will effectually settle the question but the arbitrament of arms.

The agencies of peace are constantly at work. The chief of these are education, religion and commerce; those that make for war, though latent to the casual observer, are political and commercial rivalry, and race prejudice. Whether or not the millennium of universal peace will ever be attained by man is immaterial to our discussion.

Under existing economic arrangements it is an accepted fact that strife will occur. One of the greatest peace movements the world has ever attempted was the meeting at The Hague. The greatest of good fellowship was proclaimed from the house-tops by the ablest men of the greatest century. Almost simultaneously with the drawing aside of the curtain to view the millennium of settlement by arbitration instead of by battling forces, the Spanish-American War, the Philippine Insurrection, the English-African War, the Boxer War and the Japanese-Russian War appear on the stage. Hardly have we recovered our equilibrium from the destructiveness of these when the Balkan-Turkey War breaks out, bringing the whole of Europe to the brink of a war that would stagger humanity. With this as a condition precedent it behooves a nation to exercise the right of self-preservation to its fullest extent. Preparedness is justified, first, in that being able to protect its interests may deter others from attacking a nation, and second, on being attacked the forces of the nation may be made to respond to a well directed and systematic plan of operation.

The forces of the United States for the preservation and perpetuation of its political integrity are the regular army and the militia, the latter being understood as that large and un-

trained body of men between the ages of eighteen and forty-five. The aggregate of this immense body of uninstructed men in this country is estimated at this time at sixteen millions. Of this body about one hundred and twenty-five thousand, the National Guard, which is neither national nor a guard, are trained, the training varying from almost nothing to that of good efficiency.

Granting efficiency for argument's sake, we have a combined army of about 200,000 men, not well balanced as to the various arms of the service. This is greatly inadequate from a standpoint of a mere defensive campaign, ridiculously small if an offensive campaign should be contemplated. Back of this small number of trained men we have the untrained masses, potential military resources, men, patriotism and money we have almost without limit, but of immediately available forces a mere handful of trained men.

Since modern war is fast and furious it does not take a Solomon to see that this country might be hard pressed, even defeated, by a powerful and vigorous opponent who could see the advantages to itself of a quick and determined campaign. Give this country six months time, and men and means can be secured probably to hold back any country that might attack us, but will an enemy wait when it already has its trained millions? Success comes from offensive action and offensiveness under such conditions would result in a short campaign.

Prepared Germany conquered unprepared France in the incredibly short campaign of six weeks. Russia was practically defeated by Japan when the first crushing blow battered and bottled up the Russian fleet at Port Arthur. The very fierceness of the assault of the trained Balkan troops drove the Ottoman army rapidly toward the historical Dardanelles. In these examples we see trained and prepared men against lack of training and unprepared men. In such a contest there is but one result. Mere numbers are not effective today; it is the trained men that count.

Conservation is today the cry; conservation of our forests that are fast being used up, and wastefully so, appropriated by great capitalistic interests; conservation of our extensive water power; conservation of humanitarian interests for the

benefit of the people; conservation in departments of educational activities; vocational courses are revolutionizing the old educational plan and aiming to put the boy into his life work with a greater amount of saving of time to himself and to the community; farming is intensive instead of extensive; is it not foolish to fail to conserve, and use, the military knowledge of our discharged soldiers?

A well known senator, a recognized economist and statesman of high standing, recently made the startling assertion, based on years of practical experience, that \$300,000,000 is wasted each year by the Government in bad management, planless work and duplications. What a comment for a great government of enlightened people. One-third of our annual expenditure wasted!

If our Government should go to War with some powerful foreign country, could it say as a faithful trustee of an estate might—"I am putting vast armies in the field, trained men, at a cost of production in scientific training and management that will produce maximum results—victory, at a minimum outlay—lives of soldiers and money." Or has the war been brought about without providing any trained men and scientific arrangement of forces and supplies, and therefore, we may expect to reap a large harvest of dead men, maimed men, distressed families and wealth of vast extent destroyed. But "I'll pay a liberal pension to the heirs of the dead and to the cripples for their generosity in fighting my battles. Of men and supplies I have an inexhaustible supply and I'll pour them into the hopper and by sheer force perhaps I shall be adorned with the laurels of victory."

Extravagance, wastefulness, misfeasance and malfeasance occupy many pages of our history in farming, forestry, manufacturing, building towns, use of streams, wildcat banking, frenzied finance, industrial slaughter of workers, unsanitary prisons, commercialized vice, but the people may sincerely wish that to this catalogue may not be added that of a war with a first-class power while the country is in the present state of offensive or defensive military condition.

The Campaign of 1898 that called out a half-million of untrained men is an illustration of the unpreparedness of our

government, and, while beholding the suffering and hardships endured by our untrained men, a well known politician who held a commission in a volunteer regiment exclaimed: "This is not patriotism, it is paresis." Judges are harsh with, and we use strong language in criticising an inexperienced man who attempts to operate some complicated and dangerous piece of machinery that through his carelessness and unintelligent actions may injure not only others but himself. The untrained soldier surely places himself in a similar situation.

The Government even has no right, moral or legal, to send inexperienced men to war; it is a crime against society and the murder of individuals; it is a wanton waste of the resources of the country.

Whatever may be the public spirit, whatever may be the patriotism of the citizens, whatever may be the number of volunteers, battles will be won only by trained men. The day is passed when unpreparedness and defeat can be retrieved by subsequent preparedness and victory. If wars must come and must be met, our opponenst must be met by trained men, but trained men we have not got in sufficient numbers or they are not available. How shall they be secured and preserved for use in time of need?

The Regular Army is about as large as the people seem to think it ought to be and with the ideas possessed by a democratic people there is not much probability of its being greatly increased. Viewed by the citizen class from the present standpoint it is largely an economic waste, inasmuch as its trained product turned out yearly is lost to the Government. The criticism may also be directed toward the large number of somewhat less trained men turned out annually by the National Guard and schools partially supported by the Government.

If General Grant were to return to this world today, he would see military men handling Whitehead torpedoes; gigantic mined fields electrically connected; rapid fire artillery served by the indirect method, instead of being perched on a hill that advertises its position as far as the eye could see it; machine guns capable of pouring out a torrent of shots, 600 to 1,000 per minute; long range rifles capable of inflicting injury at two miles distance; smokeless powder that fails to indicate the

position of hostile artillery or a line of advancing infantry; uniforms whose color scheme aids in concealment; wireless telegraphy forwarding messages instantly instead of by the uncertain and slow personal messengers; aeroplanes observing and signaling the position of the enemy; and many other inventions all unknown to him, and all this within the life of many of his old soldiers.

I. ORGANIZATION.

1. The organized land forces of the United States shall consist of the following:

1. The Army
 - a. The Army Reserve
2. The National Guard
 - a. The National Guard Reserve
3. The Volunteer Reservists (under Federal Authority only).

First, while the units of the Regular Army are uncertain in their location and length of stop at a given point, still there is no reason why the regimental units could not be grouped around a common center in each of say four or five great territorial divisions, thereby having the larger units under a more perfect fighting organization than at the present time. While these divisions would from time to time change their composition, still at any time a divisional organization would be in existence. The regimental units of the Regular Army should be kept at practically war strength at all times. However, as this is not considered probable, the army reserve is provided for.

The army is practically as large as our legislative and executive departments backed by the people generally considered to be necessary as based on the wants of the country's demands.

It remains, however, to provide a scheme to carry out recent legislation relative to reserves, whereby the army may take the field with a maximum of trained men. This is provided for by means of the organization of a second available force known as reservists. The number available and means

of securing them to each regiment of organization will be designated later.

Second, it is taken for granted that the organization of the National Guard is satisfactory and that training which can be carried out, when the Government recognizes the basic principle that you cannot get something for nothing, and puts the guardsmen on a pay basis, which will enable it to carry out a program of work which should result in a high degree of efficiency. This is understood to recognize twelve complete divisions of troops. The method and number of reservists to this organization will be designated later. With the allotted reservists added, the scheme contemplates putting twelve divisions of National Guard troops complete in all details into the field in case of war.

It, therefore, remains but to work out a scheme for a satisfactory volunteer reserve army complete in all its parts.

This brings us to our organization of the Volunteer Regiments or of reservists in the organization of the land forces of the United States.

Third, for the purpose of administrative and tactical considerations the United States shall be divided into territorial divisions known as the United States Volunteer Reserve Divisions. In order to establish uniformity the territorial divisions shall be co-extensive with those of the National Guard Districts of the United States. As contemplated at the present time there shall be twelve Territorial Volunteer Reserve Divisions corresponding to the twelve National Guard or Militia Divisions, each of which shall be made to conform to divisional requirements so far as troops are concerned as laid down in Field Service Regulations of the present date.

Each territorial volunteer reserve division shall be under the command of a detailed Lieutenant Colonel of the Regular Army with the rank of Major General of Volunteers, whose detail should be for a period of not less than four years. His staff shall consist of one Chief of Staff, who shall in addition be Chief Inspector-Instructor of the division, and as many additional inspector-instructors as there are regimental organizations in the division, and in addition one inspector-instructor of the signal and engineer corps, one officer of the Q. M. corps,

and one medical officer. The staff shall be made up of detailed officers from the Regular Army. The Chief of Staff may be a major, but the balance of the staff shall be from among the captains and first lieutenants of the regular establishment.

As each brigade is completed there shall be detailed from the Regular Army a major to command it, who shall be commissioned a brigadier general of volunteers, and whose detail should not be less than for a period of four years.

Officers detailed as general officers shall draw the pay and allowance of two ranks higher than that determined by their rank in the Regular Army.

A sufficient number of commissioned officers in the Regular Army shall be created to provide for details as called for in this scheme.

Regimental.—Each regiment of reserves shall have a complete roster of commissioned officers (excepting colonel) and non-commissioned officers and as many enlisted men as are available at the time of organization, which number shall be added to until the organization is at war strength. Provided, however, that no regimental organization shall be affected until there shall be at least enough men for a war strength battalion or squadron.

The complete divisional organization shall be effective when the enlisted personal shall equal one-third of war strength. That is, such a division may have its full quota of officers and non-commissioned officers at that time.

The regiment shall be under the command of the lieutenant colonel or senior volunteer officer of the regiment, who shall command at all times, except when the organization is called out in case of a declaration of war or a state of war exists, when the regiment shall be under the command of an officer of not less rank than that of major, who shall be detailed from the Regular Army. In case the officer so selected or designated be removed by death, promotion or otherwise, then the lieutenant colonel or senior volunteer officer of the regiment shall be promoted to such vacancy and become the colonel therefrom.

Staff.—The regimental staff shall be selected from the officers of the regiment and shall remain subject to the will of the regimental commander.

No organization of reservists shall be permitted to be effected except at points where there can be assembled for school instruction at least the officers and non-commissioned officers of a battalion or squadron. The enlisted reservists may be located at any point in the territory. Regimental headquarters shall be located with at least two battalions or squadrons of the regiment.

In order to affect the organization of the Volunteer Reserve Army the President shall appoint the division commanders and their Chief of Staff for each territorial division, directing them to some central point in their territorial division. Reservists shall be directed to report by letter to the Chief of Staff of their division in which the reservists is located. Regimental organizations shall be effected as soon as the required number of reservists have reported.

The location of regimental or battalion headquarters shall be at the direction of the general government.

II. ENLISTMENTS.

Reservists shall be from the Regular Army, the National Guard and from Colleges having Regular Army instructors, and no where else.

All enlistments in either the United States Army or the National Guard shall be for three years with the colors and an additional period of five years as a reservist. The enlisted man of the Regular Army passing to the Reserves shall have the privilege of being attached either to the reserve of the Regular Army or of the Volunteer Army. The enlisted man of the National Guard similarly shall have the privilege of being attached either to the reserve of the National Guard or of the Volunteer Army. It is provided, however, that an enlisted man in the Regulars or the National Guard shall have the privilege of re-enlisting with the colors, provided he is a non-commissioned officer or that not more than twenty per cent. of the enlisted men, not counting non-commissioned officers, of the company, troop or battery are serving beyond the first enlistment. Provided, however, on application and recommendation to the Secretary of War that enlisted men on showing proficiency may be transferred to the reserve class from the

Regular Army before the expiration of their regular enlistment period. In fact, it shall be the aim of the Regular Army to complete the training of a large number of enlisted men before the expiration of the full enlistment period with the colors, for the express purpose of enlarging the reservists.

The President shall have the power to extend the enlistment period of reservists for a period of not to exceed one year, or in case of hostilities actually beginning, said extension shall be for the continuation of the war.

Discharged men of the Regular Army or of the National Guard of not more than five years shall be eligible to enlistment as reservists.

Reservists shall be permitted to re-enlist on completion of their term of service as such.

On removal of a reservist from his station, he will at once notify regimental headquarters of his change, and if this change is to another division, his descriptive list shall be forwarded to the new division headquarters. His clothing will be forwarded later at a sufficient time before the next annual tour of duty. As far as practicable, all reservists in the same locality shall be grouped in the same regiment. This may be effected by transfers.

All voluntary-reservists (privates) shall report their home and address to the regimental adjutant on the first day of October, January and April, and in addition they shall report in person at the ordered annual tour of duty.

All reservists with National Guard organizations shall report as directed for volunteer reservists.

All reservists with Regular Army organizations shall be given a particular station to which written reports as above are directed; they shall be given instructions relative to the annual tour of duty that may assign them to other regiments than the one in which their enlistment runs.

III. NUMBER OF RESERVISTS.

The number of reservists in the three classes of the armed forces shall be as follows:

Each regiment of the Regular Army shall be allowed a reserve list of fifty men to each company, troop or battery of

said regiment. These men shall be reservists of the regiment and not necessarily of any company, troop or battery.

Each regiment of the National Guard shall be allowed a reserve list of twenty-five men to each company, troop or battery. These men shall be reserves of particular companies, troops or batteries, and not of the regiment.

Each Volunteer Regiment of Reserves shall continue to receive members until fifty per cent. of war strength.

As a reason for the above designations of numbers of reservists to Regular Army and National Guard, the writer will say that the former will be used largely as a training school and the personnel will change more frequently than with the latter organization, where the men must serve a full enlistment with the colors before becoming eligible as a reservist; also, the latter are permanently located and are thereby more able to keep up a higher maximum of enlisted men. However, it is not to be understood that the writer deems the number quoted an essential, but a fair comparative basis for argument. In fact, the writer is decidedly of the opinion that the Regular Army should be kept as near war strength at all times as is practicable; under these conditions less than one-half of the reservists indicated above would be required for the Regular Army.

IV. ORIGINAL COMMISSIONS.

The following are available for original commission in Volunteer Regiments, which shall be understood to be any vacancy in said regiment until said regiment shall have a full quota of commissioned officers and all commissions for the grade of second lieutenant, as vacancies occur:

1. Officers of the Regular Army resigned.
2. Officers from the National Guard retired or resigned.
3. Officers from the National Guard.
4. Graduates from accredited schools where Military instruction is given by a detailed Regular Army officer.
5. Non-commissioned officers from the Regular Army still in service or by transfer to reservists as enlisted men.

6. Non-commissioned officers of the National Guard retired, or still in service or by transfer to reservists as enlisted men.

It is provided, however, that those listed in classes 4, 5, and 6 above shall not be permitted to take the examination for commission for original appointment higher than that of first lieutenant.

If, through the above plan, enough officers are not secured for a full quota in each regiment, then promotional examinations shall be held at the beginning of the next semi-annual period to fill such vacancies.

One-half of the vacancies to be filled, which shall include additional second lieutenants hereinafter provided for, at any July examination shall be held over for the graduates of schools giving military instruction under direction of detailed army officers. Vacancies in this class not filled at the July examinations shall be filled in the regular way at the next semi-annual examination.

It is also provided that each Volunteer Regiment shall, after it has secured its quota of officers, secure ten additional second lieutenants. Not more than one-half of these additional officers shall be secured in any one year. These officers shall be subject to school duty, annual tour of duty and pay as other officers. In case of war these additional officers shall be available for assignment by the general government, to fill vacancies caused by the detailing of officers to higher commands.

Said preferment in favor of a graduate from a school maintaining a regular army instructor shall not continue for a period of more than fifteen months from his graduation from such school.

All volunteer reserve commissions shall be from the President of the United States.

V. BOARD OF EXAMINERS.

There shall be a board of examiners named in each Reserve District, which will be convened semi-annually for the examination of such candidates as shall present themselves. The candidates for examination must forward a statement through channels to the Territorial Division Commander of the District,

setting forth the educational qualifications and military record of such candidate, which must show the favorable endorsement of the regimental commander of the regiment in which the candidate applies for a commission.

The Board shall be composed of five officers as follows:

Two officers of the line from the Regular Army.

Two medical officers from the Regular Army.

And one volunteer officer who shall be an adjutant of one of the regiments in the territorial division in which the candidate seeks a commission.

The Board shall meet twice each year on such dates as are most practicable immediately following the first of July and January of each year.

The division commander shall publish an order setting forth the vacancies existing in the organizations of his division not later than three months prior to the holding of said examinations. Vacancies occurring less than three months prior to such examining dates shall be carried over until the next semi-annual examination. These orders shall be furnished to the Associated Press Association for publication, and to all schools where military instruction is given under direction of detailed army officers.

VI. SCOPE OF EXAMINATION.

Original and Promotional.

The scope of examinations for commissions in the Volunteer Reserve shall be that outlined in G. O. No. 57, War Department, March 25, 1909. Particular attention and emphasis shall be given to administrative, executive and practical work, for field officers; special stress on leading men for company officers. Former military service shall be considered in determining efficiency standing. This order shall be followed throughout except as to age limits, which are to be as hereinafter stated.

VII. PROMOTION.

Promotion shall be by seniority in each regiment, subject to examination, provided, however, that officers of the National Guard or other Reserve Regiments holding a rank one grade

higher than the vacancy calls for, may compete for such vacant position, i. e., a senior first lieutenant of the Reserve Regiment, who is entitled to take a promotional examination for a vacant captaincy in the same regiment, may find in competition for such captaincy officers from the National Guard or other Reserve Regiments, those who hold the rank of Major or higher. However, for the vacancy of Lieutenant Colonel of the regiment only majors of the same regiment shall be available for command subject to seniority and to examination. In time of war service all promotions shall be from within the regiment.

VIII. NON-COMS.

How Secured.

The non-commissioned officers of the regiment shall be secured from among the enlisted men assigned to the regiment with the restriction that they must be available for attendance at school for at least thirty classes each year.

On orders from the regimental commander semi-annual examinations shall be held for the purpose of securing available candidates for promotion.

The Adjutant shall be in charge of such examinations and shall be assisted by one line officer and one medical officer from the regiment conducting the examinations. Such semi-annual examinations shall be held during the months of February and August of each year. One month's notice of such examinations shall be required.

From these available candidates the company commanders shall recommend to the commanding officer of the regiment candidates for appointment as non-commissioned officer.

IX. PAY.

Officers shall be entitled annually to pay of their rank equivalent to one month's service, and pay for longevity based on periods of ten years' service at the increases now authorized in the Regular Army for periods of five years in either the National Guard or any of the armed forces of the United States Government. In addition they shall receive pay of their rank for service at the annual tour of duty, which shall not exceed two weeks, nor be less than one week.

Enlisted men of the three reserve classes shall receive annually one month's pay on same rating as soldiers of the regular establishment at beginning of first enlistment, which shall continue the same throughout enlistment. They shall also receive extra pay for one month, at the rates now authorized by law for the Regular Army, for rifle qualifications, as determined by the United States firing regulations. In addition they shall be paid for their attendance at the annual tour of duty as like grades of the Regular Army at that time.

A soldier who re-enlists in any of the three classes of reserves shall receive an increase of ten per cent. on his annual pay.

No travel pay shall be allowed officers and men going to and from school. Non-commissioned officers shall in addition be paid fifty cents for each school attended and shall be compelled to attend at least seventy five per cent. of the number held within the period of each annual service.

If their attendance falls below seventy-five per cent. of the period which shall be understood from annual tour of duty to annual tour of duty, then they shall be reduced to the ranks by the regimental commander, provided, however, that such absence was not caused by sickness or by such other necessity as may constitute a valid excuse, in the opinion of the regimental commander.

All members of the three classes of Reserves shall be paid during the annual tour of duty, which pay shall include the month's pay, rifle proficiency if any, school pay if any, and tour of duty pay.

X. EQUIPMENT.

A full equipment of ordnance, quartermaster and commissary stores be issued to each regiment or organization and forwarded to the maneuver grounds storehouse of the division. The quartermaster supplies; clothing; blouse, breeches, leggings, shirt, shoes and head pieces, to be assigned to each individual soldier and bear a number on each piece that is recorded on his descriptive list. At the completion of the annual tour of duty the uniform parts just named are to be properly repaired,

cleaned and packed in sacks bearing the soldier's number and properly stored in the maneuver grounds storehouse.

The equipment of the enlisted men will be listed against them on memorandum charge slips and will be kept stored in storehouse of the territorial division and issued to him only for the annual tour of duty, on the completion of which it will be turned into the storehouse. Provided, however, that non-commissioned officers will be charged on account for their clothing and ordnance equipment, which will be kept in their possession during the term of enlistment or until otherwise disposed of.

XI. ARMORIES AND MANEUVER GROUNDS.

Federal buildings located at headquarters shall be made available for use as school rooms. A room similar to one of the court rooms with the addition of blackboards would be adequate for class rooms for schools for officers and non-commissioned officers. No class need be larger than fifty in number.

Each of the twelve territorial divisions should be provided by the general government with an adequate field for maneuvers sufficiently large to accommodate a division.

This field shall be available for the use of the Regular Army, the National Guard and the Volunteer Reserves.

Suitable buildings shall be erected for administrative purposes for the storage of the equipment of the Volunteer Regiment not required at the home station, and possibly for the equipment of the reservists of the Regular Army. The equipment of the National Guard Reserve shall be kept in storage at the home station of the regiment. Part of this ground should be owned, and the rest secured by rental.

XII. ANNUAL TOUR OF DUTY.

Each Volunteer regiment shall be assembled for field work once each year for a period of from one to two weeks. This will bring together the officers, non-commissioned officers and privates of each regiments.

Two days of this period shall be devoted to rifle practice, particular attention being given to field firing. However, men

who desire and are in close proximity to federal or state rifle ranges may apply there for practice, particularly if the soldier desires to compete for proficiency in rifle practice with a view of increased pay. Under such conditions he may be permitted to fire the prescribed course in citizen's dress.

XIII. ON DUTY.

The adjutant of each Volunteer Regiment and sergeant-major, who shall act in addition as quartermaster-commissary sergeant of the regiment, shall be on duty the whole time and shall draw the pay and allowance alike as of the same rank and grade in the Regular Army.

Their duties shall be as follows, in addition to the usual duties of officers and non-commissioned officers of the same rank in the regular Army:

The adjutant shall be the acting quartermaster and commissary of the regiment in so far as the equipment is located at the home station.

The adjutant is to establish and maintain an employment bureau hereinafter described, of which the sergeant major shall be chief clerk.

The adjutant of mounted commands shall in addition be in charge of the stables and animals maintained there.

XIV. USE.

The three forces, Regular Army, National Guard and Volunteer Reserve are to be available for the following duties and subject to call:

The Regular Army as now used by the general government.

The National Guard as now used by the state and jointly by the general government in case of need.

The Volunteer Reserve regiments are available for duty on the order of the general government, but generally are not to be subject to call for riot or civil strife, but for repelling invasion or to act against a foreign enemy, unless an emergency exists when the force may be made use of by the general government.

XV. MOUNTED COMMANDS.

For regiments of cavalry and artillery there shall be secured quarters for the accomodation of approximately twenty-five to fifty horses for the training of officers and non-commissioned men in their duties. These should be furnished and provided for by the general government. This number of horses should be sufficient to enable tactical rides to be taken by officers and non-commissioned officers of cavalry regiments, and sufficient to give the officers and non-commissioned officers of artillery regiment a sufficient number of animals for tactical rides for officers and to equip a platoon of a battery with the non-commissioned officers acting in the different positions for drill purposes and for practice marches. Such rides and marches should, during good weather, be taken up on an afternoon and return to quarters the next forenoon or day. Each organization should take at least five of these practical outings each year, not counting the annual tour of duty.

In connection with the stable there should be a suitable riding ring or hall. One non-commissioned officer and two enlisted men should be on duty at such stables and held strictly accountable for proper care and conditions, under the direction of the Regimental Adjutant, who should be responsible for the purchase of hay and grain and maintenance of proper care and discipline.

XVI—A. MISCELLANEOUS PROVISIONS.

Efficiency Test.—Officers shall be required to take a medical test once each year, which shall be not more than two months before the annual tour of duty. In addition, officers above grade of captain shall take the marching test prescribed for officers of the Regular Army at the present time; that is, fifty miles for dismounted officers and ninety miles for mounted officers, said test to follow the medical test above designated and precede the annual tour of duty.

XVI—B. RULES AND REGULATIONS.

Special rules and regulations shall be prepared paralleling them with the Army Regulations, but eliminating therefrom all matter not particularly applicable to this body of men.

XVI—C. AGE LIMIT.

Reservists shall be of ages between eighteen and forty-five years, provided, however, they shall be entitled to serve out any unexpired time of the then continuing enlistment, provided also, that, officers and non-commissioned officers shall be of the retirement age as of the Regular Army at the present time.

Second Lieutenants may not be younger than eighteen years nor more than thirty-five years at the time of their being commissioned, except that an officer being commissioned in one regiment and resigning on account of removal from regimental headquarters may on previous standing be eligible to compete for a commission as second lieutenant in another regiment.

On the retirement of an enlisted man from any of the reserves he shall be entitled to retirement pay proportionate to that of a retired enlisted man of the Regular Army, as now allowed, provided, however, he has one term of enlistment with the colors and four terms as a reservist, the minimum of which shall be twenty-one years.

Officers on retirement on account of age limit or physical disability shall be entitled to pay which is proportionate to that allowed officers of same rank in the Regular Army.

XVI—D. EMPLOYMENT BUREAU.

There shall be established at the headquarters of each regiment an employment bureau under the charge of the regimental adjutant.

It shall be the duty of the adjutant to list all applications for positions and to give assistance in securing same for reservists of his regiment, including communicating with business houses needing and employing men with a view of bringing about cordial relationship and assisting men worthy of help.

XVI—E. INSURANCE.

The government shall establish an insurance bureau and shall carry an insurance of \$1,000 on each enlisted reservist in any of the three forces, provided, however, that on each pay day an amount equal to ten per cent. of the soldier's annual pay shall

be deducted and credited to the Reservists Insurance Fund. In case of death of the said reservist during his enlistment, the above sum shall be paid by the Government to the nearest of kin, as designated in said insurance, and charged to the said fund.

XVI—F. RECRUIT STATIONS.

There shall be organized a central recruit station in each of the twelve territorial divisions, located on the maneuver grounds, where in case of war recruits are to be sent for preliminary equipping and training before being assigned to the colors. Under such a contingency the station shall become part of the regular establishment and shall, therefore, be under the charge of officers detailed by the general government. Trained men are to be forwarded from these stations to the three forces, in proportion to their needs. Each of the stations should be equipped at an early date and the required number of officers and enlisted men of experience determined upon and be available for immediate assignment in case of need by the territorial division commander. All recruiting stations in the twelve districts should be prepared to forward for preliminary training to these selected places, the details being on file in their several stations and at territorial division commander's headquarters.

Any system that fails to keep the fighting force of an army at war strength is wrong, absolutely wrong. No other plan would be considered, were it not for the political power exerted to put into the field new troops, necessarily untrained, to provide commissions for political aspirants.

COST.

Reservists with Regular Army:	
Pay 1 month 36,000 men at \$15.....	\$ 540,000
Annual tour of duty (estimated) \$5.....	180,000
Transportation (estimated) \$4.50.....	162,000
Subsistence (30 cents).....	108,000
Total cost.....	<u>\$ 990,000</u>

Reservists with National Guard:

Pay 1 month 51,840 men, \$15.....	\$ 777,600
Annual tour of duty, \$5.....	259,200
Transportation 4 cents per mile, \$4.50.....	233,280
Subsistence.....	155,520

Total cost.....\$ 1,425,600

Reservists with Volunteer Regiments:

1 Division aggregate 18,533 enlisted men:	
Pay 1 month 18,533 at \$15.....	\$ 277,995
Annual tour of duty.....	92,665
Transportation (4 cents per mile, estimated).....	80,000
Subsistence at 30 cents per day, 10 days.....	59,550
Pay 1 month 752 officers (estimated) \$200.....	150,400
School pay 3,078 N. C. O.'s, 50 cents.....	46,170

Total cost of one division.....\$ 706,780

Cost of Reservists with Regular Army.....	\$ 990,000
Cost of 12 Divisions Volunteer Reservists.....	8,481,360
Cost of Reservists with National Guard.....	1,425,600
Cost of items not included above.....	603,040

Total cost of Reservists scheme.....\$ 11,500,000

This is equivalent to the cost of one super-dreadnought fully equipped.

Under present conditions, that is, rate of discharge from the Regular Army and the National Guard, it would take approximately eight years to complete the organization contemplated.

In the above statement of estimated costs the transportation is approximated on the following basis: First, on the basis of the distribution of the reservists among the population of the district, and, Second, on determining the transportation to the center of gravity of this distribution. The twelfth division, as announced for the organization of the National Guard, is taken as an average of the several divisions.

The rate is taken at four cents per mile, which should be cut in half by a government contract with the railroads.

HOW TO PROVIDE THE MEANS.

A. Our economist statesman, who asserts a waste of \$300,000,000 furnishes an object lesson; this sum invested in bonds at four per cent. would yield annually \$12,000,000, which will more than provide enough to pay the additional expenses for the reservists necessary to maintain an army of 500,000 effective men. That is, this saving need only be carried out for one year so as to secure the needed principal to produce an income to warrant the expense. Then, if the economy is too severe on our political nerves, we can go back to the old style of extravagance with the assurance that we have at least contributed toward a partial, if not a complete, protection of the country.

B. While military experts declare the Civil War could have been finished in one-half of the time it did take, then one-half of the expense could have been saved, but we will assume that but one-fourth was unnecessary and could have been saved:

Carrol D. Wright is authority for the following:

"Cost of the war in money.....	\$8,000,000,000
Cost of the war in men killed and wounded.....	1,000,000
Cost of the war in pensions: in 1870, 30 millions, in 1912, 160 millions.".....	9
One-fourth of money cost.....	\$2,000,000,000
Considered at 5 per cent. interest 40 yrs.....	4,000,000,000
One-fourth of total pensions paid.....	285,000,000
Considered at 5 per cent. interest 20 yrs.....	285,000,000
Not counting wealth destroyed.....	0
Not counting productive value of men lost.....	0

Total amount involved as principal.....\$ 6,570,000,000

The annual premium on insurance to protect this sum as a principal will at one-fifth per cent. amount to, \$13,140,000.

This in itself is more than enough to warrant the contemplated outlay.

C. The sale of unnecessary military posts and reservations would more than pay the purchase price of the maneuver grounds necessary to carry out this scheme.

ARGUMENT.

1. It is believed that the present reservist law should be amended to fit this scheme; first, it is not pay for services rendered, it is bounty; second, the government does not know the numbers that will avail themselves of the bounty offered; third, it affords us training while reservists; fourth, it offers more to the one from the colors a number of years than to the one just from the colors, whereas, is a difference exists, it should be in favor of the latter; fifth, being a bounty, it will deter others from enlisting unless a bounty is given them (this has been done in the past); sixth, it is un-American—it is a duty to serve one's country.

This scheme will put the Regular Army into the field with a maximum strength in training and maneuvering ability at the very outset of the war.

2. It will put the National Guard into the field promptly following the declaration of war at full strength.

3. It will put twelve divisions of veterans into the field in an incredibly short time.

4. This will put over one-half million of well trained soldiers into the field at the beginning of a war.

5. It provides a means of keeping this force at its maximum strength by the addition of trained men to take the place of casualties.

6. It will result in the conservation of the trained product of the Regular Army, the National Guard and of the University where army officers are detailed as instructors.

7. It will group men in the same regiment in the same locality.

8. It will bring men of the same proficiency together.

9. It will bring a body of men (Volunteer Reserve) older in years together than found in the Regular Army or the National Guard.

10. It will enable units of the same proficiency to be put into the field at once.

11. It gives the reservists an opportunity to look forward to promotion, first as a non-commissioned officer, than as a commissioned officer. This applies to the Volunteer Reserve Regiments.

12. It keeps the officers and non-commissioned officers abreast of the times by school work.

13. The annual tour of duty and the rifle range keep up the military spirit of the enlisted men.

14. It enables the benefit of the military training to be utilized in business.

15. It keeps a large number of the soldiers among the producers, rather than among the consumers only.

APHORISMS.

In time of peace prepare for war—this is national insurance.

The 13-inch gun is a great peace argument.

The hold-up man lets the armed man alone.

Only the shots that hit count; untrained men do not hit.

The untrained man on the field of battle is but a bullet stopper—better use trees.

Conservation is the basis of perpetuity.

An ounce of prevention is worth a pound of cure.

A dollar expended in training will save two dollars in pensions—and you will have the man left—he will be thankful for that.

A business man who has not counted all the costs would be considered insane and would be lucky if he escaped having a conservator appointed.

CONCLUSION.

Any scheme that does not contemplate the immediate organization of the reservists is a failure. The training and military spirit of the reservist must be continued by present activities. The parts of the machine must be fitted and in working order when the time comes for the use, and this can only be accomplished by organizing along well defined military lines. To accomplish this object this scheme is respectfully submitted.



THE CAVALRY ON STRIKE DUTY IN COLORADO.

BY LIEUTENANT WILLIAM M. GRIMES, TWELFTH CAVALRY.

PROBABLY there are some readers of the JOURNAL who may be interested to know something of the Colorado situation, especially as the Cavalry has been actively engaged there in the field for the past eight months.

There have been practically two regiments of cavalry in the strike zones since April, 1914. A squadron of the Fifth Cavalry were the first of the Federal troops to arrive in the State. Later two troops of the Twelfth Cavalry from Fort D. A. Russel proceeded to Cañon City, arriving there the latter part of April. Additional troops from Fort Robinson, two troops and machine gun platoon, entered the Northern Fields May 2d, and at the same time the entire Eleventh Cavalry from Fort Ogelthorpe was ordered into the Southern Coal Fields. On May 12th, three troops of the Twelfth from Fort Wingate reinforced the troops in the Northern Fields. In all, we have the entire Eleventh Cavalry, seven troops of the Twelfth and a squadron of the Fifth.

The coal region of the State is practically divided into four districts or zones. The Southern district composing the counties of Las Animas, and Huerfano, with headquarters at Trinidad, is occupied by the Eleventh Cavalry, and a squadron of the Fifth. The Cañon City district, or the Central district, is occupied by the Twelfth, with headquarters at Cañon City. The Northern district, the Boulder-Louisville section, comprising the mines in the proximity of Denver, is occupied by the Twelfth Cavalry with headquarters at Louisville. Farther north in Routt County is the Oak Creek district, also under the jurisdiction of that regiment.

The strike districts were previously occupied by the National Guard of Colorado, they having been actively engaged

on this duty from October, 1913, to May, 1914. The State troops had approximately 700 officers and men in the field; this force was greatly reduced in the early spring, and by May there were very few State troops on duty. The National Guard were laboring under the most trying circumstances and conditions, and performing very arduous duties, many of them not even being paid for their services. The press and the people of the State, were, as a whole, very hostile to them. After the Ludlow affair, of which so many exaggerated accounts have been written, public opinion in the State became so hostile against the State troops that the Governor of Colorado telegraphed for Federal aid. This no doubt saved the lives of many, as the strikers were prepared to fight the Guardsmen to the end. If ever there was an example of rebellion in a State, surely it was manifested in Colorado. Both sides, strikers and operators, were well equipped with modern rifles. There were quite a number of cases in which real fighting occurred between the National Guard and the Strikers. This was the situation when the Governor appealed for Federal aid.

The moment the "Federals," as our troops were called, arrived, the State troops were withdrawn; and by the latter part of May all of them were out of the affected strike zones. We were welcome visitors in all the mining towns. The strikers in many cases met our troops with bands, and escorted us to our camps. Everyone was eager to lend a hand to the Federals. We were not only welcome to the strikers but to the operators too, who now saw their way clear to operate their mines peaceably.

One of the first acts done by the commanders of the various districts, was to close all the saloons. This proved to be a very wise move, and probably averted much trouble and disorder. Shortly after our arrival the President's proclamation regarding fire-arms was published, and for some time after this all the troops were busily engaged in receiving arms and ammunition. Much has been written on this subject by magazine writers, some contending that the operators did not turn in their arms, others contending that the strikers did not comply with the proclamation. No doubt there were some who did

not comply, but the offenders were equally divided between the two factions.

In this connection the reader must remember that at each mine there were armed guards hired by the coal operators to guard their property. At some mines there were small buildings not unlike block-houses, on top of which were mounted search-lights, that constantly played on the ground immediately surrounding the mines. In the tower were placed machine guns. In the Louisville district the troops gathered in four machine rifles from the mines. In receiving and checking guns we employed a system not unlike the manner in which a traveler checks his luggage at a railway station. Each gun was tagged and on the tag was noted the owners' name and address, and a brief description of his gun. As soon as a gun was brought in, it was checked, a receipt given for it, and then it was packed in boxes made especially for the purpose. As soon as a box was filled it was sent to Fort Logan where all arms collected in the Northern fields were sent for storage and safe keeping. Many funny incidents occurred in the checking of arms. One man, who must have been at least eighty years of age, brought in an old muzzle loading rifle with bayonet attached that probably had seen service in the Revolutionary War. This old gun was about nine feet in length, and the owner promised faithfully not to fire the piece provided he was allowed to retain it in his possession. A woman gave us an old muzzle-loading shotgun that she wanted to keep to protect her chickens from the rats. One man handing in the stock of a rifle said he had read the President's proclamation and being a law-abiding citizen wanted to comply with it; another brought in only the barrel of a rifle. Everybody had a reason why he should be permitted to keep his gun. We took in a number of Mauser rifles, not a few of the guns showed signs of having been recently buried. Later, we learned that many men had buried their guns to avoid turning them in.

About the time arms were being taken in, the entire State was placed under an embargo as to arms and ammunition. The embargo has since been somewhat modified so as to effect only the strike zones proper. However, the shipment of arms

and ammunition into the State is forbidden, unless permission is first obtained from the commanding officers of the district.

Since the occupation by the Federal troops there has not been the slightest disorder of any sort in the strike zones. Our troops maintain an absolutely neutral position. Not being familiar with the other districts an account will simply be given of how peace and order is maintained in the Boulder-Louisville district.

In this district there are about forty mines covering a front of approximately thirty miles. There are four principal mining towns or camps, at each of which is stationed one troop. These troops are simply performing ordinary police duties such as the Pennsylvania State Constabulary is called upon to perform in the coal fields of that State. This duty is very onerous and exacting. When we first arrived we were called upon to settle many petty and trivial complaints. Mrs. Smith would come to camp and complain that Mrs. Jones made a face at her, and wanted her arrested, or some saloon keeper whose place we had closed, wanted to get out his pet cat. These and similar requests we met with daily. It was some time before we could persuade the people that they should call upon the town Marshal to settle their petty quarrels. There is no doubt that in a union town and with a union sympathizer for Marshal that the quality of justice was somewhat strained, and the same held true in a non-union neighborhood and both sides wanted our aid in any and all cases. To guard the mines in the district each troop furnishes patrols that daily visits the mines. Patrols are out day and night. At larger and more remote mines they remain over night. In some districts there is a detail of an officer and fifteen men who remain constantly at the mine, and are relieved once a month. From each mine a daily report is received showing the number of men employed, and the names and number of men discharged and taken on. In this way a check is had on each mine.

There are two classes of mines: those employing non-union labor are the non-union mines; and those mines employing union labor are union mines. Under the former come the large mines operated by the Rocky Mountain Fuel Company,

The Colorado Fuel and Iron Company, The National Fuel Company, and numerous other large companies. Those mines that have signed agreements with the United Mine Workers of America, or, in other words employ union labor, are known as union mines, under this head comes a number of small independent mines. Before our troops came into the fields, the mine guards were guarding the big non-union mines, since then we have been guarding their property; the mine guards have been discharged. There is no doubt our presence saves the operators many thousands of dollars in this respect.

There is an order now in force that prohibits the operators to advertise for, or gather up men in numbers to work in their mines, but any man applying for work may be employed provided he appears to be acting in good faith. The object of this order is to prevent the importation of strike breakers, the operators however have been able to operate their mines with full forces and apparently have all the labor needed, in spite of the order regarding strike breakers.

The term "strike breaker," implies a man hired by an operator to work at a non-union or open shop mine, filling a place formerly held by a striker. To prevent the wholesale importation of strike breakers is one of the duties of our troops; as each mine submits a daily report giving the numbers and names of all employees. It is an easy matter to judge each case and determine if the men should be employed. The union before our arrival prevented the importation of strike breakers by what is known as the picketing system. This was the placing of pickets or men at some designated point, a railroad station for example, their duty being to warn and prevent men seeking work at a non-union mine to keep out of the district. The picketing system lead to acts of violence, and is not countenanced by our troops.

The underlying point of the controversy in the Colorado strike is the recognition of the union or The United Mine Workers of America; this the large operators refused to do. This organization is a federation of miners scattered throughout the principal mining regions of the country. The organization called a strike in the Louisville district over four years

ago and since then has steadily waged a strike in the Northern fields. The reader may ask what does the striker do for a living while on strike. The union pays every man on strike \$3.00 a week, and in case the man is married he receives \$1.50 for his wife and \$0.75 for each child until the child becomes sixteen years of age, when the allowance is increased to \$1.50. Each striker receives his pay once a week. Some idea of the amount of money paid out by the United Mine Workers of America in benefits, that is their weekly pay, while on strike can be seen from the following in the Louisville district composing the towns of Marshall, Superior, Louisville, Lafayette, Erie and Frederick, where the union has paid in the last four years and a half over a million and a half dollars. The monthly pay-roll for this period has averaged \$28,000 a month. For the town of Louisville alone over a half million dollars has been paid in benefits. The monthly pay-roll averaging about \$8,000 a month. The strike was called in Louisville April 1, 1910, and the union began paying benefits in May of that year. The above figures are for the Louisville district, in the Northern Coal Fields. The Southern fields are larger and the sums spent there by the union with which to wage the strike, are still greater. There are many other points at issue between the operators and the United Mine Workers of America, but the main issue is that of recognition.

The President in October attempted to settle the strike by his "Three Years' Truce" which in general provided for a peaceful settlement of the situation. The Truce provided for a joint board of mediators to settle questions that might arise between employer and employee; it further provided that all miners now out on strike should be allowed to return to work in the mines, provided the men had not been convicted of any unlawful acts. The United Mine Workers of America agreed to the proposed truce but the operators refused to accept it. There has been a committee of the State Legislature investigating the strike situation. Their committeemen seem to be in favor of withdrawing our troops and once more placing the state troops in the field; the stumbling block to this appears to be the fact that the State will have the additional indebted-

ness should the strike zones be occupied by the National Guard, whereas with the Federals in charge this additional expense would not be incurred. Although there is peace and order in the strike zones, still the strike situation is precisely the same as when we came into the State.

As a result of the failure to settle the strike the troops are now preparing for a prolonged stay in the coal fields. In many towns we have rented buildings for men and animals; in some cases temporary winter quarters and stables have been built. Everyone is watching the present state elections with a great deal of interest as we all hope that with a new administration we will be withdrawn and relieved of our present duties as policemen and mine-guard.

It is a very hard matter on duty of this nature not to have ones feelings lean toward one side or the other, to be on the fence, as it were. There are two sides to the controversy of course, and we are naturally in a position to know every phase of the situation. We hear grossly exaggerated accounts of cruelty and wrong doings from both parties. An outsider can not understand the undercurrent of extreme bitterness and deep feeling of hatred that pervades both factions. The outcome of this strike will be watched with great interest, the question at issue has become one of national importance and the manner in which it is settled will be of vital consequence to not only labor and capital, but to the country at large, it will establish a precedent for the settlement of similar disputes in the future.



THE REGULAR ARMY AND RESERVES.

BY LIEUTENANT K. B. EDMUNDS, TWELFTH CAVALRY.

FOR the first time, perhaps, in history there seems to be an inclination on the part of Congress and the people to inquire into the condition of the army with a view to putting the country in a secure position against foreign aggression, and the service will undoubtedly be asked what means should be taken for its accomplishment. Are we prepared to give a clear and reasonable answer? On the contrary there is a wide difference of opinion among army officers on this subject. After advocating for years the preparation of the country for defense we are liable to see the opportunity pass with nothing done, simply because we are not united on a suitable plan of action.

There seems to be a larger number of officers, with an equally large number opposed to their view, who say that it takes but a short time to train a soldier, and that the country should be prepared for war by training as large a number of citizens as possible in the duties of a soldier who, after a short period of training with the colors, would return to civil life to be available for service at the outbreak of hostilities. To accomplish this result they propose cutting down the term of enlistment to from six months to a year, and discouraging reenlistments, in order that the largest practical number of men shall receive military training. Those opposed to this view state that it takes several years to make a trained soldier, that the number of men who would voluntarily return to the colors in case of war would be small and that reducing the enlistment period would end simply in filling the service with recruits and so reducing its efficiency without any other result.

The truth is that both these views are in part correct and in part wrong. It is true that the most efficient and economical way of preparing for war is to have a large reserve with a

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comparatively small standing army, but it is also true that reserves can not be efficiently trained in our army as it is at present organized; that to train reserves without organizing them so that they can be found when wanted is a waste of time, and that to reduce the term of enlistment would seriously impair the efficiency of the army. It is true that with uninterrupted work and proper facilities a soldier can be made of a civilian in a comparatively short time, but the duties of our army are such that the facilities are seldom available and the training is continually interrupted. These conditions will always obtain and are not susceptible of improvement.

From the time it was first organized the principal use of the regular army has not been to train for war with a foreign power, but to keep the peace within our own boundaries and its service has been such as at the time to call for highly trained men, and also to render impossible the following of any formal schedule for the training of reservists. This service for many years took the form of campaigns against the Indians, but since their pacification it has by no means ceased, as a glance at the records for the last fifteen years will show. During this time have occurred the Philippine Insurrection, three Moro Campaigns, the San Francisco earthquake, the Dayton flood, the border patrol, and the Colorado strike. To this list might be added the China Relief Expedition, and the "pacification" of Cuba, which, while outside the country, were not properly wars against foreign powers. During the last two years the majority of the regiments have been continually away from their permanent stations. In the field neither the time nor the tools are available for the training of reservists, and this "constabulary" service calls for trained men, not for recruits. *It takes something better than a six months recruit to arrest filibusters, to shoot down individual rioters in a mob, or to face a Moro rush.*

Used constantly on the frontier our regiments must be far away from their supply of recruits and consequently of their reserves, and the reservists will have nothing on which to assemble. An efficient reserve calls for localization of regiments, but to be impartial in domestic disorder our troops must have no local affiliations. Often stationed on the outskirts of civilization, recruited from all over the country, with no means of

tracing its time expired men, the regular army is the poorest possible school for the training of reservists.

We see then that there are two opposed duties that the army is to perform. First it is to educate large numbers of citizens in the duties of a soldier; this calling for permanent stations in thickly settled districts, time devoted entirely to training, localized regiments, readily accessible armories, riding halls, target ranges, and maneuver grounds; short enlistments and few reenlistments. Second, it is to be ready at all times to quell disorder at home and to suppress insurrections in the colonies; calling for frontier stations, highly trained men, few local ties, and long enlistments. To try to combine these duties in the same organization is absurd.

The necessity of providing for our needs in war must be met, therefore, by organizing an entirely new and additional body of troops, which although a part of the regular army, will be a separate and distinct branch thereof. To make this clear call the present army the Guard Regiments, and the new organization the School Regiments, of the Regular Army. The Guard Regiments need little discussion as they would remain substantially as they are. Probably it would be necessary to meet the easier and more attractive service of the School Regiments by increasing the pay of enlisted men of the Guard, especially on foreign service, but the organization itself need not change except to be increased or decreased as necessity should arise.

In the organization of the School Regiments there is but one object to be sought; *the smallest and most economical organization that will train the required number of reservists.* Let us see what a School Infantry Regiment might look like.

There must be a permanent skeleton for the reserves of the regiment to assemble on and there must be a trained corps of instructors, the faculty so to speak, of the school. The supply departments must also of necessity be permanent. This skeleton would consist of officers, non-commissioned officers and special men (artificers, cooks and the like) detailed from the Guard, and additional members of it. Say this skeleton consisted of the Colonel, Majors, Captains, Staff Officers, Non-commissioned Staff, two sergeants to each company, and the

necessary number of cooks, etc. The remainder of the regiment would be made up of men undergoing instruction for the reserve. Putting the enlistment at one year with the colors and four with the reserve, the "student" strength of the regiment should in time of peace be about one-third its war strength. That is to say that if the war strength of a company is 150, its peace strength should be about 50. This allows both for filling the regiment at mobilization and for the later replacing of casualties.

The headquarters of the regiment, and its winter quarters should be located in a thickly settled district, preferably near some large town, for it is essential in an organization of this kind that its members come from the same neighborhood, and for quick mobilization the reserves should not have far to travel before reporting. Also if the principle of voluntary enlistments is to be retained, and there is always sure to be strong opposition in this country to compulsory service, sufficient local pride must be fostered and the organization must be made attractive enough to insure its getting its quota of recruits. In addition to the winter quarters there should be a summer training ground within easy marching distance. The clothing, arms and equipment of the reserves should be kept stored in the winter quarters.

The short term of enlistment requires that the recruits enter at the same time, for it is impossible to adopt any progressive scheme of instruction with new men constantly coming in, and the shorter the term of enlistment the more necessary it is to follow a schedule. Assuming that the recruits enter in November the following might be the course of instruction:

The time from November to May, designated as the Winter Training Period would be devoted to the organization of the new companies and to everything comprised in the Schools of the Soldier, Company, Battalion, and Regiment, the Manual of Interior Guard, and the Preliminary Instruction in Rifle Practice; in other words, all the training of the barrack room, armory, and drill ground. At the end of April the regiment organized and with its members instructed in the ground work of their profession, would proceed by marching to its summer training ground and go on to the field training. This includes target practice, combat exercises, the march and bivouac. The

summer should end with two weeks of maneuvers with the companies filled to war strength by the addition of the first and second year reservists.

The training for the mounted branches, the cavalry and field artillery would be similar to that of the infantry. The winter training should include two to three hours riding a day and ample riding hall accommodation would have to be furnished for this purpose. The mounted troops would have to be kept at war strength, or nearly so. This is for the reason that a mounted regiment must have trained horses as well as men, and to have the horses it is necessary to have also the men to care for them.

No mention has yet been made of the junior officers. If at the end of the summer training season recommendations for the promotion of non-commissioned officers are made it is thought that a sufficient number of desirable men could be secured. It is to be expected that these School Regiments would attract a number of young men of good education who would be glad to take a year of extra service for commissions as officers of the reserves. A course of study during the winter training season with the year's previous service in the ranks would make these men better qualified for their positions than a large number of officers who enter the present army from civil life. Each year would then see the reserves strengthened by a number of trained officers as well as enlisted men.

As regards numbers the needs of the country are not excessive. Unlike European nations we are not in competition with others and under necessity of meeting increase with increase. The limits of our needs are quite definite. *We must be able to mobilise enough trained men to defeat the largest expedition that can be landed at one time on our shores.* The question becomes, then, simply one of transports. We can safely say that 500,000 trained and organized men would make this country safe from invasion. This under the above system would make a standing army, including the guards, of about 200,000.

Reprints and Translations.

CAVALRY MOUNTS.*

By PRESTON GIBSON.

MILITARY Washington is watching with keen interest the marvelous performances of the cavalry in the epochal conflict of nations in Europe. The dashing charges and the utter abandon with which the fearless cavalymen plunge into the very jaws of certain death have inspired among the military heads of the government an admiration that no one seeks to conceal.

But aside from the spectacular and almost superhuman performance of these defenders of nations, the one dominant feature that stands out pre-eminently in the operations of all the belligerents is the wonderful stamina and the equally wonderful training of the splendid mounts.

With the practical abolition of racing in this country, the thoroughbred, the pride of all sportsmen, has been permitted to become an almost obsolete creature. And with its decline has come a dearth of well-bred mounts, felt mostly by the army. High officials of the War Department have exerted every effort to keep alive the best traditions of the turf in order that the military arm of the Government might not suffer. Generous and patriotic Americans have aided by presenting thoroughbreds of almost priceless breeding, but withal the army today

*Clipping from a Washington daily newspaper furnished us by Ed. L. Wenick, 11 West 64th Street, New York, dealer in rare horse books and prints.

suffers for the want of such animals that are contributing from day to day to the making of history on the battlefields of Europe.

For a number of years American officers have studied the problem as to how this country should supply the cavalry with a sufficient number of mounts, and at the same time procure the breed which was best adapted to this peculiar work. The combination of speed and stamina is not easy to find, but the supply of horses even reasonably well adapted to the cavalry is grievously lacking. By gift and purchase the Government has acquired a few brood mares and stallions of the highest quality, but the problem in its larger aspect still remains unsolved, and is the subject of many anxious conjectures on the part of military men.

It has, therefore, become a matter of special interest that while the United States Army is confronted with this grave difficulty, the cavalry branch of the European armies is giving such a good account of itself as to attract the attention even of the layman.

Eye-witnesses bear testimony that the charge of the British Ninth Lancers upon the guns of the enemy, which had been pouring in a murderous fire along the French frontier, was as gallant as the mad dash of the Light Brigade at Balaklava, with the additional fact that it was not only "magnificent," but it was "war."

The immortal tactics of the Scots Grays in galloping forward with an infantryman clinging to every stirrup leather has been repeated during the past few weeks as successfully as it was done on practically the same field 100 years ago at Waterloo.

These facts, coming as renewed confirmation of the vital necessity for keeping the cavalry efficient in numbers and quality, have not escaped the observation of the military experts of this country, many of whom here in Washington have been found willing to express their views in the hope that something may be done to improve the situation.

In the history of all wars, horses have played a most important part. In the Army of Frederick the Great, horses were the first consideration, and it is said that "Frederick saw that

the task suited the horse. Napoleon made the horse suit the task."

The American type of small thoroughbreds is not unlike the Arab horse, and the Arabs are undoubtedly the outcome of centuries of careful breeding to a distinct type, that can carry a man through a long campaign and live on a meager allowance.

Colonel W. E. Wilder, commanding Fort Myer, when questioned regarding the modern and best type of cavalry horse, said:

"It is greatly to be lamented that racing in this country has received such a terrible blow, as the thoroughbred is the best type of cavalry horse we have, and the fact that racing has been in a great measure discontinued, has forced owners to ship their best mares abroad, and the business of breeding these splendid animals has been to a great extent stopped.

"The cavalry horses which are used abroad are of a heavier type than we require, since the cuirassiers, and other cavalrymen abroad, are so much more heavily equipped than we are. Our equipment is so much lighter that the ideal horse is about 15.2, and must have speed, endurance and poise. But, of course, the one great factor which is of absolute necessity is stamina. The heavy, slow, hair-heeled animal is certainly not to be compared with the lean animal which comes from the thoroughbred pure, or from the thoroughbred cross, whose muscular development, stamina and speed are far beyond his lethargic rival.

"Furthermore, this type of thoroughbred has a good digestion, which is a most important factor. Also the horse should not be too big, as the recuperative powers are greatly lessened with every additional inch of height, and it takes more power of the heart to pump to the extremities.

"So many splendid mares have been shipped abroad that the best types are becoming scarce. The fact that the interest in the breeding of horses has greatly decreased since racing has practically been eliminated also has been a great factor in injuring the standard of the cavalry horse.

"Cavalry when mounted is practically fresh when compared with troops that have gone on foot, and instead of having traversed about three and one-half miles they will have gone seven or eight. As a matter of reinforcement, cavalry can gain a given point so much more rapidly than infantry that in this regard there is great saving.

"In fact the usefulness of a man is nearly doubled, and this is also true in withdrawing. The usefulness of the horse is only limited by the expense and accessibility of forage.

"After racing was in a great measure stopped, a number of gentlemen contributed stallions to the Government, and the result has been most satisfactory, but instead of having a great many stallions and hundreds of mares to give us splendid colts, there are only now a handful as compared with a few years ago.

"It seems to me that it must be evident to everyone that the consumption of horses in the present European war will make them very expensive, and that this is a time when all who are interested in horses should breed them. It would seem to me an opportunity for a revival of the sport of racing and the breeding of thoroughbreds.

"Horses that are destroyed must be replaced everywhere, and it behooves every man to breed and raise the best horses that he can."

Brigadier General E. A. Garlington, Inspector General of the United States Army, said:

"There is at present a great scarcity of fine horses for cavalry service.

"The finest thoroughbreds, such as Belfrey, 2d, who was by Roch Sand, who won \$236,840, out of Beldam, who won \$49,995; Octagon, Henry of Navarre, and other great horses have been given to the Government or acquired for a small sum.

"The best type of cavalry mount is a half-bred horse for the trooper, and a three-quarter or seven-eighths bred one for the officer, and the horse must have breeding and stamina enough to go through any kind of country.

"It should not be much over 15.2, as a big horse cannot

stand the strain which the small, compact horse is capable of standing.

"This is a particularly happy time to foster in the minds of everyone the desire to breed good horses, as in three years time, or before, horses will be in great demand and at a premium, and it is to be hoped that all those who have horses, and are interested in them, will take advantage of this great opportunity to increase the supply of this splendid animal, as the market for him will be the greatest in the near future the world has ever known."

EUROPEAN DEMAND FOR HORSES.*

DURING the next decade there will probably be an increased demand for American horses in the countries now engaged in the European war. The demand may even continue much longer, according to investigators of the U. S. Department of Agriculture, as not only will horses be needed for armies, but when peace is restored, more will be needed for agriculture. Already European agents are said to be endeavoring to purchase horses in this country and Canada, and there is an increased interest in many sections in horse breeding.

To meet this increased European demand American farmers may well endeavor to raise well-bred horses, although the Department of Agriculture does not advise them to purchase a surplus of horses merely for breeding purposes. It merely advises that ordinary farm work should be done whenever possible by good mares which should be bred to good stallions. It also desires to emphasize the fact that only horses of high quality may be profitably raised today. Inferior horses are a drug on the market, and their production is to be discouraged as much as the production of good horses should be encouraged.

*From advance sheets of Department of Agriculture "Weekly News Letter."

The United States has previously been drawn on to supply European countries at war. In the Boer War over 100,000 horses were bought here by the British Government. It may be doubted whether a foreign government could now obtain a similar supply in this country, except at excessive cost. However, if farmers take pains to utilize their good mares during this winter to breed them to good stallions, in the course of several years (time enough for the foals to develop), America will be better able to meet the European demand.

It is natural that European countries should look to the United States for horses, as next to Russia it has more of these animals than any other country in the world. The United States and Russia possess fifty-eight per cent. of the world supply. Strange to say, however, there were no horses originally on our continent and the present supply comes from stock brought over from Europe. Canada's supply is small compared to our own.

WAR AS A CONSUMER OF HORSES.

The German Army requires for a complete mobilization 770,000 horses and the French Army is said to require 250,000, which figure, however, probably includes only those for the cavalry. It is conservatively estimated on good authority that 1,000,000 horses are now engaged in the European War. As the great majority of these horses are not included in the permanent military organization but are used for farm work and are requisitioned by governments only when needed for military purposes, the countries of continental Europe will certainly face an acute shortage of farm horses before the next planting season which will seriously affect the price of horses the world over, as soon as peace is declared.

According to the best information horses in the countries of Europe now at war, number as follows:

Great Britain.....	2,231,000
France.....	3,222,000
Belgium.....	263,000
Germany.....	4,523,000
Austria-Hungary.....	4,374,000
Russia.....	24,652,000
Total.....	39,265,000

In addition England has a supply of about six millions to draw on in her various dependencies. Russia has about ten millions in Asia, and France probably 500,000 to one million in her colonies.

The rapacious consumption of horses in war is illustrated by figures from our own Civil conflict. During his Shenandoah Valley Campaign, Sheridan was supplied with fresh horses at the rate of 150 per day. In his report for the year 1865, the Quartermaster General of the U. S. Army stated: "The service of a cavalry horse under an enterprising commander has averaged only four months."

During 1864 there were 500 horses consumed per day in the Northern Army, without considering those captured and not reported. During eight months of that year, the cavalry of the Army of the Potomac was remounted twice, nearly 40,000 horses in all being required.

OUR OWN ARMY A DESIRABLE MARKET.

Our own army furnishes a desirable market for well-bred horses, there being under the remount system, at least 5,000 horses required annually to supply both the army and the National Guard. There are now about 20,000 horses in our Regular Army on a peace basis. In war, many more would be required before the first engagement. There is, therefore, a steady market for good horses independent of the European demand. Even the invasion of motor power which has reduced the number of horses on our streets has not influenced this demand. In fact, the price of horses has advanced along with other commodities during recent years.

The Bureau of Animal Industry of the U. S. Department of Agriculture, Washington, D. C., stands ready to aid any farmer desiring to breed high class horses. As the day of the large horse ranch is practically gone, any increased demand will have to be met by the farmer. There are certain localities more suited to horse breeding than others and places where certain breeds do better. Such details may be obtained for the asking. Even in the South, where mules are bred in preference to horses, an increased production of first class animals should find a ready market abroad, although the mule is not used on the Continent to the extent that it is used here.

THE SUSPENSION OF RACING.*

LITTLE did Major General Wood, Commander of the United States Army, imagine how soon his prophecy would be fulfilled, when in the winter of 1911, he said to the press of our country:

"As a result of recent State legislation affecting racing there has been, and still continues to be, a very extensive shipment out of this country of the very best thoroughbred blood. These shipments in some cases consists of entire studs of thoroughbreds, and are assuming the *Magnitude of a National Calamity* so far as the effect on the breeding of thoroughbred stock in this country is concerned.

"This matter touches the mounted service in such a vital way that the War Department cannot be indifferent to it. While other countries are spending immense sums of money in imported thoroughbred stock, many of our most renowned breeders have entirely sold out, shipped abroad, or are gradually reducing their establishments.

"The loss of thoroughbred stock to such an extent as is now taking place threatens the further improvements in the American horse and will gradually reduce the source from which the army can secure a proper mount. This matter is one of such importance that it is thought the attention of Congress should be invited to it."

Today our country is infested with agents from Canada, England and France in search of horses for cavalry and artillery for the present great war, with the result that even the meager supply in existence will soon be exhausted. Our farmers are losing thousands of dollars in not being able to supply the demand, and the dearth of any horses will soon be felt all over our broad land, and what our Army can do for remounts even in time of peace is indeed a problem.

The great authority of England and France, "Boulanger," has the following to say through the daily press of England,

*Clipping from a daily paper, furnished by Mr. Ed. L. Wenrick, 11 West 64th Street, New York, dealer in rare horse books and prints.

and it should be carefully read and considered by every thinking man in our country:

"We race horses for the sake of breeding, but we do not breed horses for the sake of racing." Of the many things said and written in these days, this is one of the truest, and, indeed, he must be a biased man who does not admit it. Too many faddists are getting a hearing at the present moment, but while in times of peace strenuous efforts have often had to be made to silence the crowd who decry racing as a menace to the economical and moral welfare of the people, it should not be a very difficult task to prove they are in error when the war horse of the various nations, which has so vastly been improved during modern times, is put to its severest, and, possibly, decisive test. Opposition against a speedy resumption of racing denotes a painful ignorance with regard to all the vital points of horse breeding generally, and in particular of the cult of the noble horse.

Nobody can accuse me of being possessed of a too vivid imagination if I declare that there is not a single horse of the battlefields which comes within the range of army remounts that, in parentage or ancestry, is not related to the British thoroughbred. I had in my time many an occasion to inspect registers of fiscal and private half-bred studs, and I am certain that if I compiled a list of British breeders mentioned in these I could get a complete directory of English and Irish breeders which one would have some difficulty to obtain by the usual means.

It is perfectly true to say, that, for the first time in British history, the English soldier is to become aware of the efficiency of that essential "weapon" which has been produced and raised on the soil of his motherland, viz., his mount, and being, I am almost inclined to say, an instinctive connoisseur of horseflesh we shall probably have to listen to lucid descriptions of the French Army horses, which, for my part, I consider the most efficient means of offense to be employed in this disastrous war. Thoughts of this kind induced me to observe, in my article in the *Sporting Life* of August 11th, that the establishment of fiscal studs in England on Continental lines can be a matter of time only. It is certain to come, since the Government is now

obtaining the first practical conception of the immense value of a uniform type of army horse, and may in future, therefore, lend a willing ear to those whom they thought to be pleading for a wrong and impossible cause. I am highly pleased to note that an esteemed confrere has been encouraged by this comment of mine to discuss this important subject from the proper English point of view, and versatile and impulsive as he is, he should not fail to strike a suitable scheme with a view to encouraging the Government to at once take the necessary steps.

Only a few days ago I chatted about these matters with a prominent English breeder who was commissioned to buy horses for the War Office, and he alluded to the great difficulty in procuring the proper material. Of course, there are heaps of splendid hunters and hacks to be got, but they are not used to army routine, which is so vastly different from, and much more strenuous than, daily work over the country. Only the dire need for horses for military purposes can justify the enormous capital outlay connected with this item of the mobilization. It has certainly cost more than the maintenance of fiscal studs would have required, yet this sort of remounting can never serve its purpose, since uniformity in type of the army horse as a whole, and not supreme individual merits on the part of a few amongst them, is its chief asset. A squadron of lancers mounted on 16.2 hands hunters and 15 hands hacks cannot possibly attack in straight and close lines, and, instead of over-riding a column of infantry, they would soon be all over the ground, and, seriously handicapped in the proper use of the rifle, would be made prisoners or shot without difficulty.

We may have to wait some time ere the man in the street will admit the enormous, though passive, part which the British blood-stock breeders is playing in this war. Even then, if problems of this kind are discussed, he will probably stubbornly deny the existence of any relations between breeding and racing. However, he may in time listen to this. No industry can prosper which is deprived of a testing ground for the quality of its products. Prices are determined by quality, and quality is the result of competitive labor. The ultimate goal of international competition is to gain a sort of monopoly in the production, manufacture and supply of such goods or articles that

are essential for the maintenance of national health, comfort and safety. In the course of years it was proved that, while the natural resources for the production of an essential article are, in respect of either quantity or quality, limited in one country, they are unlimited in another. Consequently the more fortunate country can attain a sort of monopoly in the supply of a special article, but only as long as opportunities are given to test and prove its superiority.

The British bloodstock industry is in exactly the same position. It would be doomed if its testing grounds—the race courses—are abolished. We have no need to fear that this will ever happen, but it is a certainty that if racing is stopped for any length of time, particularly during the most important part of the year, breeding will suffer so severely as to be unable to cope with the enormous demand for bloodstock which is certain to spring up after the termination of the war. Unless a breeder is put in a position to prove the quality of his stock he risks losing his home and foreign market for a considerable time, if not forever, for the simple reason that he would run short of the capital needed to keep up the high standard of breeding which he has attained after many years of arduous and costly labor. Once his reputation is gone, his enterprise slackens. I happen to know of several particular instances of breeders who, assisted by the boom of the last few years, had sufficient means to spare to mate their mares with first-rate stallions. Unless they now find a good market for the produce, they will have to fall back on their own and primitive way of breeding, and will probably be ruined before they are able to retrieve the enormous losses they would sustain if this year's market should collapse.

A CAVALRY RECONNAISSANCE STORY.

(From the *Topeka Daily Capital* of November 30, 1914.)

BERLIN, November 29th.—A lieutenant of *Uhlands*, who took part in the siege of Antwerp, has sent home his diary of which a correspondent of the Associated Press has translated the most interesting portions. It has not yet appeared in the German press. After describing his movements from Antwerp till the army reached Aershot, some ten miles to the northeast of Louvain, when the main body bivouacked on the night of September 26th, the diary continues, with some unimportant omissions, as follows:

"Our horses were stabled in the barroom of a tavern, some of them tied fast to beer taps—how idyllic! The town had been frightfully shot up; there was hardly a house undamaged.

"SEPTEMBER 27th.—On the march at 7:00 o'clock, reaching the railway crossing north of Aershot, where the main body remained, while the advance guard entrenched itself two kilometers further on. We sent out two patrolling parties, each of twenty horsemen, one including K—, (the first lieutenant), and me. We joined the brigade staff and rode on unconcernedly. Suddenly a terrific infantry fire began on our front. Nobody could explain the matter, as our advance battery was silent, while only our infantry in the rear was firing. 'The enemy can't drop from the sky; and where does the machine gun firing come from?'—we asked. Then everything was quiet again. What had happened? A Belgian armored automobile, the terror of our troops, had come roaring right through our advanced battalion at a mad pace; before our men knew what was happening. The automobile reached our main body and could no more turn back; so it began to let its murderous machine gun play upon us. We should all have been lost but for a fortunate shot striking the chauffeur in the head—whereupon the automobile dashed into two ammunition

wagons and then toppled over into the ditch at the side of the road. The officer commanding it and two of his men were killed, and two others badly wounded.

"I examined the automobile immediately. It was double armored, with a layer of abestos between the two plates. It had been struck by showers of our infantry bullets, but none of these had penetrated the second plate. The inmates would have been perfectly safe but for the fact that one of our riflemen, firing from an elevation, hit the chauffeur in the forehead. Thank God! we had captured one of these dangerous things. They are a frightful terror to all our patrolling parties and have a most demoralizing effect upon them because these automobiles can only be knocked out by artillery, which can never get in its work in time. We had only two killed and several severely wounded in this encounter, but we were saved from greater losses only by accident. After a long discussion of the matter we returned to Aershot for bivouac.

"SEPTEMBER 28th.—Rendezvous again this morning at the railway crossing. We had scarcely arrived when a new trick was staged. The Belgians sent out two unmanned trains to collide with our ammunition trains in Aershot. They came on at a tearing speed, one close behind the other. Fortunately, the switch was set for a side-track, so the trains were dashed to pieces without doing any harm. The brigade moved on to Heyst op den Berg (about nine miles northwest of Aershot, in the direction of Antwerp), upon which our infantry had been hotly firing the previous evening. In that action we had considerable losses, including my good friend Captain F—. But the enemy at night evacuated this place, which was of great importance for our artillery, as Forts Lierre and Kessel could be shelled from it. We marched into the place at noon, and soon after this our heavy guns began to speak. It was the first day of the siege and bombardment of Antwerp.

"Who would have thought that we were to march into the city in twelve days? I must add that we were well provisioned from now on, notwithstanding the fact that our baggage trains with the field kitchens never arrived on time, for there was live stock in plenty. I usually sent out three patrolling parties, one for eggs, one for chickens and one for wine. The last two

always brought in the biggest booty. At night every man in camp had his chicken in the pot, and all next day he had cold chicken with his army bread. Everywhere there was wine in abundance, especially good red wine. The only thing that we missed was our morning coffee.

"At Heyst, we found a neat little cottage, in which K—— and I made ourselves at home; and very soon we had a steaming chicken and red wine punch on our table. For table music we had the prodigious thundering of the cannon. We were shelling Fort Lierre, and it was answering vigorously. As the shells never fell nearer than about 1,000 yards of us, however, we took no notice of them, but put on our night-shirts again for a rarity and laid ourselves down in clean beds.

"SEPTEMBER 29th.—The artillery duel continued. In the afternoon observation officers of our 42-centimeter mortars arrived to select positions for their guns, I climbed the ladder, ninety-eight feet high, and could see that our shells were pounding Fort Lierre in fine style; if we only kept it up the big mortar would soon open up a free path for us. Toward evening his excellency, Field Marshal von der Goltz (civil governor of Belgium) arrived. He told me he heard that we had learned to roast a hen in excellent style, and asked whether we did not have one left for him—and lo, the hen was soon on the table, along with a can of asparagus and a bottle of Haute Sauterne.

"SEPTEMBER 30th.—Marched this morning to the river Nethe to occupy and protect the bridge at Hellebrug. K—— and I were entrusted with a patrol across the Nethe to Heykant and Bevel. We passed through Heykant all right, but we found telephone wires communicating with the church tower in Bevel. We cut the wires and then sent a non-commissioned officer with seven men on to Bevel, while K—— and I, with a bugler, walked to a hill and watched the highway. When the little party reached the village it was fired upon, but continued into the place nevertheless.

"I remarked to K——, 'Let us get away from this hill and go behind that house there.' The words were scarcely spoken when a dozen bullets whizzed about our ears, but all too high. But we left the hill at double-quick. After an anxious half hour the non-commissioned officer returned with

his party safe and sound. And what had the daredevil done? A Belgian telegraph patrol, stationed in the village, was firing upon the party; but the 'non-com' and his fellows attacked without lances, and away the enemy scampered. Thereupon, the officer, accompanied by one man, mounted the tower and destroyed the telephone station. Meanwhile, the townsmen were firing lustily at their horses, held by the other men; but thank Heaven, they didn't hit anything. Then we recrossed the Nethe bridge at Hellebrug and took quarters with the infantry, which had already strongly fortified the bridge.

"OCTOBER 1st.—I received the honorable commission to ride again to Bevel to see whether it was clear of the enemy and, if possible to make observations from the church tower. 'Well, those fellows,' I said to myself, 'probably got enough yesterday.' At Heykant I saw that the telephone wires, destroyed yesterday, had been restored. I sent forward a 'non-com' with five men about 100 yards ahead and followed after at the head of my twenty Uhlans. Everything seemed to be going well until the vanguard party was within thirty paces of the first houses of Bevel. Then all at once a terrific infantry fire opened. The 'non-com' and another man dropped.

"The rest of us were out in the open field, scarcely 150 paces from the enemy whom we could see standing behind a hedge. I gave the order, 'To the rear, open order, march!' Behind the nearest house I called a halt, and we prepared to dismount and begin the fight; but at this moment we were fired upon from the rear, from Heykant. The fellows had calmly permitted us to pass through that village, in order afterwards to fire upon us from two sides. There were ditches right and left, so there could be no retreat toward any side. We had to dash through. After passing Heykant we gathered in a forest.

"All my men answered to their names except the two mentioned, and they fell only fifty paces from the enemy. I inquired and was told that the two were dead. A Uhlan saluted and said, 'Herr Lieutenant, I will not leave the corporal lying there; let me ride back and get him.' I lifted my hat, in spirit, before this hero who wanted to ride back into the fire of the enemy, and said a silent prayer for his safety. 'Yes,' I

said, and a second man followed him. After ten minutes they returned with the corporal and the Uhlan. They had both fallen without being hit. All four are sure to get the Iron Cross.

"We got back safe to Hellebrug, where Lieutenant K—— and the infantry officers were happy to welcome us. I can't understand yet how those Belgians were able to shoot so badly. Not to hit one cavalryman out of twenty-five at fifty and one hundred and fifty paces is certainly an artistic achievement. At the same time another patrolling party under Lieutenant H—— was fired upon, also at a very short distance; and the result was two dead horses.

"I reported at once to the brigade and asked that the church tower, which seemed to be used as an observation lookout by the Belgian artillery, be shelled. On the following day two field howitzers fired twelve shots at it. This started the general conflagration in Bevel, and the tower disappeared. That was a great satisfaction. To be fired upon twice from one village was just enough. We made our quarters for the night at Itighem, as Hellebrug had grown too dangerous for our horses.

"K—— and I found good quarters in the villa of a physician. Moreover, we 'requisitioned' two shot guns and the next morning we went pheasant shooting. I had been keeping a setter with a baggage train for some days. There was not a living soul in all this region, but starving dogs and livestock were running loose everywhere.

"OCTOBER 2d.—Patrols were sent out early, but I took a rest, having had enough work on the previous days. However, K——, and I, with our usual staff of bugler, a member of the hospital corps, and an orderly, rode to Herenthout, without seeing anything of the enemy. Night quarters were again at Itighem.

"OCTOBER 3d.—Three forts have already fallen. We again sent out three patrols; all got under the enemy's fire, but returned without loss. Toward evening we all rode to headquarters to report to his excellency. Scarcely arrived there, the enemy's shells began to drop around us. The staff had hardly got out of the house when a shell crashed through the roof. The location of brigade headquarters had been revealed to the

Belgians by escaped prisoners. We faced about in a hurry and left our unfinished reports till the morning. Quarters were again at Itighem, with splendid fruit and walnuts in our garden.

"OCTOBER 4th.—With the first battalion and first battery we marched against Fort Kessel, which was still occupied by the enemy. We made no attack and returned to Itighem.

"OCTOBER 5th.—Fort Kessel kept silence during the night. Yesterday's detachment again sent forward to storm it. We led till we reached the open fields around the fort, when the infantry advanced in firing lines. Scarcely did it reach the open fields, however, when it was literally showered with shrapnel from Fort Broechem. Shell after shell exploded in their ranks, but they occupied Fort Kessel all the same. The enemy's shrapnels had little effect. For three hours they hailed upon our infantry, and the result: two wounded men. Our squadron remained behind in the woods, K—— and I watching from its edge, while the shrapnels were falling among the infantry scarcely 100 yards from us. We stood there fully two hours with no shell dropping nearer us than about 100 yards.

"Finally we started back to our squadron, and had hardly taken 100 steps when a shell exploded at the spot where we had been standing. What a happy escape. (We had exactly the same experience, moreover, on the following day). We get so accustomed to shells and shrapnels, however, that we don't get out of their way unless they drop nearer than 100 yards from us; otherwise we do not let them bother us even when we are eating.

"OCTOBER 6th.—K—— and I were ordered to reconnoiter Fort Broechem, which is to be shelled by our 42-centimeter mortars. We rode with forty Uhlans to a point west of Nylen (about eleven miles from Antwerp). In an ancient linden tree on a slight elevation we found a deserted Belgian observation platform. We quickly climbed to it.

"A wonderful sight—the fort lay about 1,300 yards before us, every Belgian soldier plainly visible through our glasses. A splendid place. Punctually at 8:00 o'clock the 42-centimeter guns began to talk. The first two shots dropped 1,200 feet short. We announced this at once. Every seven minutes

two shells were thrown. The next two dropped nearer, but not in the fort. Again an urgent signal, after which every shot hit. We took note of every one, and continued to report at once. The fort replied continually, but our presence in the tree was not yet discovered. We reported what of the enemy's turrets were firing, and a half hour later the mortars directed their fire upon them. Meanwhile, Lieutenant H—— and three of our men crept to within 530 yards of the fort and sent back reports by bicyclists confirming our observations.

"Suddenly the Belgians appeared to have discovered our point of observation and three shells whizzed by us. We got down and galloped nearer to the fort. Later everything became quiet and after an hour we remounted our old linden, but taking the precaution of sending our men and horses further back. At 1:30 the last shot was fired from the fort. Nevertheless, our big mortars continued firing till 6:30. The last shot struck a powder magazine, which exploded with frightful beauty. It was a moment never to be forgotten to see how the concrete blocks, as big as houses, flew through the air. Fragments flew nearly half a mile, many dropping in the Nethe and making the water shoot up in high pillars. We did big work today, and his excellency sent his special thanks to the officers (K—— and me). He said we were all sure of the iron cross. Highly delighted we took quarters in Neylen.

"OCTOBER 7th.—Again this morning we went to our old post of observation. The fort was deserted. Our pioneers were working feverishly rebuilding the bridge over the Nethe, without which we could not enter the fort. H—— and I rode down on bicycles, feeling that we must be among the first to enter the fort. The pioneers carried us and our wheels across. Then we hurried across the open space before the fort, which was still being shelled by the next fort. The sight inside was frightful. Everything was broken up and in ruins! One company looking for Belgians succeeded in finding twelve. Also many dead. We were glad to have seen all this. As a souvenir I took a brand new French rifle, with cartridges. Then we started back on our wheels, but scarcely had we left when a shell exploded fifty paces ahead of us, leaving a most evil stench. So we turned back to the fort and went out the

backside. For slow riding we had no taste. Quarters were again at Nylen.

"OCTOBER 8th.—Marched to Emblehem. Fort Oelegem was again firing upon Fort Broechem, held by us. Our heavy artillery began last night to shell Antwerp. We could plainly see the city burning, especially the oil tanks. A patrolling party under a 'non-com' advanced to Ranst. Near Emblehem we sat down in a stubble field and played skat, while the cannons were thundering and the enemy's shrapnels were dropping 500 yards from us. Antwerp continued to burn. We spent the night in Emblehem, which is all shot to pieces.

"OCTOBER 9th.—We sent out a patrol to Ranst and thence to Fort No. 1 (of the inner girdle of forts). At 11:00 o'clock we were informed that negotiations for capitulation were in progress and we were ordered to take the rest of the cavalry squadron and reconnoiter in the direction of Antwerp. We rode away with the highest enthusiasm, incessantly singing the 'Watch on the Rhine,' and 'God Save the Emperor.' Every where were deserted guns. Forts M—— and 3 and 4 were deserted. Should we ride into Antwerp at once? The answer goes without saying! And we trotted on briskly till we reached the outer moats. We had to ride half way round the city before we could find a bridge that had not been destroyed. And now we entered Antwerp with an indescribably happy feeling. Everything was still burning. The few inhabitants stared at us with great eyes. We advanced to the market place, where a battery of the Fifth division had already arrived. But there were none of our Sixth division there yet, so we were the first. However, we could not stay alone in the city, and therefore, we rode back on the wall and went into quarters for the night at Pulhof Chateau. There we found some choice wines. That was a great windfall, so we celebrated the fall of Antwerp till late into the night. The next day we left Antwerp and returned to Brussels by way of Malines."

THE MAKING OF CAVALRY LEADERS.*

AT the request of the Editors of the "*Kavalleristische Monatshefte*," General von Bernhardt, cavalry, retired, gives his views on the above question in the January number of that magazine.†

In the first part of this article the General takes issue with the idea that "a cavalryman ought not only to know how to ride a horse but that he should not lose sight of the fact that equitation is nothing but a means of attaining the end, and, that after all, the successful accomplishment of the mission imposed is the real important thing. Only that man who never loses sight of the final object of military instruction, in which the horse, in the last analysis, is but a means of attaining the end, only that man who can recognize what is important from a military standpoint and who tries to succeed in that line by taking into consideration all the conditions of modern war, only that man, as said before, has a chance of absorbing the qualities requisite for a cavalry leader. The General then very properly asks "What are the tasks that a European war would impose on the cavalry?" For it is only after it has been determined what those tasks actually are, that it can be decided just what are "the principles to be observed in the making of a cavalry leader."

The duties, as laid down for cavalry are as follows: "To clear the way, reconnoiter, take cover before the enemy's main body, act against the enemy's line of communications, take part in the battle and in the pursuit." These duties can only be accomplished when the enemy's cavalry have been driven from the field of operations. "We actually believe," says the General, "that in the struggle of cavalry against cavalry, the charge will generally wind the thing up." "Our training," he continues

*Translated from "*Internationale Revue*" by First Lieutenant Allan M. Pope, Eleventh Cavalry, for the War College Division of the General Staff.

†See translation in the July, 1914, number of the CAVALRY JOURNAL, page 132.

"comprising the charge by regiments in closed order, reconnaissance in force and by patrols," actually constitutes the be all and the end all of tactical instruction for troops and their leaders. "Fighting on foot" he adds "is practically only an accessory with us and usually is practiced in small units. In the service of information we attach an exaggerated importance to the great amount of country covered as though this was something of special importance."

General von Bernhardt is "of a different opinion on all these questions."

At the beginning of a war he cautions against exaggerated efforts in reconnaissance, so as to keep the horses in condition. He considers "that it is an error in principle, to try, from the beginning, to push the cavalry as far ahead as possible" when it is not known just where the enemy is to be found. He believes in feeling prudently to the front, and then when the enemy is encountered, concentrate rapidly by night the forces which at the beginning had to be scattered. At this stage, the General believes that the services of aerial reconnaissance, with which the cavalry should cooperate, should be used. Aerial exploration should come "before the first great tactical decisions are made on account of the great frontal development of modern armies." Aerial squadrons should overcome those of the enemy from the beginning by superior numbers. Very mobile artillery for firing against balloons and aeroplanes, which should accompany the cavalry, should be used to assist in the accomplishment of this.

"The fight of cavalry against cavalry should be begun when the cyclists, the dismounted cavalry and the artillery leave off; and it should be continued by successive reinforcements until the decisive moment arrives; that is the moment that should be seized by a rapid resolution." In surprise encounters, it goes without saying that the charge should follow immediately. The General does not believe that a charge against dismounted cavalry in a turning movement will be successful. A turning movement under fire of artillery at long range is very difficult, and it is dangerous to make a frontal attack against dismounted cavalry and machine guns. What has just been said relates to cavalry against cavalry. But "the same principles hold for

cavalry in battle." It should avoid hanging on to the wings of its own army, and try to reach the wings or the rear of the enemy and open fire. "It is best," continues the General, "to save the charge for the pursuit," and he believes that this pursuit should be parallel to the retreat because a direct pursuit "will soon find itself stopped by the enemy's rear guard just as soon as it has time to reform." Attacks against the enemy's line of communications should naturally, at first, be directed against their flank columns "especially when the enemy tries to strategically envelope our own wings." Aerial exploration should also be made use of here.

In the second part of his article, the General considers the ways of making a cavalry leader, and he asks the young officer to get the idea out of his head that "cavalry combat and the charge are one and the same thing." The thing to obtain is the result. Just how it is obtained depends upon circumstances. We must not lose sight of the fact that in exercises and maneuvers in time of peace, the cavalry is much more numerous than it would be in time of war, especially in its proportion to infantry. Then we must remember that the horse is, in the first place, only a means of transportation and that only in the engagement of cavalry against cavalry is it to be used tactically. The rapidity of the cavalry horse should be applied, today, to getting around to the flanks and rear of the enemy.

To aid in the making and the theoretical training of future leaders of cavalry, General von Bernhardt naturally recommends the study of military history, the art of war, exercises with large bodies of troops and theoretical lessons according to a fixed system. Such methods of instruction are recommended for officers up to and including commanders of regiments. In exercises with large bodies of troops "the troop should be drilled in combat exercises and in individual operations and strategic maneuvers which strictly belong to the duties of a troop." A commander of a large body of cavalry should find occasion, in his strategical exercises, to make use of cyclists and aeroplanes so as to become accustomed to their use in time of war and "in the course of these exercises he should practice movements in parallel columns."

"All things considered," concludes the General, "it is excessively difficult to set to work methodically to make a cavalry leader" because situations met with in war are very difficult to create for him in peace, and then because certain qualities of character and certain instincts can only be developed but not created in an individual. Audacity, a spirit of enterprise that is always on the alert, rapid comprehension, rapidity in resolve, sang-froid, calculating circumspection, certain and instinctive judgment regarding the enemy's morale, action that inspires confidence in his subordinates—all these things, together with absolute mastership over his horse, a sure seat and confidence in himself constitute the qualities and instincts that are the most highly prized. If to all those we add a sufficient knowledge of the art of modern warfare, a faculty for judging what his command is capable of, the gift of giving orders briefly and clearly and of employing subordinates according to their special aptitude then we will have a leader of cavalry in the true acceptance of the word. Seidlitz and Stuart alone reunite these qualities.

General von Bernhardt ends his article in a manner especially interesting to the layman: "A young man of character is the one great principle to be fulfilled under all circumstances by one who wants to lead cavalry troops to victory. That is the one great essential that makes a cavalryman out of a soldier."

HORSE BREEDING IN RUSSIA.

BY AN OFFICER ABROAD.

THE Council of War by resolution dated June 28th has decreed: For the purpose of improving and developing the local horse breeding on each farm of the Kuban Cossack troops the annexed project of regulations for the home horse breeding is to be put in force.

The former regulations on the subject are to be revoked.

The sums necessary for the introduction of the new regulations are to be carried to the account of the Kuban Cossack army fund and the funds of the stanitzas (Cossack villages) of the said troops.

REGULATIONS.

On the Home Horse Breeding in the stanitzas of the Kuban Cossack Troops.

1. For the purpose of securing to the Cossacks who are liable to service the possibility of having their own field horses answering to all the requirements of the Cossack service, home horse breeding is to be carried on in the stanitzas on the basis of the following clauses.

2. For the acquisition of the stallions necessary for the home horse breeding the requisite sums are allotted from the common Cossack Army Fund (the *Voisko* Fund) and also assigned by the stanitza and farming communes.

3. The stallions must be of pure blood or their direct half-breeds.

4. Each stanitza is bound to provide for the stallions which it has at the time of the confirmation of these regulations as well as those which will be sent there in accordance with these presents.

5. The stanitza communes which have no natural pastures with good hay must sow plants fit for fodder in the quantities necessary for the nourishment of the stallions during the whole year, as prescribed in the instructions for the keeping of the stallions.

6. The number of stallions to be kept by the stanitzas and farms is established by the Acting Hetman in accordance with the number of mares fit for breeding purposes, but not more than one stallion to fifty mares.

7. For the purchase and transport of the stallions, the awarding of prizes and the construction of stables a sum of 49,175 roubles* is yearly assigned from the *Voisko* Fund

*A rouble is worth about fifty-two cents.

which is distributed as follows: 35,200 roubles, for the purchase of stallions, 5,000 roubles for the construction of stables, 2,750 roubles for the prizes for the one year old foals, 1,650 roubles for the three years' old colts, 2,475 roubles for the field horses and 2,100 roubles for the transport of the stallions.

8. The purchase of the stallions is carried out by a commission appointed by the acting hetman.

9. The stallions must not be purchased before they are matured for breeding purposes.

10. Persons belonging to the Cossack army body and stanitza communes may charge the commissions to purchase on their behalf and at their cost both stallions and breeding mares.

11. The distribution of the stallions among the stanitzas is effected by order of the acting hetman.

12. Poor stanitzas and farms obtain the stallions free of charge; well off stanitzas, at their own cost or at half price.

13. For the care of and attendance of the stallions, the district hetmans appoint one groom to every three stallions, from the cossacks liable to service, elected by the stanitza council.

The service of these grooms is counted as active non-combatant service. Their salaries are paid from the stanitza public funds, as fixed by a resolution of the stanitza council, but not less than sixty roubles per annum. The term of service of such grooms who have not served on active service, is appointed at four years, but after the expiration of this term they are allowed to remain for an after-term of service with all the rights and privileges established for non-combatant privates, except their remuneration, which is fixed in accordance with the verdicts of the stanitza councils. Grooms serving an after-term of service are not called to the camps of instruction and are not taken on active service in war time.*

14. For the loss of a stallion or any damage occasioned to them the grooms on service (whether active or after-term service) are held responsible as in the case of loss or damage of

*The stanitza communes may also keep hired grooms.

government property; for the hired grooms the respective communes are held responsible.

15. The stanitza councils are entitled to issue rules prohibiting the letting out of the stallions on to the pastures, public squares and streets, without the authorization of the communes.

16. The superintendence over the regular maintenance and use of the stallions is entrusted to the stanitza hetmans and their assistants in the horse breeding department; the immediate supervision over the horse breeding is laid on the veterinary surgeons of the districts and sections within the limits of their respective districts and sections; the chief control and care for the improvement of the stanitza horse breeding in each district is entrusted to the hetman of the district, and for the whole Cossack body (Voisko) it is laid on the manager of the stanitza horse breeding under the immediate supervision of the Chief of the Voisko staff who receives his instructions from the acting hetman.*

17. The service of the stallions to the mares of the Cossack population is free of cost, and certain hours of the day are appointed for this purpose.†

18. To encourage the Cossacks to breed good horses and to train the foals properly every year on certain appointed days exhibitions are held in the most central stanitzas of each military district, of the best produce of one and three years old, from the public stallions.

19. For the appraising of the good qualities of the exhibited foals and colts and awarding of prizes committees are appointed to each exhibition by an army order; these com-

*The instruction to the manager of the stanitza horse breeding determining the rights and duties of the officials, and giving indications as to the keeping, nourishment, care and attendance on the stallions, their rejection, the selection of the proper mares, and the servings, are confirmed by the acting hetman.

†After the expiration of such hours or in case of the absence of mares belonging to the Cossack population, the stallions may be used for the mares of other persons (not Cossacks) in accordance with resolutions of the stanitza councils for a fee established by these councils. This fee is entered in the public funds of the stanitzas.

mittees are presided over by the Hetman of the district, or persons appointed by the acting hetman. A committee consists of the commander of an "exempt" regiment*, the veterinary suregon of the district administration, the veterinary of the section, if not otherwise occupied, the hetman of the respective stanitza and the persons appointed by the acting hetman.

20. For the prizes to be awarded at the regimental district exhibitions to the best one year old foals and three year old colts a sum of 400 roubles is annually allotted from the voisko fund to each regimental district; out of this sum 180 roubles are for prizes for the best yearlings, 70 roubles for the purchase of medals and diplomas awarded to the one year old foals, and 150 roubles for money prizes awarded to the best three year old colts.

The prizes consist of the following: 1. A large silver medal and fifty roubles in cash; 2. A small silver medal and forty roubles in cash; 3. A small silver medal and thirty roubles in cash; 4. Bronze medal and twenty roubles in cash; 5. Bronze medal and fifteen roubles in cash; 6. Bronze medal and ten roubles in cash; 7, 8 and 9. Testimonials and five roubles in cash to each, and if required, further testimonials. For the three year old colts the first prize is forty roubles, the 2d is thirty roubles, the 3d is twenty-five roubles, the 4th is twenty roubles, the 5th is fifteen roubles, the 6th is ten roubles and the 7th and eighth are five roubles each. †

*The Cossack is liable for military service at nineteen years of age. All Cossacks (except the Ural Cossacks) service is divided between Active Service and Opol'tchenie (militia). The active service is divided into the preparatory class of two years, the field class of twelve years, divided into 1st, 2d, and 3d categories of four years each, and the reserve of five years, after which the Cossack passes into the Opol'tchenie in which he remains to complete a total service of twenty-four years.

In practice, the Cossack serves only three years of the second class, i. e., the first category of field service, and then passes to the second category being considered "exempt" or on furlough for the remainder of the field class.

†Any uncalled for prizes may be paid out in the following year; the number and amounts of the prizes may be modified by the exhibition committee in accordance with the circumstances, but they cannot exceed the limits established for the first prize.

21. To further encourage the best breeding in each stanitza competition shows are held of all the one year old foals born in the said stanitza from the public stallions and prizes are awarded to the best of them.

22. Such shows are held in each stanitza separately on the days appointed by the stanitza councils. The hetman of the stanitza informs the hetman of the district of the day appointed for the show.

23. The appraising committee consists of a chairman—the hetman of the stanitza, and three members elected by the stanitza council.

24. Prizes are awarded to one year old foals of persons belonging to the Cossack voisko body, either born in the stables of the persons producing them at the show, or acquired by them from persons belonging to the voisko body in whose stables they were born from the public stallions. All the yearlings must, if possible, be produced at such shows.

25. The prizes are paid out of the public funds of the stanitza.

26. The number and dimensions of the prizes at each show are fixed by the stanitza council. The awarded sums are paid out on the spot; and any sums which should remain unawarded, are put by to increase the prizes of the next year.

27. As soon as the results of the award becomes known, an Act is drawn up and the hetman of the district announces it in his district order.

28. In judging the qualities of the yearlings on exhibition attention must be paid to their care and nourishment, their size, breed and conformation; and, for the three year old colts, besides this, to the regularity and freedom of their movements.

29. Besides the above mentioned shows of the produce, yearly competition shows are held of the field horses of the young cossacks who are liable to be sent to the first category sections, as well as those remaining in the surplus, and which have been bred by the cossacks on their farms and are the get of the public stallions; the prizes are only awarded to the cossacks who have tried and trained a field horse (charger.).

30. For prizes for the best field horses the sum of 225 roubles is assigned annually from the voisko fund to each military district; out of this sum the first prize is fifty roubles, the 2d is forty roubles, the 3d is thirty roubles, the 4th is twenty-five roubles, the 5th is twenty roubles, the 6th is fifteen roubles, the 7th, 8th and 9th are of 10 roubles each and 11th and 12th are of five roubles each.

31. The judging of the field horses is carried out by a commission consisting of three officers and a veterinary surgeon under the chairmanship of the hetman of the district, at the assembling places before the departure of the section of young cossacks into the first category.

32. In appraising the qualities of the horses attention must be paid to the care bestowed on the horse (his condition and grooming), his nourishment, size, degree of development of his muscles, his exterior, the correctness and freedom of his movements. The prizes are awarded by a majority of votes.

33. The owners of the one year old foals, three year old colts and the field horses must produce certificates from the administrations of the stanitzas, attesting that the exhibited foal, colt or field horse really belongs to a cossack, was bred by him and was born of a mare served by the public stallion and belonging to a cossack of the voisko body.

34. The prize list indicating the amount of the prizes awarded, for foals or horses, and to whom they were given, are sent by the hetman of the district after each award to the acting hetman to be announced in the Voisko order.

35. In regard to the accountability of the horse breeding, books are kept by the administrations of the stanitzas in which are entered: 1. A list of the public stallions; 2. The mares served, and 3. the servings, for the control of the regularity of the same.

36. All the expedition of business of the stanitza home horse breeding in the whole Cossack army body is concentrated in the voisko staff, and for each district, in the administration of the district.

37. Every year by the first of February the district hetmans forward to the acting hetman a report on the position

of the home horse breeding in their districts and their opinions as to the improvements to be introduced.

The acting hetman draws up a general report and sends it to the Voisko Acting Hetman of all the Cossack troops of the Caucasus by the first of April.

The latter sends the general report accompanied by his own conclusions to the Minister of War by the first of June of the year for which the report was drawn up.

PRICE OF REMOUNTS.

The Council of War, by resolution dated August 9, 1912, has decreed:

1. To increase in 1913 the average remount price for the purchase by the remount commissions of remounts for the cavalry and artillery in European Russia, as follows:

a. For the saddle horses of good blood for the cavalry and artillery from 385 to 400 roubles.

b. For an artillery draught horse of good blood from 350 to 365 roubles.

2. To establish for the years 1914 to 1918, inclusive, the average remount price for the horses for the cavalry and artillery in European Russia as purchased by the remount commissions to be:

a. For a saddle horse of good blood for the cavalry and artillery 425 roubles.

b. For an artillery draught horse of good blood 390 roubles.

AZOTURIA.

A COLD WEATHER DISEASE OF HORSES.

(From the Department of Agriculture *Weekly News Letter*.)

WITH the approach of cold weather horse owners should guard against azoturia, which occurs almost invariably in well-conditioned animals and claims many victims, especially during the winter season.

Various local names have been given to this disease, among which may be mentioned "lumbago," "spinal meningitis," and "black water." The two former terms have been applied owing to the hard and swollen condition of the muscles of the loins and croup and the loss of control of the hind parts commonly observed in these cases, and the latter name is descriptive of the urine, which is usually of a dark coffee color.

While azoturia may occur at any season of the year it is but seldom observed during the warm weather of summer. It usually appears in highly fed, well-nourished animals, which, though accustomed to regular work, have remained idle for one or more days without a corresponding reduction in the rations.

As a rule the animal is attacked suddenly soon after leaving the stable in apparently perfect condition. The attack may occur after five or ten minutes' driving or, in some cases, several hours after the horse has left the stable.

Among the first symptoms are a staggering of the hind parts, knuckling at the pasterns, and profuse perspiration. In spite of such spasms in muscles of the hind parts the horse attempts to go on until he soon falls helplessly. Usually there are efforts to rise, but as a rule the animal is unable to stand even should he regain his feet, and it becomes necessary to remove him to the stable on a wagon, sled, or drag.

Horses attacked with azoturia should be immediately freed from the wagon and harness and be provided with ample straw or other bedding to protect them from injury incidental

to the struggle to regain their feet. Especial care must be taken to prevent beating of the head upon the ground, and if the patient is very restless a strong man should place his knees upon the animal's neck and hold the head firmly upon the ground. Throw a warm blanket over the prostrate horse and arrange immediately for his removal to the stable, where a commodious and well bedded box stall should be provided or, if such is not available, the barn floor or a comfortable shed can be utilized.

In the meantime a qualified veterinarian should be summoned, azoturia being a disease which requires skillful treatment and careful nursing. Until the horse is able to stand it will be necessary to pass a catheter and draw the urine at least twice a day, and also, as an item of nursing, to turn the animal from side to side at frequent intervals, in order to avoid development of bed sores. Both treatment and nursing are best carried out under the direction of a skilled veterinarian who is equipped with required instruments and can apply treatment as indicated in each individual case.

Various theories have been advanced in explanation of the true cause and nature of azoturia. A majority of investigators, however, are inclined to the belief that it is an auto-intoxication. The fact that development of the disease is favored by rich feeding and a period of idleness tends to lend weight to such hypothesis. For practical purposes, however, it is sufficient for the owner of good horses to know that the disease may be prevented with the greatest certainty by reducing the ration of grain when the horses are not working and by exercising his horses daily.

PROTECTION OF WOUNDS OF ANIMALS AGAINST FLIES.*

WHEN an animal is wounded, it is important to treat the wound in such a way as not to prevent its healing, and yet prevent screw worms and house flies from attacking the open surfaces, laying eggs, or carrying infection to the animal.

The screw worm, particularly, deposits eggs in wounds, and there are other flies that may deposit their eggs in this way. The larvae or maggots hatching from these eggs infest the wound and burrow more or less extensively in the surrounding tissues, so that serious damage may result.

The housefly alights on wounds to suck up the exudate, and is a cause of considerable annoyance to animals. It prevents wounds from healing and may introduce agents of infection which adhere to its body.

The Department of Agriculture, in a bulletin on repellents for protecting animals from the attacks of flies quotes the following formulas for application to wounds:

Jensen gives three formulas for repellents for application to wounds:

Formula No. 1

Oil of tar.....	8 ounces.
Cottonseed oil to make.....	32 ounces.

Formula No. 2

Powdered naphthalin.....	2 ounces.
Hydrons wool fat.....	14 ounces.
Mix into an ointment.	

Formula No. 3

Coal tar.....	12 ounces.
Carbon disulphid.....	4 ounces.
Mix; keep in a well-stoppered bottle and apply with a brush.	

*From the "Weekly News Letter" of the Department of Agriculture.

Mixtures Nos. 2 and 3 are said to adhere to moist surfaces, and No. 3 is said, in addition, to form a coating over raw surfaces and protect from the screw worm fly.

The editor at the close of the article in which the above formulas are given adds the following formula:

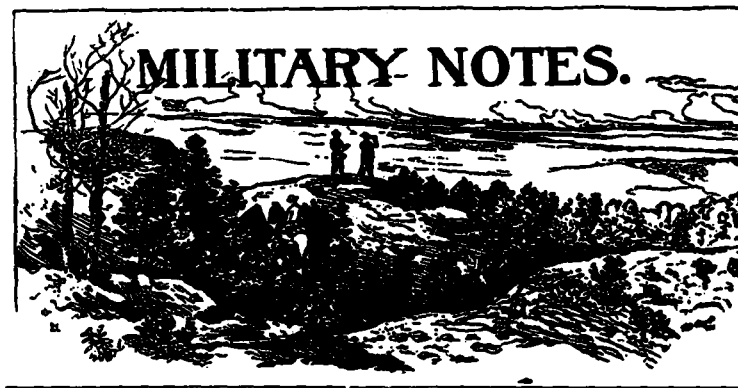
Oil of turpentine..... 1 dram.

Phenol..... 1 dram.

Cottonseed oil to make..... 4 ounces.

Mix and apply freely to wounds.

It is stated that this remedy is highly effective and is used widely in the South. It is said to induce healthy granulation of wounds.



CAVALRY INSPECTION.

HEADQUARTERS FIRST CAVALRY BRIGADE.

General Orders, } FORT SAM HOUSTON, TEXAS,
No. 23. } November 11, 1914.

1. The annual tactical inspection of field training of the brigade will be made during the months of November and December.

2. This inspection will comply with par. 194, A. R., and Sec. 2, Par. 193, A. R. (a-b-c-d-e-f-g-h-i-j-k-l.) Also, as far as practicable, it will cover the course of annual field training required by the letters of the Division Commander of October 28, 1914, and by G. O., No. 10, Hq. 1st Cav. Brig., April 20, 1914.

3. The inspection will include, if practicable, an observation of the efficiency of the troops in the combat exercises mentioned in par. 5, G. O. No. 10, Hq. 1st Cav. Brig., c. s., namely: outposts; advance guard; ambush; scouts; attack

and evasion; dismounted attack of a position; night attack; methods of forced marches. In drill regulations particular attention will be paid to estimating distances; ~~equitation~~; training of horses; care of horses; precision of drill; jumping of hurdles; dismounting to fight on foot; moving at fast; gaits and charging; ~~mounted~~ attack against outlined cavalry; mounted ~~assault~~ of intrenchments; mounted use of rifle, saber and pistol; packing and signalling. Machine gun groups will be tested.

4. In order to more fully comply with sections 3 and 6, Par. 194, A. R., officers as a class will be examined in estimating distances; equitation; jumping hurdles; use of the pistol mounted; use of the saber mounted; hasty reconnaissance; selection and sketching of defensive positions; the locating and staking off of lines of intrenchments thereon, and the formulation of written dispositions for constructing same. They will also be examined in war games and terrain exercises.

By Command of BRIGADIER GENERAL PARKER.

JOHN H. READ, JR.,

First Lieutenant, Cavalry, A. D. C.,

Acting Adjutant.

EXERCISES FOR ALL OFFICERS.

Construction of Hasty Intrenchments.

(See Manual of Military Field Engineering—Beach

Also U. S. Engineer Field Manual.)

(Utensils: 8 stakes, ball cotton wrapping twine, drawing board, paper, legal cap size, pencil, ruler, compass.)

1. Hasty reconnaissance, selecting and sketching of the position. Time for exercise: Thirty minutes. Arrived at the ground the officer will make a hasty sketch (scale: 6 inches to 1 mile) of the position. Extent of front, one mile;

depth, two miles—one mile in front, one mile in rear. The elevation on which the intrenchments are to be placed to be particularly sketched, the sketch to include the position of trenches, the heights of elevation above the plain given in contour lines, positions for supports and reserves, of auxiliary trenches in front of main line of defense, of cover which can be taken advantage of by the enemy, of distances from the principal points in front, and of all details important to the defense. Also a profile of the trench on opposite side of paper with dimensions.

2. Locating and staking off lines of intrenchments. The front given to each officer for this purpose, one hundred twenty-five (125) feet. With stakes and cord he will lay off the principal lines of the excavation and embankment for a kneeling trench. The enemy is expected to make his appearance momentarily.

3. Written dispositions for constructing trench to be turned in in twenty (20) minutes: Having fifty (50) men, but only ——— picks and ——— shovels, time available for digging trench——— minutes, each officer will write in detail the dispositions he will make for constructing this trench, showing how the men will be marched up to the position, how they will be distributed and manner of working. The ground is supposed to be (soft) (hard).

PROGRAM—TACTICAL INSPECTION.

1st Day—MORNING: Full field equipment.

1.—Review in double rank at trot, concluding with charge past by squadron.

Present: Complete strength of troops, excusing only one guard for quarters and one guard for stables.

2.—Inspection, mounted, of troops and transportation.

3.—Inspection of camp or quarters.

AFTERNOON:

- 1.—Examination of officers in estimating distances, equitation, jumping hurdles and use of saber and pistol mounted.

2d Day—Morning: Troops with saddle stripped, carrying saber, pistol and rifle. T. C. D. R. used. Squadrons to have front of 64 troopers.

- 1.—Review (same as 1st day.)
- 2.—Close order silent drill.
- 3.—Mounted attack of batteries.
- 4.—Mounted attack of trenches.
- 5.—Dismounting to fight on foot—horses mobile.
- 6.—Dismounting to fight on foot—horses immobile.
- 7.—Mounted combat exercises against outlined enemy.

AFTERNOON: All officers.

Reconnaissance, sketching and preparation of defensive positions. (Par. 4, G. O., No. 23, c. s., Hq. 1st Cav. Brig.)

3d Day—Morning: (Same as 2d day.)

AFTERNOON: All officers.

- 1.—Terrain exercise.

4th Day—Morning: Same strength and equipment as 2d day.

- 1.—Formation of line of outposts.
- 2.—Dismounted attack of position.

AFTERNOON:

- 1.—Use of rifle, saber and pistol by troops.
- 2.—Estimating distances.

5th Day—Morning:

- 1.—Advance guard, ambush, scouts, attack and evasion.

AFTERNOON:

Packing and signalling.

EVENING:

Night attack.

6th Day—Morning:

Advance guard, ambush, scouts, attack and evasion.

AFTERNOON:

Machine gun platoon test.

7th Day—All day: Forced march.

Test of proficiency of going into camp; promptness and proficiency in preparing meals, breaking camp and packing wagons and pack-trains.

PREPARATIONS REQUIRED.

1. For running at heads with sword: Straightaway track with five head-posts (limber poles) 25 yards apart; capped by leather heads the size and shape of quart cup, open at one end and inverted loosely over end of pole.

2. For mounted rifle practice: Straightaway track; five standing silhouettes, five yards from track. Each man at gallop, 16 miles per hour, firing with gallery practice ammunition; in a place where there is no danger from wild shots. One run shooting to left.

3. For officers: Pistol practice mounted. Good back-stop; straightaway track; five targets, standing silhouettes; gait, extended gallop or run. One run shooting to right.

4. Field exercises: Commanding officers are requested to secure a large piece of ground if practicable two or three miles long, undulating and affording cover. Each trooper to carry thirty rounds blank rifle ammunition.

5.—Machine gun test: Arrange two guns to fire 500 rounds at 800 yards, at line of kneeling figures, six inch interval. To compete with machine gun platoons: Eighteen enlisted men first class. Men to fire 500 rounds at same range and target.

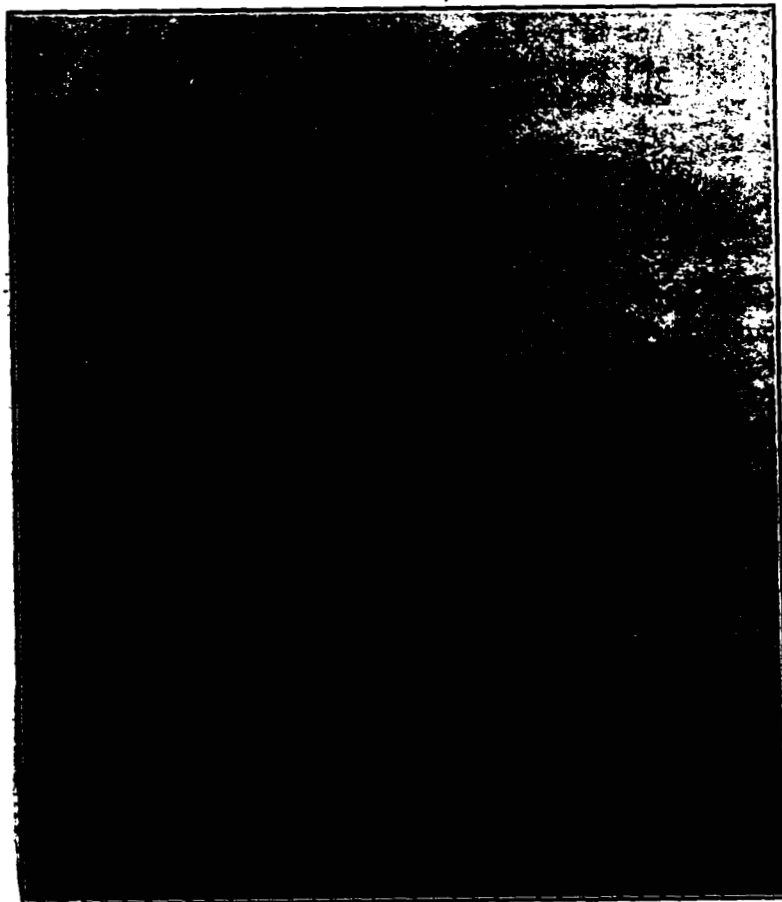
6.—For officer's exercises: All officers attend: Officers will provide themselves with note book, compass, paper and field glasses.

7.—For March: Rations for first quick meal.

ARAB HORSES.

The Editor:

I HAVE just learned that you are to have a picture of Colonel Spencer Borden's pure bred Arab stallion, Sinbad, in the



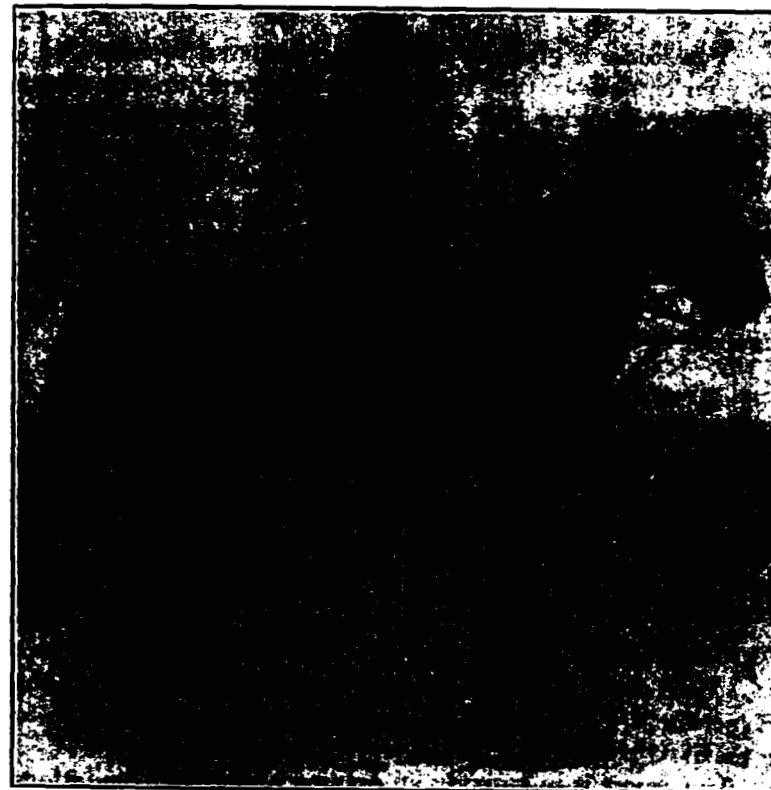
SINBAD.

Owned by Colonel Spencer Borden, Fall River, Mass.

Sinbad	{	Kahled	{ Nimir
Ch. h. 6 yrs.			{ Naomi
Bred in America	{	Imported Shabaka—Dam of Segaria	{ Mameluke
			{ Kexiah II.

next CAVALRY JOURNAL. This is good news to me as I am tired of seeing so many cuts of weedy thoroughbreds that are being published in the JOURNAL.

You know from good hard service on the plains that many of the so-called "first mounts" would not stay in the column long after a few hard marches away from their three feeds a day.



JAHIL.

Owned by Colonel Spencer Borden, Fall River, Mass.

Jahil	{	Sire—Berk	{ Seyal
B. h. 9 yrs.			{ Bukra
Imported from England	{	Dam—Jahnuda	{ Rajeb—owned by Japanese Government
Bred by Lady Anna Blunt			{ Johara—sister of the "broken legged mare."

How many of these thoroughbreds would have gone through the Nez Perce Campaign, 700 miles away from the railroad? Not many, but this horse Sinbad would have done it.

I wish you would note under the cut of Sinbad that here is a horse that the Quartermaster Corps can and should put to use as a sire for our cavalry remounts. Every thoroughbred stallion owned by the Q. M. Corps is blemished, but this horse Sinbad is clean.

You know a great deal about long distance rides. Is it not your experience that the best type of horse for such efforts is one that is under 15.2 rather than those over that height? I know your answer will be in the affirmative. This being the case, why are officers compelled to select their first mounts from the less suitable class of horses? Suitable from the military point of view and not from the horseshow standard.

Say something nice about Sinbad. General Scott will approve of it as will also all cavalymen with experience not acquired in the show ring. * * *

X.

PROPOSED ORGANIZATION OF CAVALRY.

CAMP STOTSENBURG, PAMPANGA, P. I.

OFFICERS of the cavalry in the Philippine Islands have been ordered to submit by May 31, 1915, a report on the "Experimental Cavalry Service Regulations," 1914, soon to be received by troops.

The report is to embody an opinion and recommendations as to changes or modifications in these Regulations.

This most important duty is committed to us and the resultant reports and opinions will undoubtedly be given their proper weight in determining whether or not the principle of double rank for cavalry will be adopted and also whether a six squadron regimental organization will be recommended to Congress for adoption in place of our present one.

The pamphlet within bears very strongly on these subjects.

Its existence was discovered in a bound volume of War Department General Orders for 1868.

It was first published in Great Britain in 1853, and represents the ideas of several of the most progressive British cavalymen at that time.

The writer has had the good fortune to see something of the cavalry of England, France and Germany and while visiting the Cavalry Brigade at Aldershot several years ago, in conversation with General Baden-Powell, the Inspector General of the English Cavalry, he and other officers spoke in terms of highest commendation of our ideas and organization and without remembering their exact statements, impression was given that in the opinion of some English cavalymen we had more nearly solved the problem of cavalry organization and tactics than other army.

This pamphlet of Colonel Kinloch discusses the problem of the "rank entire" and cites actual war experiences which gives the opinion expressed an additional value. This reprint has been made in the hope that it will have some value in fixing the attention of officers on the important results depending in some measure on their reports and the far reaching effects of the same on the future of our cavalry service.

It is offered as an addition to the subject matter already at our disposal, in the belief that it has not appeared since 1868, and that it will be of great value in assisting us to form the opinion and to base the recommendations directed in General Orders No. 52, Headquarters Philippine Department, 1914.

W. F. H. GODSON,
Captain and Adjutant, 8th Cavalry.

From the "UNITED SERVICE GAZETTE," 12th March, 1853.

In the "United Service Gazette" of the 8th May last we noticed a very interesting pamphlet by Colonel Kinloch, on the subject of the Constitution of a Yeomanry Force, and

especially in reference to the organization of cavalry in "rank entire."

We have now the pleasure of publishing a letter from Colonel Kinloch, embracing the opinion of the late Duke of Wellington, Lord Vivian, Lord William Russell, and General Bacon, upon that momentous subject. It is peculiarly well timed, as at the present moment great interest is taken in the question of increasing the efficiency of our present weak regiments of cavalry, and of rendering the yeomanry fit for active home service.

"To the Editor of the 'UNITED SERVICE GAZETTE.'"

"Sir,

"In a pamphlet I published last year on the 'the Defence of the Country by means of a Volunteer Force,' I ventured to recommend cavalry, and yeomanry in particular, to be formed in 'rank entire,' instead of in two ranks as is usual in most armies.

"I have lately found copies of the opinions of the Duke of Wellington and several cavalry officers on this subject, which I could not lay my hand on at the time I wrote the pamphlet.

These opinions were addressed to General Anthony Bacon, (who commanded the cavalry of Don Pedro, in Portugal, in 1833-34), and who was good enough to give me copies of them."

I.

"From F. M. The Duke of Wellington, K. G.

"Stratfieldsaye, 20th November, 1833.

"Cavalry is essentially an offensive arm, whose use depends upon its *activity* combined with its steadiness and good order.

"I think that the second rank of cavalry, at the usual distance of close order, does *not* increase the activity of the cavalry.

The rear rank of the cavalry does not strengthen the front rank, as the center and rear ranks do the front rank of infantry.

The rear rank of the cavalry can augment the activity or even the means of attack of the front rank by a *movement of disorder*.

"If the front rank should fail, and it should be necessary to retire, the second or rear rank is *too close to be able to sustain the attack* or to restore order. The second rank must be involved in the defeat and confusion, and the whole must depend upon some *other body*, whether of cavalry or infantry, to receive and protect the fugitives.

"I have already said that the rear rank can only augment the means of the first rank by a movement of disorder.

"This is peculiarly the case if the attack should be successful. In all these cases the second rank, at a distance sufficiently great to avoid being involved in the confusion of the attack of the front rank, whether successful or otherwise, could aid in the attack, or, if necessary, cover the retreat of attacking party, and thus augment the steadiness and good order of the cavalry as a body; while, by the absence of all impediments from the closeness of the rear rank, the activity of the front rank would be increased.

"It cannot be denied that, till required for the actual attack, the less cavalry is exposed the better. My notion of the distance of the lines of cavalry was as much as a cavalry horse could gallop in a minute; the second line should pull up at a walk when the first charges; the third and other lines in columns should deploy, or be used according to circumstances.

"I conceive that the one-rank system would require a change, not only in the discipline, but in the organization of the cavalry. If I am not mistaken, it would render the use of cavalry in an army *much more general than it is at present*.

(Signed,) "WELLINGTON."

II.

"Extract from a letter to General Bacon, from Lieut.-General Sir Hussey Vivian, G. C. B. (afterwards Lord Vivian, and Master-General of the Ordnance.)

"I rejoice to find Don Pedro's cavalry has fallen under the orders of a man so capable of leading them. I again congratulate

you on your very high and honorable station. In short, I feel confident you will do credit to yourself, your cavalry, and to your Peninsular education.

"I quite entirely agree with you in all you say of the value of the lance.

"As to the rank entire system, I am by no means certain that it would not always be a good thing, if on advancing to an attack, or standing in line, the rear ranks were to form a reserve at the distance, say of eighty or one hundred yards; when so circumstanced they would be much better able to follow up an advantage gained by, or to repel a successful attack of, the enemy on the first rank. The fact is, *that the second rank is but of little use to fall over the first.*

"Let me congratulate you on your brilliant success and gallant conduct at Leyria. I will run over and pay you a visit.

(Signed,) "R. HUSSEY VIVIAN."

III.

"*Extract from a letter to General Bacon, from Lord William Russell, Colonel commanding 8th Hussars.*

"I wish you joy of your promotion and command. The cavalry will, I have no doubt, be in excellent order in your hands; but don't be rash—they are too numerous for you to cope with, and their horses are better fed.

"Anything that proves the efficiency of the single-rank system is interesting to me; and it certainly was thoroughly proved on the 16th October, (1833,) when your force of cavalry imposed on more than treble your numbers; this quite destroys the argument, that a single rank 'looks so weak,' and 'invites the enemy to charge.'

"Your adversaries were not to be tempted on the 16th. Keep note of all the occurrences; we will one day put them in print.

"I am delighted to find that Vivian (Sir Hussey) looked with a more favorable eye on the system. Depend upon it they will all come round. He wants to get off on the *mezzo*

termine of leaving the rear rank behind. This I entirely disapprove, because the *rear rank so left would have no one to command it, and cavalry depends entirely on its officers.*

"There is no doubt that, if cavalry is to act in one rank, a different organization is necessary. You must turn your mind to this, as the end of the war brings to your aid the practical reflections you can make now. The Duke of Wellington is in our favor, but the prejudices of the cavalry officers are difficult to be overcome.

"I send you up——, and if you can convert him you will do wonders. He never in his life gave up a once formed opinion.

"Try Heads' (Sir Francis) plan with the lasso for your guns.

(Signed,)

"WILLIAM RUSSELL."

"*Extract from a letter from General Bacon.*

"11th September, 1835.

"MY DEAR KINLOCH:

"I hope you stick to it 'rank entire.' Depend upon it, it is the most efficient way of using cavalry. You are quicker, and have more reserves. Enclosed are some extracts* respecting my system with cavalry. Lord Anglesea, Brotherton, and many other officers I could name, agree with me. As I am the only man who has tried it, I give you a few of my reasons.

"In one rank all movements are made with greater precision and more rapidly than in two.

"When cavalry has to re-form after a charge it is effected more readily and far quicker, for each man gets at once to his own troop, and, if such formation be required under fire, the value of *quickness* will admit of no argument against it.

"I have tried this in the presence of a superior enemy very frequently, and at a time when hotly pressed, and under heavy fire of artillery and musketry.

*The above, is from the Duke of Wellington, etc.

"A charge in one rank will be more rapid, consequently more likely to succeed, than one in two ranks, because the horses are more at liberty, not likely to be cramped by the endeavors of the rear rank to get to the front, and the men will have a more free use of their arms; every one will do his duty; *skulkers* cannot so easily pull up, and such are found in all armies.

"In advancing in line for any distance (and before an enemy you have rarely a fine open country) the intervals are never preserved between squadrons, and it frequently happens that a line of two ranks towards the center becomes a disordered column; in re-forming, a rear rank is never sure of its 'telling off.'

"In all columns I should form my second rank in a column in rear of my first, that is, as a second regiment, and this will always be easy by keeping, when in line, a distance equal to the depth of a close column; you may always close your lines if you think it desirable, and, when about to form columns, it is only to open your ranks, or, instead of a column of squadrons, to form on the center of a contiguous close column of half-squadrons.

"Another great advantage in the system is, that all your ranks are commanded by officers. Whenever you are asked for a squadron, remember it is a troop, and if you send two troops they are two squadrons, and they become a proper command for a major.

"I could give you many other reasons for the system, but I hope to be with you, and perfect that which I have begun, and with a fair portion of success.—Believe me, etc.,

(Signed,)

"A. BACON."

A squadron of the 1st Lancers of the British Legion in Spain, under the command of Major Hograve, and consisting of only sixty horses, charged three hundred of the Carlist cavalry, (after they had defeated several squadrons of Christino cavalry), pursued them about three miles, and killed nearly one hundred of them. The squadron of the 1st Lancers was formed in 'rank entire', the Carlist in two ranks, and thus proved triumphantly the efficiency of that system.

From the above opinions of distinguished and experienced officers supported as they are by facts on the few occasions the 'rank entire' formation has been tried, it appears worthy of consideration whether it should not now be acted upon in the British army.

I find that in the Regulations for the Drill and Exercises of the Yeomanry Cavalry, they are recommended to adopt the 'rank entire' system, which I was not aware of when I wrote my pamphlet last year. This formation is particularly suitable for yeomanry and all irregular and half-disciplined cavalry, on account of its great simplicity and freedom of action. As the Duke of Wellington 'conceived that it would render the use of cavalry in an army much more general than it is at present,' as Sir Hussey Vivian said 'that the second rank is but of little use but to fall over the first;' and as General Bacon observes, 'a troop becomes a squadron, and each rank is commanded by officers; it appears that the effective strength of our cavalry may be greatly increased, *if not fully DOUBLED*, by adopting the rank entire system. The principal change in the organization called for by this alteration appears to be a *small* and *economical* addition to the officers.

Captains commanding troops will, when in line, command squadrons, for a troop occupies the same front in single rank that a squadron does in two. (The interior economy of the troop remains as before.) The officer who commands two troops or squadrons when in line will have a fit command for a field officer.

I would therefore suggest, that, in order to carry out the advantages of the "rank entire" system, and render it thoroughly efficient, a second major should be restored to each cavalry regiment; and as a half-troop will become a half-squadron, there should be another subaltern to each troop.

Perhaps the two or three senior captains should have a higher rank than merely Captain, as they may sometimes command two troops or squadrons; the higher rank of Chef d' Escadron, as in other armies, or brevet major, might be given to them.

The only additional expense, therefore, would be a second major for each regiment, and a second lieutenant to each troop.

A very small expense certainly, if, as it is assumed, the cavalry will be greatly increased in efficiency.

Let the troops be increased to fifty horses per troop, with the above addition to the officers, and adopt the "rank entire" formation; then our cavalry will be ready for any service that might be required of them; but at present the regiments are very weak in horses, and in double ranks are only about two good squadrons strong.

I must apologize for troubling you so long, but as the economical increase of the army is the great question of the day, and cavalry appears not much noticed, I trust the foregoing remarks and opinions on the organization and efficiency of that chivalrous and important arm of the service will not be considered uninteresting to your military readers.

I have the honor to be your obedient humble servant,
LOGIE, 7th March, 1853. JOHN KINLOCH.

P. S.—The following sentences are extracted from my pamphlet before referred to.—J. K.

"It was on his (General Bacon's) recommendation that I adopted this, which appeared to me to be the proper and common-sense formation of cavalry (and raw cavalry in particular) in the 1st or "Reyna Ysabel" regiment of lancers in the British Legion in Spain, which I had the honor to organize and command in 1835-36; and to that simple formation I attribute the very creditable and efficient manner in which they could go through the maneuvers of a field day, and do their duty in the field, after very little practice and drilling. After being broken in a charge, or dispersed in pursuit, a squadron in rank entire may "rally" and "tell off" in much less time than the front and rear ranks would take to scramble into their places; and thus much time, so valuable in cavalry movements would be gained.

"Many smart soldiers dislike being in the rear ranks, and feel themselves thrown in the background; they are apt to become careless, and merely to follow their front rank files,

without knowing or caring what is going on; whereas in rank entire every man is under the eye of his officers, and *must* be on the *qui vive* and *wide awake*. Every man has an equal share in the attack, which is not the case with two ranks Rank entire may *appear* loose, and show more "daylight" between the files, but is not in *reality* more loose; on the contrary, cavalry accustomed to work in rank entire will be found to be better closed together than with two, though the two rank help to "fill up" better, and make them *appear* closer and more solid.

"I consider that a charge of cavalry in rank entire, on fair ground, fit for a good gallop, will "hit harder," and every man and horse "tell" with greater effect, than if the rear rank were treading on their heels. The rear rank cannot give much assistance to the front, but they may actually incommode them.

In the rank entire system, young and untrained horses will be quieter and steadier, and not so likely to be lamed by the rear rank treading on the front rank horses' heels, and they in turn, "lashing out," and laming those behind. It may be said that the two ranks have answered very well on former occasions, but it may be a fair question to ask, whether half the number would not have done as well? or whether the same number in two lines, instead of two ranks, would not have done better?

NOTES ON A TRIP THROUGH JAVA.

THE Dutch forces in the East Indies number about 30,000. Almost the entire force is in Java, although there are a few troops in Sumatra and other places. About one-third of the enlisted strength is European, as a child is considered to be of the nationality of his father and as inter-marriages between Dutchmen and Japanese women are very common, many of

those classed as Europeans are half-breeds and some are nearly full-blooded natives. The term Eurasian is commonly used in speaking of half-castes.

The natives and Europeans are placed together in the same companies, the Europeans, however, are grouped together in one of the four sections into which each company is divided. They live separately, mess differently and receive higher pay. The enlistments are voluntary and the term is for six years. Re-enlistments are allowed. The enlistment of Europeans may be made in Holland for service in the Indies.

The officers remain permanently in the colonial army which is separate from that of Holland. There are a number of mixed-breed officers, the late Commander-in-Chief having been an Eurasian. Promotion is slow, it taking about fourteen years to a captaincy at present.

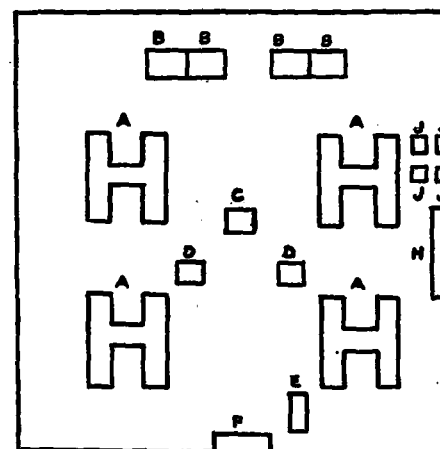
The troops consist of cavalry, infantry, mountain artillery, fortress artillery, engineers and auxiliary troops. There is one regiment of cavalry of four squadrons, of 150 men each. They are mounted on small Australian horses.

Apparently the present plan of defense contemplates the holding of the great plateau of the Preanger, situated in west central Java, at an altitude of about 2,500 feet above the sea level and completely surrounded by mountains. This valley is very fertile and large crops are raised and supplies of all kinds are obtainable. As the War Ministry is being moved from Batavia to Bandoeng, the principal city of the district, and large store houses, magazines and barracks are being built there and in the neighborhood, it appears that the defense in case of foreign invasion would be mostly confined to this region.

At Bandoeng will be the military headquarters for all the Dutch East Indies. The moving of these headquarters from the capital city and principal harbor of the country to a distant inland town, in a comparatively easily defended district, is significant. In Bandoeng itself there is one battalion of infantry, one company of artillery and a large number of troops of the supply corps. A few miles from the city is a large military camp where there are cavalry, infantry, artillery and engineers.

I visited the barracks and supply depot at Bandoeng. The buildings were quite new and were built of brick, white-washed, with red tile roofs. All of them were only one story high. Some of the buildings have small walls around them. The storehouses were built in groups and were surrounded by walls. Narrow gauge railway tracks connected them with the railway station.

The infantry battalion's barracks were surrounded partly by a stone wall and partly by a barbed wire fence. Inside of this everything for the battalion was complete. The buildings were well arranged, placed near enough together for convenience, yet there was plenty of room, without great useless parks and lawns with roads and walks to care for. Each company barrack was built in the form of an H, the general plan for the whole battalion being as shown in the accompanying sketch.



- A. Barracks.
- B. Cook houses.
- C. Non-commissioned officers mess.
- D. Bath houses for non-commissioned officers.
- E. Headquarters.
- F. Guard house.
- J. Married European's quarters.
- H. Large shed used for market.

There were some other buildings not shown in the sketch which were used for storehouses, etc. The kitchen arrangements were very simple and practical. A large furnace supplied steam for heating several large caldrons, which had mechanism for raising and emptying the caldrons themselves, they being too large to be moved by hand. In one caldron was rice, in another was soup and in another coffee. Over the fire was a place for frying. The food seemed

remarkably good for the cost which was said to be about seven cents per day for the Europeans and five cents for the natives. I thought there must be some fund from which additional money was obtained for the mess, but the officer who showed me around, said there was none.

The non-commissioned officers' mess was very well arranged in a separate building. Many officers' messes in our army are not as well kept. This one had an attractive room, tables with clean cloths, napkins, good dishes and silver; there were waiters and the bill of fare which I saw was excellent.

As stated, each company barrack was built in the shape of a letter H. The top and bottom half of each leg was for one of the four squad rooms. The front part of the cross bar was the mess for the European soldiers; the rear part, which extended somewhat beyond the upright of the H, was a squad room for soldiers of the auxiliary services, attached to each company.

In the European squad room the men had iron bunks, mattresses, bedding, etc., a foot locker, shelves and hooks in rear of the beds, all much as in our barracks in the Philippines. The bedding was folded during the day as by the cadets at West Point. In the center of the room were arm racks.

At the end of the squad room was a low suale partition which formed two rooms for non-commissioned officers. At the same end, but in the squad room itself, were three, large comfortable looking beds. These were for soldiers who had women.

The native soldier had wooden tables to sleep on. They were arranged side by side along the sides of the room so as to form a continuous platform. The men had mats, pillows and blankets but no mattresses. The other arrangements were much the same as for the Europeans. Each native is allowed to have a woman with him. They also have many children and as each table is for two men and only about five and a half feet square the sleeping accommodations are somewhat crowded. Women and children are not allowed in barracks from breakfast to 11:00 A.M.

The mess hall for Europeans had tables with oil cloths much as in our service. The natives are marched to the

kitchen, receive their food in their mess pans and take it to their squad rooms where they share it with their women.

The barracks appeared very clean, light and airy and were it not for the women and children there would be plenty of room.

In rear of the barracks were a few small houses for married Europeans. The market inside the enclosure of the barracks was a large covered place where the women and children spent the mornings and bought their food.

There were places for washing clothing in rear of barracks.

The officers state that there is much trouble with so many women in the barracks but that the men would not enlist if not allowed their women.

ELBERT E. FARMAN, JR.,
Second Lieutenant, Second Cavalry.

A NEW PRESERVATION FOR LEATHER EQUIPMENTS.

NOW that the new system of accountability, with its checking the cost of upkeep, has been adopted, and a complete new equipment is about to be issued, perhaps the various organization commanders would like to hear of a dressing that will add *at least* 100 per cent. to the life of the leather and will cut down the labor of caring for the same about 50 per cent.

There is now on the market and quite extensively advertised, a dressing called "Dri-foot" which is manufactured by the Fitz Chemical Company of Phillipsburg, N. J. It can be obtained in small cans in almost any shoe store. In gallon cans or in bulk, it can be gotten for less than two-thirds the cost of neat's-foot oil. So far, only two officers besides myself have been found that have tried it out.

It has kerosene in it, but that does no harm as it evaporates very quickly, leaving the preservative material in the fiber of the leather where it should be.

By using this preparation, the leather is water proofed to anything but a prolonged soaking. The leather is kept in a wonderfully soft and pliable condition, requiring but a little working in the fingers, if by chance it should become stiff. If properly applied and this can be done with less trouble than oil or soap, there is no rubbing off on the clothes.

Depending upon the first application, use, climate, etc., it will last at least six months and from that on up to a year. No care is required other than that of wiping off dirt with a damp rag. The original color of the leather will not be changed and, being water proof, it will darken the leather uniformly with service, instead of in spots as when oil is used. It will give new life to old leather that would otherwise be thrown away.

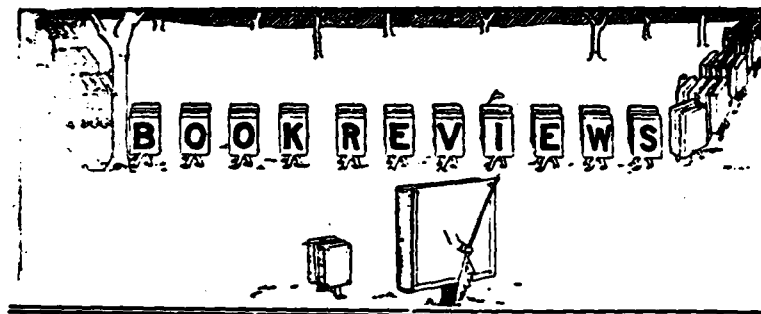
By keeping out the water and other foreign material, the actual wear is greatly prolonged, especially the soles of shoes and boots. The uppers will not crack across the instep and will last through many pairs of soles. If the shoes are treated with this preparation, men who are subjected to being out in sudden showers or to walking post in dewy grass need not fear getting wet feet.

Thus its benefits are almost infinite in number, being applicable to all cases where leather is used for any purpose, from sweat bands of hats to machine belts.

Personally, I have used "Dri-foot" for about two years with the utmost satisfaction. Every piece of leather that comes into the house is treated with it.

* * * *

D. H. S.



Military Hygiene.*

This little handbook of 266 pages of text is based on the lectures given by the author to the Cadets of the U. S. Military Academy. It is, as would properly be expected, popular and simple and untechnical in style and is condensed and epigrammatic without being obscure. It is remarkable for the extent of ground covered and the large amount of valuable information collected in the fifteen short chapters.

The space devoted to alcohol and other narcotics, one tenth of the whole, would seem out of proportion to those who are not aware that this special emphasis is in compliance with a law which requires special instruction to be given to the cadet on this subject.

The author, while duly emphatic as to the injuriousness of alcoholic indulgence is, as he states in the preface, careful to keep within the limits of accurate scientific statement, being thereby in refreshing contrast with the crude and extravagant assertions of the publication formerly in use as a text book.

*A TEXT BOOK OF MILITARY HYGIENE AND SANITATION. By Frank Keefer, M. D., Lieutenant Colonel Medical Corps, U. S. Army, and Professor of Military Hygiene, United States Military Academy, West Point, N. Y. 12 mo. 305 pages. Illustrated. W. B. Saunders Co., Philadelphia and London. 1914. Price, bound in cloth, \$1.50 net.

The illustrations of the soldier's equipment and of field sanitary appliances are very clear and many of them are original.

It would of course, be possible to find, if sedulously sought for, a few errors of omission and commission. Of the former would appear to be the failure to mention the use of hypochlorite of lime for the rapid sterilization of water in the field, and the omission of so important a matter as the details of the prescribed venereal prophylaxis for soldiers. The author's reticence on the latter subject may be, however, in deference to the action of the War Department, which so feared to shock the aesthetic sensibilities of the now rather obsolete class of persons, who in all matters of sex, insist that a spade shall, if mentioned at all, be referred to as an agricultural instrument, that it distributed the Surgeon General's instructions to medical officers for the carrying out of the provisions of G. O. 17, of 1912, as a confidential document.

Colonel Keefer's book will be of special value for use in post lyceums and camps of instruction and for the use of instructors in military colleges.

Tactics and Landscape.*

This is a work of fifty-six pages, one topographical map and nine plates. The latter are panoramic sketches made from certain points indicated on the map.

The book is an effort to show how practicable and how advisable it is to "visualize" a landscape from a topographical map, to answer the constantly recurring question: "What can I see from such and such points?" and, the general location of a hostile position being known: "What can the enemy see from such and such points?" There is no doubt that ability to answer these questions quickly and accurately, confers a great advantage on him who possesses it.

*TACTICS AND THE LANDSCAPE. By Captain T. Bedford Franklin. Illustrated by M. M. Williams. Price three shillings, net. Gale & Polden. Ltd. Aldershot and Portsmouth, England.

The author selects a topographical map of an area about three miles by five, of quite diversified terrain, and from a number of points makes sketches, showing what is actually visible of the landscape from those points. The sketches, by a Scottish artist, Mr. M. M. Williams, were made on the ground. The idea of the author is that from the map one should conjure up such pictures as the sketches.

The book is an unique presentation of the day's work of the company commander and the subaltern, and as such is well worthy of study. It is purely "troop leading" in the presence of the enemy and as such, independent of all formal maneuvers, can be read with full appreciation by any military man whether he has a knowledge of the British drill and formations or not.

The author starts out with the leadership of a small advance party of infantry, and deals with the ever-present necessity that the leader is under of planning ahead, with the aid of his map, for the utilization of points of view as he reaches them. Two rather startling incidents occur here. A patrol is sent ahead, "at the double," goes two miles, up hill and mostly across country "creeps" to the crest of a hill, "scans" the country beyond, "slips back behind the ridge," and reports by signal; all while the party which sent it out covers half a mile of good road by steady marching. Another is a 1,000 yard "dash" up a three degree slope, by scattered patrols, to secure a crest about to be occupied by the enemy in unknown strength. The "dash" is successful.

Against these two incidents may be placed a careful and rational presentation and discussion of about as many little situations as might be expected to be encountered by a company commander or subaltern in reconnaissance for information or security, and in approaching, during, and after action. Attack, defence, advance and retreat under rifle and artillery fire, ammunition supply before and during action, care of wounded, use of ground scouts and patrols, personal reconnaissance by unit commanders; these and many other matters are presented in graphic fashion, and disposed of with a brevity and simplicity that is commendable.

The subject is unique, the handling of it is good, and the presentation of both sides is an improvement over the usual tactical study. Though the affair involves several battalions and artillery, the author never loses sight of his primary purpose—to demonstrate that "It is because we do not, or cannot, realize the answers to the questions, 'What could I see from here?' and 'What could the enemy see from there?'" that so much nonsense is written in tactical examinations."

SCOTT.

**Course
for
Cavalry.***

This book of 278 pages—4½" x 6¼"—by Captain Lincoln C. Andrews, U. S. Cavalry, was originally prepared for the use of the cavalry of the National Guard of the State of New York, where he is on duty as Inspector-Instructor of the cavalry of that State.

The Introduction gives the *raison d'être* of the work as follows:

"This book is prepared by direction of the Academic Board of the School of the Line and Staff, National Guard, New York, to meet two accepted conditions of facts. First: The Guard is preparing to take its place in the first line for National defense in time of war, and this will require its officers and non-commissioned officers to be just one thing—*Good Troop Leaders*. The privates come and go, but the officers and non-commissioned officers are the continuing element in each organization, and determine its excellence or weakness. Especially when war comes, and the ranks are filled to war strength with new men, the whole question of efficiency will rest solely on these leaders and their ability to take the recruits and quickly train them into reliable soldiers. The Nation will be content if it finds the Guard officers and non-commissioned officers trained to be good troop leaders, and will not seek among them for strate-

*BASIC COURSE FOR CAVALRY. By Captain Lincoln C. Andrews, U. S. Cavalry, Inspector-Instructor, National Guard Cavalry of New York. The J. B. Lyon Company, Albany, New York. 1914. Price \$1.00.

gists and grand tacticians. Second: The National Guardsman, with but limited leisure to give to military study has at his disposal only the voluminous detailed text-books that are the subject of study for Regular Army Officers in year courses at the service schools. He cannot know for himself what are the essential things he must glean from these books, and his study therefore, results in his getting a smattering of the whole subject, rather than a clean cut, usable conception of the duties of his grade. This leads, in any given situation, to uncertainty and lack of self-confidence, which are vital weaknesses in a leader. It is believed that if he has a sure knowledge of the fundamental principles, he will have greater self-confidence, quicker judgment, and consequently be a far better leader * * * "

Again, in the Preface to the Second Edition, his ideas as to the use for the book are given as follows:

"This is not intended as a text book to be memorized and repeated in recitations. It meets rather the new system of military instruction recently promulgated by the War College—the applicatory system, in which the student's proficiency determined by the understanding and skill he shows in the actual practice of the subject in question; not by his ability to memorize and repeat paragraphs from the text book. Furthermore, what the Guard most needs is an appreciation of the meanings of the service, what we are getting at and how getting at it, how to arouse and direct that actuating spirit that will make each organization a splendid machine for efficiency. * * * "

We have quoted thus freely, and might quote more extensively, from the preface, in order to show the spirit in which the book is written.

The several subjects of which the book treats may be understood from the following several headings of the chapters: Troop Leadership; Drill, preliminary suggestions, general principles, school of the soldier, school of the trooper, the squad mounted, school of the troop, school of the squadron; Battle Exercises and Extended Order, squad exercises mounted, squad extended order, troop mounted, troop in extended order, the fire fight, the troop in the squadron; Horsemanship, across country work, care of the horse, hippology; Care of

Arms and Equipments; Military Courtesy; Guard Duty; Riot Duty; Small Arms Firing; Field Service Regulations, marches, shelter, making and breaking camp, supply, transportation; Sanitation, care of health, first aid; Map Reading, and Sketching; Employment of Cavalry, patrolling, security, advance guards, etc., outposts, convoys, etc.; Administration, regulations, public property; Military Law.

This book of 3,338 pages—5½" x 8"—which
Modern Army.* is the combined production of Major General J. F. O'Ryan, N. G., N. Y., and Captain W. D. A. Anderson, Corps of Engineers, U. S. Army.

It purports to be an elementary study of the conduct of war, describing the operations of an army in the field.

It has a "Foreword" by Major General Leonard Wood which is as follows:

"I have read 'The Modern Army in Action' with very great interest, and consider the subject treated by Major General O'Ryan and Captain Anderson, especially at this time, as being of prime importance from every point of view. It should, and I have no doubt will, cause the people of our country to devote serious attention to the general technique of war, and direct thoughts toward the necessity of placing our country in a condition of preparedness which can be secured only through the establishment of adequate reserves for the Regular Army and Militia, and ample supplies to equip them in case we have the misfortune to become engaged in war with a first-class power, prepared as these powers are immediately to make their maximum military effort. No matter how righteous our cause may be, or how considerate we may be of the rights of others, we must be prepared to defend our rights and to secure for ourselves just treatment. This cannot be secured by treaties alone. It can be secured only when our people are

*THE MODERN ARMY IN ACTION. An Exposition of the Conduct of War. By Major General John F. O'Ryan, Commanding N. Y. Division, and Captain W. D. A. Anderson, Corps of Engineers, U. S. A. McBride, Nast & Company New York. 1914. Price \$1.50, postage 12 cents extra.

prepared promptly to meet force with force. Undeveloped military resources are of no more military value in the onset of a modern war than would be an undeveloped gold mine in Alaska during a panic in Wall Street."

It is a book intended for the general public, as was the Valor of Ignorance, and written for a similar purpose, although not along the same lines, that of instructing our people as to what a modern war actually is, how it is conducted, what it costs, in men and money, etc., etc.

Its seventeen chapters cover the following subjects: Genesis of Strategy; On War; Preparedness for War; German system—Universal Service; British System—Volunteer Armies; Mobilization and Concentration; Transportation and Supply; Principles of Strategy; The Strategic Offensive; The Strategic Defensive; Infantry; Cavalry; Artillery; Auxiliary services; Security and Information, and Combined Arms in Action.

As is stated in the Introduction: "The work should prove of interest and value to the officers and men of the National Guard, whose intelligent interest in the profession of arms is so well known, but who have not the time to digest, in addition to their prescribed studies, a detailed and advanced work covering a field so broad as that of strategy."

Finally, as is also stated in the Introduction: "If the work serves no other purpose than to bring to minds the of some of our influential fellow citizens a realization of the helpfulness of a nation forced into war without military preparedness, and the need in this country for an intelligent and provident military policy as a national insurance, it will have accomplished its mission."

The book is well printed in large, readable type and is illustrated with sixteen, full page, half tone cuts.

**Training
for
War.***

A small monograph, written in popular style published in September, 1914, and which went through four editions in England during the first month it was on sale.

It is not a training manual but a short, clear presentation of some of the principles and ideas most necessary to be understood by the officers and men of raw troops that have no time for regular training, but who hope to attain a certain field efficiency in a very short time.

While in no sense a full presentation of the subject, the book contains many valuable ideas stated in language that can be readily understood by anyone. Rough sketches are given where needed to illustrate any device.

It should be popular in the United States as it seeks to cater to the sentiment, so common here, that with courage, luck and a little amateur instruction all necessary field efficiency can be developed among raw levies in a few days.

E.

**Training
for
War.†**

This a neat, little monograph devoted to a discussion of the psychological side of the training of the individual soldier and of the soldier as an unit in the mass.

It is well written and interesting, but consists largely of extracts from earlier writers who went into the subject more exhaustively.

It will probably have little or no sale in this country.

E.

*QUICK TRAINING FOR WAR. By Lieutenant General Sir Robert Baden-Powell. 1914. Duffield & Company, New York.

†TRAINING SOLDIERS FOR WAR. By Captain J. F. C. Fuller. Hugh Rees, Ltd., London. 1914. Price two shillings, net.

**Military
Training.***

This a new book, 5" x 7½", of about 700 pages, by the well known writer of military manuals, Captain James A. Moss, 29th U. S. Infantry, that covers nearly every imaginable subject connected with the training of a company.

The book is intended, primarily, for use in connection with the instructions of Cadets in our military schools, and, of company officers of the organized militia, and, secondarily, as a guide to company officers of the regular army, the aim being to make efficient fighting companies and to qualify our Cadets and militia officers for the duty and responsibilities of company officers of volunteers.

It is divided into three parts, as follows:

Part I. Drills, Exercises, Guard Duty, Target Practice, Ceremonies and Inspections.

Part II. Miscellaneous subjects pertaining to company training and instructions.

Part III. Company field training.

The several chapters, under these three heads, treat of the following:

PART I.

I—Infantry Drill Regulations; II—Manual of the Bayonet; III—Manual of Physical Training; IV—Manual of Interior Guard Duty; V—Signalling; VI—Small Arms Firing Manual.

PART II.

I—Government and Administration of the Company; II—Discipline; III—General Principles of Company Training and Instruction; IV—Common Sense Principles of Applied Minor Tactics; V—Plan of Instruction in Map Problems for Non-commissioned Officers and Privates, Instruction in Delivering Messages; VI—Service of Information; VII—Service of Security; VIII—Map Reading; IX—Military Sketching; X—Loading Wagons; XI—Marches; XII—Care of the Health

*MANUAL OF MILITARY TRAINING. By Captain James A. Moss, 29th U. S. Infantry. George Banta Publishing Co., Nemasha, Wis. 1914. Price \$1.90, postpaid.

and First Aid to the Sick and Injured; XIII—Military Courtesy; XIV—Military Department and Appearance, Personal Cleanliness and Care of Clothing and other Equipments, Care and Preservation of Shoes; Forms of Speech and Delivery of Messages; XV—Care, Description and Management of the Rifle.

PART III.

The first nine Chapters are devoted to the Company in attack, considered under five stages, in addition to the general rules and principles; the counter-attack, meeting engagements and advance guard actions. Chapters X and XI discuss the Company in Defense; XII—The Company on Outpost; XIII—Scouting and Patrolling; XIV—Night Operations XV—Field Orders of Enlisted Men; XVI—Intrenchments; XVII—Obstacles; XVIII—Field Firing; XIX—Camping; XX—Individual Cooking.

As must necessarily be the case, the book is largely, in fact almost entirely a compilation and covering such a wide field as it does, it can never replace, the authorized manuals and text books for the regular officer.

The book is well printed, but in small type, with few typographical errors.

The True Ulysses S. Grant.*

In many ways General Charles King ranks among our foremost writers, and in characterization, narrative and description he is at his best. His history of Grant is penned with a loving hand, shows intimate knowledge and deep study; it is in sober phrase and simple style, but occasionally reveals the strain under which the author works to resist the tendency to give full scope to his gorgeous vocabulary. His golden pen holds closely to the line, drawing for us an intimate picture of

*THE TRUE ULYSSES GRANT. By Charles King, Brigadier General U. S. Volunteers, 1898-99. With twenty-eight illustrations. J. B. Lippincott Company, Philadelphia and London. Price \$2.00, net.

Grant as boy and man, not forgetting the romance of his inner life, and perhaps giving too careful attention to highly exaggerated faults and weaknesses. Lightly touching the great warrior's deeds but rather portraying character and personality, because in truth there is nothing more to be said of the former, and because Grant's fame had need of rescue from the age of fable into which national heroes fall so soon. King has taken the steel engraving, the bronze statue, the marble bust, and has filled them with human blood and life. It is hard to do this for a man so self-effacing, so modest, so forgetful of the fact that he was a maker of history.

The little love story of the plain lieutenant and the girl is told in a charming way, omitting—I see not why—the delightful story of the general refusing to allow a surgeon to straighten a slight defect in one of Julia's eyes, because forsooth they were the eyes of his bride in youth and age.

It is hard for a biographer to treat of the human weakness the faults, the flaws, in a perfect picture of his subject. If he neglects them he may be lacking in frankness; if he mentioned them it is probable that they will be given entirely too much importance by the reader who crowns as heroes only those who are without reproach. We would like to see the matter of Grant's indulgence in liquor expunged from his record, for the reason that it is trivial. The facts, if they be facts, of occasional lapses from the standard of total abstinence, are too few, and the evidence is too flimsy. Lincoln evidently took this view when he put Grant in command without writing him a temperance lecture—as he wrote Hooker an essay on discipline. The activity of Rawlins in watching Grant's habits reads very much like the honest persuasion of a very good puritan, and the story of B. F. Butler and W. F. Smith—in which Butler furnished the liquor—is ridiculous. The author fails to cite Worthington, but after all he shows clearly enough that the enemies of Grant have failed to make a case when it ought to have been easy if it had been as bad as they wished the world to believe. So after all we may thank King for his frank and careful treatment of this accusation.

And Grant stands a gigantic figure, ever growing as a type of the kind of man that a virile race will ever breed in its day of travail and sore distress. We might indeed go even further than the author on his high estimate of Grant, not agreeing with the remarks about "injustice" to Thomas and to Warren. Grant knew full well that he had no right to think of justice to this man or to that—the country, not the individual was the single thought he had.

EBEN SWIFT.

Napoleon at Work.* This is a most interesting and instructive book of over 300 pages (dull finish paper—large print) devoted to a detailed study of Napoleon's methods of conducting Imperial Army Headquarters.

Written in a chatty style that makes delightful reading, it takes up distinct examples of the Emperor's methods of organizing his headquarters, gaining of information, coming to a decision, issuing and transmitting orders and supervising their execution.

For this purpose the campaign of Jena is carried through from start to finish as far as direction from Napoleon's headquarters is concerned. Copies of two maps of the vicinity of Jena which were used by Napoleon are attached on which one is able to follow the movements with the very kind of information on which that leader was obliged to base his own conception of the situation. Unfortunately, the maps are fastened in the text in such a way as to be a nuisance to the reader.

Intermingled with this study of Imperial Headquarters during this particular campaign are comparisons with Napoleon's methods in previous and later campaigns and with modern conceptions of the ways of doing the same things. The idea given of the organization and conduct of a general headquarters

***NAPOLION AT WORK.** By Colonel Vachée. Translation by G. Frederick Lees. The Macmillan Company, London and New York. 1914. Price \$2.00, net.

in campaign is vivid, comparisons with other methods are instructive and the descriptions, anecdotes and gossip (not to say scandal) are entertaining. Any officer who hopes in future to be called upon to act as commanding general or chief of staff of an independent division or larger force will derive much benefit from reading this work and any military man will find it entertaining.

E.

Editor's Table.

THE QUESTION OF ORGANIZATION.

The article that appeared, under the above title, in the October, 1914, number of the *CAVALRY JOURNAL* (page 199) has attracted no little attention and many inquiries have been made as to the author. Several of our members have written commending the article and three of these have surmised that it was from the pen of Captain Hamilton S. Hawkins, Third Cavalry, in which they have read between the lines correctly.

The failure to credit Captain Hawkins with the authorship of the article arose in this way. It was received from the office of the Secretary of the War College Division of the General Staff along with another document, which latter was an official report from one of our officers on duty abroad. Permission was given to publish these but with the injunction that the source and name of the writers should not appear in connection with them. The *Editor* assumed that this injunction applied to both the official report and the article, and therefore, noted that the latter was by "A Cavalry Officer Abroad."

This *nom de plume* or the similar one of "An Officer Abroad" has been frequently used heretofore where we have been inhibited, as in this case, from divulging the source or writer of official reports, but have been given permission to publish the same.

Since the article appeared in the October number, the author wrote us that the article was in no sense an official report and that the caution that the name of the author should not be disclosed was a mistake.

EDITOR'S TABLE.

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We are, therefore, greatly pleased to give the proper credit to Captain Hawkins and, at the same time, to call the attention of our cavalymen to this excellent article which has so much meat in it. Especially is there much food for reflection in it, at the present time, when this important subject is before the cavalry officers of our service.

BRITISH CAVALRY JOURNAL.

We have received the following from the Managing Editor of the *British Cavalry Journal*:

"Owing to the absence of the Managing Editor, Lieut. Colonel Sir Arthur Leetham, and the whole of the Editorial Staff, who are actively employed, it has been found quite impossible to bring out the October issue of the "*Cavalry Journal*."

"The Managing Editor hopes, however, that the *Journal* will resume its issue when the war is over, and possibly pick up the numbers which at present will not be published.

"Meanwhile it is hoped that subscribers will continue their subscriptions as heretofore."

NEW GERMAN TRAINING. LEARNING BY EXPERIENCE.

NO MORE CAVALRY CHARGES.

What purports to be the German Minister of War's advice on the training of the new German Army, has been furnished us, by the Secretary of the War College Division of the General Staff, but too late for insertion in its proper place in this number of the *Cavalry Journal*.

It was published in the *London Morning Post* of November 28, 1914, and is noted as being from their Special Correspondent. It is as follows:

Belgium, Nov. 27.

A copy has fallen into my hands of the German Minister of War's letter of advice on the training of the new German armies. It is dated September 26, and has not yet, so far as I know, found publication. The interest of the document lies chiefly in the proof it gives that the German military mind is not impervious to teaching and that the first stages of the campaign have taught it the necessity of some modification of its old tactics.

Summed up, the official instructions insist on three points: More caution in infantry attack; the "scrapping" of the cavalry charge; the closest development of aerial reconnaissance, kept in close touch not only with the Commander-in-Chief, but with the artillery commander. They give valuable indications, too, of the general defence position in Germany, for they speak of the absolute need of new troops by the middle of October, as if that had been the time marked for the maximum of the German effort.

The document, translated fully, reads:

Directions for the instruction of new formations of Reserves.

I. It is clear that the putting into the field of new troops is a matter of very great difficulty, but as we have absolute need of these troops by the middle of October to continue the war, it is necessary that these difficulties should be surmounted.

II. In that which concerns the choice of leaders (both officers and non-commissioned officers) it is not so much necessary to respect social grades as to place at each post the man who suits it best.

III. The experience of the war goes to show how expensive it is that the leaders should expose themselves uselessly. It has to be admitted, on the other hand, that men, do not hesitate to follow a leader who is actually at their head. But the officer ought not to be in any way distinguishable from his men by his uniform.

INFANTRY.

IV. It is undoubted that if the German Infantry makes good use of entrenching tools, and by this means best utilize natural cover, so as to shelter itself from the fire of artillery, it is, so to say, unattackable on its front, and therefore, it has the advantage of the possibility of a strong echelon in depth on its flanks.

The greatest possible use of these means (i. e., entrenchment) is recommended to all units, the smallest and the greatest.

None of our adversaries can withstand the German "hurrah" and the attack with the bayonet.

In the infantry attack it is necessary, above all things, to cross the danger zone of the enemy's artillery fire; this may be done by night movements or by movements in foggy weather. Under such conditions it is generally easy to come into close contact with the infantry of the enemy, particularly when one can pass from an echelon in depth to a movement of menace on the flank, however light it may be.

But the end to attain is always to advance up to the artillery of the enemy as quickly as possible and to put it out of action.

Each step in advance ought to be consolidated with the trenching tool against the possibility of a counter offensive.

CAVALRY.

V. As regards the cavalry, the habit of pampering horses in peace time has caused some bitter disillusionments for us. It is necessary, therefore, that for the future our horses should be accustomed to bivouac in the open-air, and to be satisfied with what food can be obtained on a campaign. Horses should be left out of doors for days together in order to train them to the open-air life.

There is no question at all now of training cavalry horses for dashing work. It is infinitely more important to train them to make long marches at an easy pace from point to point, and to the men it is most important that they should be trained to use their carbines.

The dismounted cavalryman should be able to fight exactly as an infantryman. Cavalry charges no longer play any part in warfare.

ARTILLERY.

VI. The field artillery and the heavy artillery of an army nowadays fight almost exclusively in entrenched positions. Careful attention should be given to the instruction of the artillery in the tactics of entrenchment. The tactics of the search for the enemy's artillery—which is also nearly always in covered position—are a necessary part of that instruction. Batteries in this war are often employed from isolated positions in order to take as much advantage as possible of the shelter afforded by the natural features of the country. Nevertheless, fire control to keep the fire of the guns (both as regards rate and direction) at the best possible pitch must be maintained over all the artillery units. Otherwise, there would inevitably result an intolerable waste of ammunition.

It is necessary, speaking generally, to attach the highest importance to the economy of ammunition. Each shot fired uselessly is a crime.

THE AIR SERVICE.

The role of the aeroplane in war has taken on an unexpected degree of importance. Their working should be carried on in very close connection not only with the general command, but also with the artillery command. Every possible effort should be made on the maneuver grounds to train for a close coöperation and a reciprocal understanding between the aeroplane service, the general command, and the artillery.

Aviators on reconnaissance should be provided with pistols and with hand grenades. Though these latter produce no appreciable result for the most part, nevertheless they have an important effect in creating alarm among the enemy, and should therefore be employed.

THE TENTATIVE CAVALRY DRILL REGULATIONS.

As was noted in the October number of the CAVALRY JOURNAL, it was hoped that our cavalry officers could and would furnish us with copies of their reports on the Tentative Cavalry Drill Regulations in order that this subject, which is of such vital importance to our cavalry service, might be thoroughly discussed through the columns of our JOURNAL.

One such report has been received and it is not only very interesting but valuable as to the many points considered. It was from Captain Hickok and was accompanied by the permission of his brigade commander for its publication.

However, the War Department thinks otherwise as regards the publication of these official reports as is shown by the following extract from a recent indorsement: "To the Editor of the United States CAVALRY JOURNAL with the information that there is no objection to the publication of articles on the Tentative Cavalry Drill Regulations. Official reports made by officers on this subject, however, will be submitted to the War Department by the officers making them and these reports should not be published unless such publication is authorized by the Department."

Under the provisions of Par. V, 1 and 2. War Department, October 22, 1914, the experimental Cavalry Service Regulations have been issued to the Cavalry of the Army, and these will be in force from the date of their receipt. Reports on them are to be submitted on June 1, 1915, so that a full six months will elapse before the reports will be required.

In the meantime, it is hoped that we may be furnished with *articles*, based on the experience had with them, in order that the views of the entire cavalry service may be obtained, and, if practicable, be harmonized.

A LARGER ARMY.

It would appear that the present is the most opportune time that has arisen for many years for an united effort, not only for a reasonable increase in our Regular Army, but also to devise and urge the adoption of some well digested scheme for a reserve system that will prove practicable. The agitation that has been started recently in Congress and that has been taken up by the press of the country indicates that a strong and growing sentiment in favor of a larger army is abroad in the land.

That such an increase was necessary has long been known to the army but their efforts and recommendations along this line have been discounted, owing, first, to the ignorance of the people and even of Congress as to the needs of the country in this respect, and, second, to the belief that some ulterior, selfish motive was behind all these recommendations.

Now, however, that the people at large are waking up to the fact that we are in no condition to successfully cope with any foreign power of importance, even on the defensive, is the best possible time, not only to foster and encourage this spirit, but to devise and have adopted a sensible military policy. To this end, our experts should get busy and be ready to advise Congress as to what is needed, as regards the mobile army, the staff of the army, the National Guard and a reserve.

As to the necessity for a larger mobile army, many new problems have arisen within the last few years that have an important bearing upon this question, among the more prominent ones being the completion and opening of the Panama Canal, the troubles along our Mexican border, the labor strikes, the necessity for a larger force in Hawaii, etc., etc.

It is understood that a force of 8,000 troops are to be quartered on the Canal Zone for the protection of the Canal and although it will be found difficult to find available troops for this duty, this number is much too small.

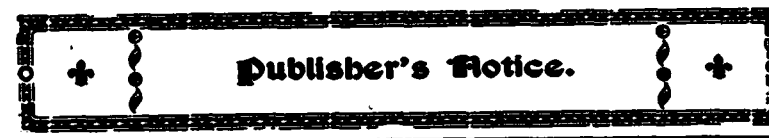
According to an interview that appeared in recent periodicals, a prominent Frenchman, who has been spending several months on the Canal Zone, stated that "twenty-five thousand soldiers, or nearly one-third of the total strength of the standing army of the United States will be necessary to properly guard the Panama Canal and prevent its destruction in case of a sudden attack. In the opinion of many men of authority, both on the Isthmus and in Europe, the United States will be committing a grave tactical fault unless the eight thousand men, now proposed for the posts between Panama and Colon, are tripled. The presence of modern fortifications at either end of the canal should not lull the American government to sleep in fancied security, for many authorities are of the opinion that a blow would be struck, not from the sea, but from the land."

Having determined what should be the size of our mobile army, or what Congress will allow, the problem for the experts, the General Staff, to solve is, first, the proper proportion that should be maintained between the several branches of the same in order to obtain a *well balanced* army, and, second, to justly and amicably settle the question of promotion. All increases in the army heretofore, with the possible exception of that of 1901, have been the result of haphazard, sporadic and compromise legislation that has been brought about by the "*pull*" that this or that branch of the service or staff corps happened to have, and which has resulted in much bitterness and has been the cause of any lack of harmony that now exists or that has ever existed in our army.

Then comes the question of a sensible, practicable reserve for the Regular Army, in order that it will have the men ready to step into ranks and fill up the several organizations with trained men to war strength and to keep them at that strength during any war. This, however, only under the supposition that Congress cannot be induced to allow all organizations of the mobile army to be kept at full war strength at all times, in peace as well as in war. Even under this last contingency, some scheme for keeping the ranks full of trained men should be devised.

Next on the docket in procuring a reasonable military policy is that of improving our National Guard. It is a well known fact that if our National Guard should be ordered out as a part of the first line of defense, not twenty-five per cent. of the war strength of the organizations would be prepared to take the field and they would have to be held back until recruited up to that strength. The National Guard organizations are not now of half war strength and the physical examinations would reduce them to less than the above noted percentage. Therefore, some sort of a reserve system should be adopted for the National Guard as well as for the Regular Army.

Of all of the above vital questions, that of promotion stands out as the most important and should receive the greatest care and thought. It is the opinion of the writer that the question of harmony between the several branches and corps never will be satisfactorily adjusted until the "One List for Promotion" scheme is adopted. Then and then only will peace and harmony prevail. And with this should be coupled the provision that precedence between the line and the staff, in all questions of quarters, etc., should be taken according to length of commissioned service.



SANTE FE RAILWAY:

The fourth anniversary of the Santa Fe de-Luxe will be celebrated on January 5th when the first de-Luxe train of the season will leave Chicago for Los Angeles. Although only four years old this coming January it is a decidedly lusty infant and is rapidly gaining in popularity, according to J. M. Connell, General Passenger Agent of the Santa Fe. Advance reservations of space well into January, have already been made.

It is operated once a week in the winter time for those who like superior service and are willing to pay for it.

"It provides a long-felt want" says Mr. Connell, and is supplementary to our California Limited which runs every day in the year. The Santa Fe is not selling speed in connection with the de-Luxe, but service. Most extra fare trains in the East are operated with the idea of making the quickest time possible. The Santa Fe de-Luxe, while it is one of the fastest trains from Chicago to Los Angeles, making the runs in about sixty-three hours, is primarily a train of service, with barber, valet, manicure and stenographer as typical examples of its conveniences. There are also bathing facilities; stock market reports are handy, and the latest world news is provided in telegraphic bulletins. Instead of the usual custom of sending waiters through the train calling the hours at which meals are served, the steward in charge quietly announces this fact to each passenger as the meal proceeds."

The equipment is all-steel and consists of a ten section observation Pullman, two all-drawing-room Pullmans, one compartment Pullman, a Fred Harvey dining car and a buffet-library car. Air which the passengers breath is automatically washed and cooled. An extra fare of \$25 is charged.

ARMY INSURANCE:

The attention of our members and subscribers is invited to the advertisement in this number of the CAVALRY JOURNAL, regarding Accident and Life Insurance Policies, of Mr. CHAS. R. HOE Jr., of New York. Mr. HOE makes a specialty of Army Insurance.

THE ROCK ISLAND:

This well known railroad has a new advertisement in this number of the CAVALRY JOURNAL. In case you are going their way, call up "SUNNY JIM" ALLEN.

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JUN 12 1915

JOURNAL OF THE

U. S. CAVALRY ASSOCIATION



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April, 1915.

The Nail

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is "The Capewell" because it is safe, reliable and easy to drive.

When horses start out for a long, hard trip, or for military maneuvers, they should be shod with nails of the right sort—the kind which hold a shoe securely.

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have for years been the standby of the most competent shoers throughout the Country. Cheap nails often fail under trying strains. They break, split or crimp. This causes a lot of trouble, needless expense—sometimes injury to the horse.

For shoeing cavalry and artillery horses there is no nail which equals The Capewell. Not the cheapest regardless of quality but the best at a fair price.

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Note the Trade Mark—a pattern on the head of the nail formed by lines crossing each other diagonally.

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APRIL, 1915.

No. 106

SOME IMPRESSIONS OF THE MOUNTED SERVICE SCHOOL.*

BY MAJOR GENERAL WM. A. KOBBE, U. S. ARMY, RETIRED.

FORT Riley and the Mounted Service School are situated at about the center of the United States only a few hundred miles, fast decreasing in number, west of the center of population on an east and west trunk line of railway and near a line running south to the Gulf. Twenty minutes away by trolley is a town of some 6,000 people, with good shops, banking facilities and a polo team, and Kansas City with an annual horse show and the resources of a large city a few hours distant by rail. The country is one of fertile farms and Kansas, in addition to being the banner wheat state, raise large forage crops. The neighborhood has an abundance of easily quarried stone of which permanent and sightly buildings can be quickly and economically built, including snug, light and well ventilated stables.

*This interesting account of his impressions of one of the service schools, by a distinguished soldier, was written at the urgent request of the Commandant and School Staff, after General Kobbé had been casually at Fort Riley for a couple of months, visiting his son, a student officer at the school.

Fort Riley is the home station of a regiment of cavalry and of a regiment of horse artillery, with adequate quarters, barracks, stables, gun-sheds and riding hall.

The military reservation has some 20,000 acres with characteristic but varied topography specially suited for training and exercising mounted troops, including a ready-to-ford and ready-to-bridge river. There are valleys and gulches in succession and well wooded river bottoms, but high plateaus predominate with natural obstacles, bounded by perpendicular bluffs whose talus invites feats of horsemanship that seem incredible in pictures. With weather varying from winter storms and snow to summer heats and dust, though with a fair share of fine days, the site seems to offer all the conditions of active field service except and enemy. Much wild hay that should be better than it looks is cut on the uplands.

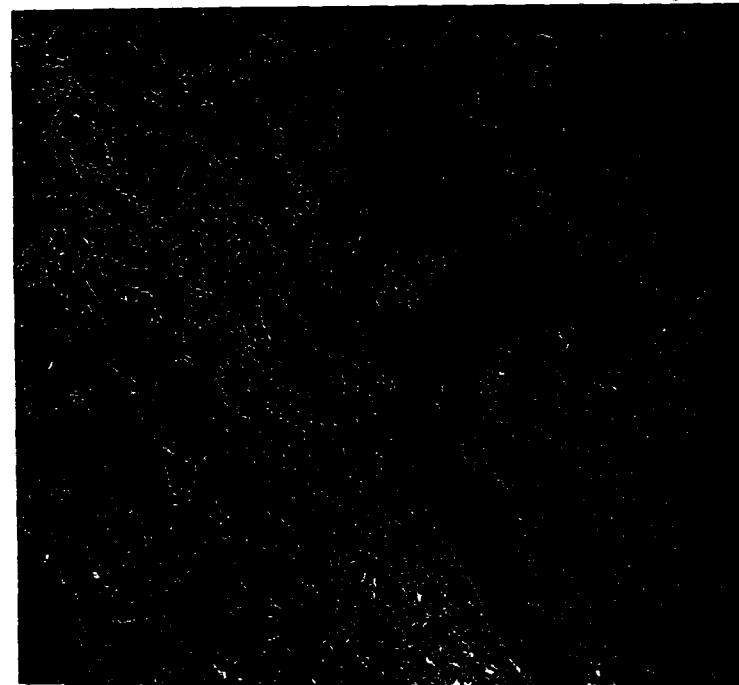
With these advantages it is a surprise to learn from the 1914 report of the commandant that the removal of the Mounted Service School to some other site is under consideration.

There is a difference in the nature and object of the instruction given at this and at other army service schools. In the course, here which from beginning to end is essentially practical and worked out with infinite patience and singleness of purpose, there is little or nothing that the student officer will not find invaluable later in ordinary routine duty, not occasionally but daily; and nothing that he cannot and should not pass on to others, including individual troopers, not casually but systematically. If student officers are not impressed with this obligation, the school will fall short in an exceptional mission. Perhaps, if the class were composed largely of junior captains or senior first lieutenants the spirit of the instruction would be disseminated most directly and quickly; but in a service where short cuts to efficiency are often blocked by expediency this is doubtless utopian.

The instructors in riding at the Military Academy will, of course, always be selected from graduates of the school.

A number of infantry officers in the class are equally interested with their comrades of the cavalry. No one will begrudge them the privilege if their detail does not exclude others for whom the course is primarily designed.

There is no very apparent difference between the first year course and the course for field officers. With the exception, perhaps, of somewhat shorter hours for the latter, one is as



CROSS COUNTRY RIDING—SLIDING DOWN HILL.

Lieutenant J. F. C. TILSON on "Fitz."

thorough and stringent as the other. In any case a tempering of duties in deference to rank and years is evidently uncalled for and might be resented. With captains near majorities up to and including lieutenant colonels one may fancy a connecting link between the busy and work-a-day present and that intangible and elusive entity "*the old army*." It is easy to agree

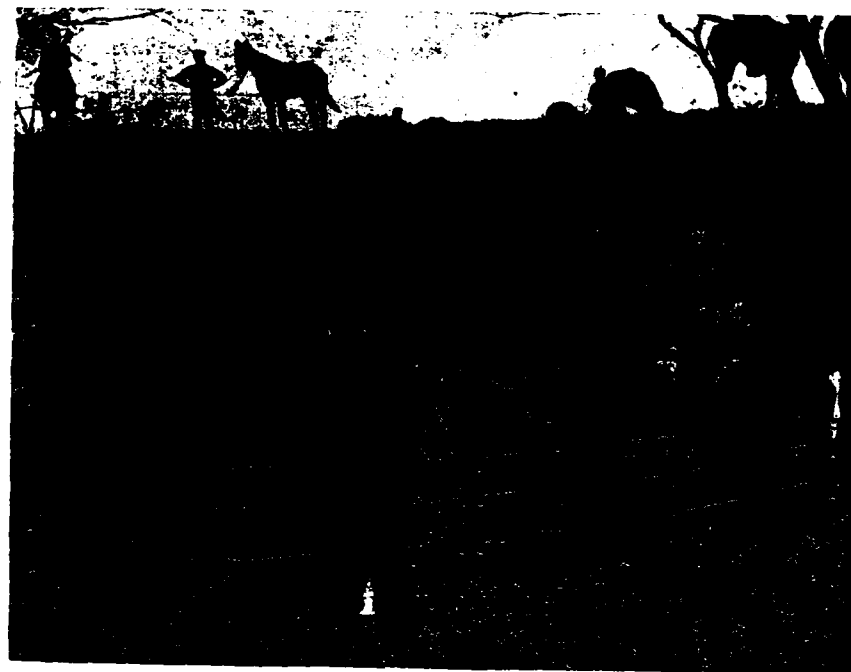
with the statement in the commandant's report that graduates of the field officer's course have deprecated the fact that, when subalterns, they were deprived of the advantages of the regular course, and to consider with him that the field officer's class is of the greatest possible benefit, not only to the officers individually, but to the regiments which they represent.

The courses at the Mounted Service School are designated officially, if somewhat rhetorically, also as "schools." Of these the school of equitation overshadows the others from inherent importance and because it is progressive and continuous throughout the school year.

The young officers who make up the class are very intelligent and fit and at present are largely comparatively recent graduates of the military academy. It goes without saying that they "know how to ride," most of them fearlessly and confidently. Some of them look well on horseback and some do not; and generally it is purely a coincidence if any two ride alike. It is difficult to fix on any one inept feature obviously common to all, but perhaps it is a sense of antagonism between horse and rider, more or less in evidence, the horse bearing his burden under protest and the rider too alert; an antagonism more conspicuous among civilian riders and reaching a climax with the cruel methods of the cow-boy.

Whether this impression is substantial or merely fanciful, does not essentially matter because in a few weeks a change has taken place gradually and become clearly discernable not only in the student officer's riding, but in his whole attitude toward a horse: *i. e.*, toward any horse given him to ride, however undesirable the mount. This progress or change is common in an equal degree to all members of the class; and that it is due to well thought out methods of instruction is unquestionable when there is opportunity to note the riding of instructors or second-year men, the finished product of the course, so to speak; and in "*riding*" are included the confidential relations that have somehow been established between man and horse.

It is difficult again, in raking over impressions to find any that lead anywhere or that hark back to the relative value of this or that method in producing results, though results be ever so manifest—especially when there is no very apparent connection between cause and effect; so that an outsider should make note of his impression tentatively and with a good deal of diffidence.

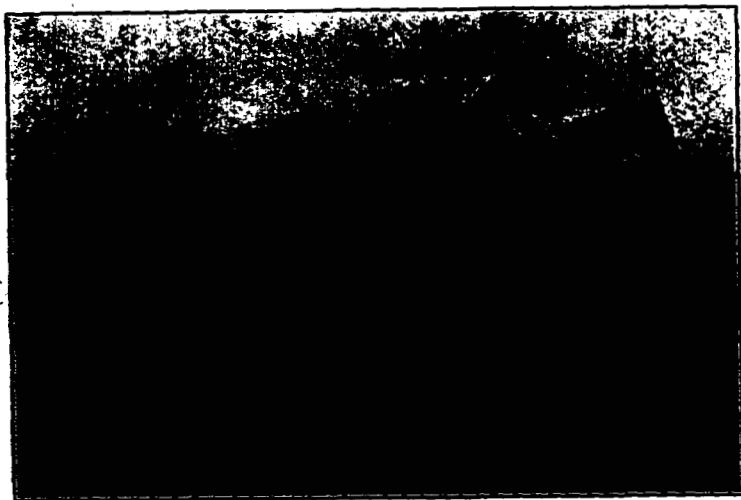


JUMPING A FENCE ON AN INCLINE.

Lieutenants ARTHUR H. WILSON and J. G. QUEKEMEYER.

The student officers ride or are busy in one way or another with horses day after day and early and late, preceded, however, by an hour or more in the gymnasium of fencing, callisthenics, vaulting, etc. The object seems to be to make them supple and lithe, or colloquially, to "*limber them up*." Possibly this is to bring about what may be called a "*bag o' meal*" seat when

mounted—a seat that, if not prescribed, is not corrected. In fact, other than an occasional word of caution or advice, there is an absence of coaching and instructing that one naturally looks for in this part of the course, if not later. Perhaps it is unreasonable to assume that there can be any hard and fast rules, for a horse's center of gravity shifts and varies with the imposed weight of the rider and a lot of unaccustomed muscles are called into play, varying also with the gait; and to get him used to this may be the most material part of his training; but the rider will make it difficult and fatiguing both for himself



TAKING THE TRIPLE BAR.
Captain L. R. BALL on "Quandary."

and his horse, if he assume, *e. g.* a bolt-upright "*dragoon seat*" or any other that might be prescribed. Proficiency will come with prolonged riding, with and without saddle, with and without stirrups and with most any sort of a horse, so he be not incurably vicious, until the rider meets and supplements every movement of his mount intuitively with a give and take of his own. "*Gaiting*" a horse seems to consist in encouraging him in this or that gait by making it easy for him.

This seems to be a fair analysis of the matter, if reasons must be given. Whatever the cause, however, instructors,

second year men, etc., all ride alike and it is a great pleasure to watch them.

The *bag o' meal* seat has developed into one of perfect ease, impressed with the grace that comes from fitness and with and evident minimum of effort and fatigue for both rider and horse. At whatever gait, whether flat riding or jumping, these two are "*en camarade*" and understand each other. In jumping the horse comes up to the obstacle almost leisurely and with a barely perceptible hesitancy to gather himself that does not interrupt his stride, clears it: nor does the rider lean perceptibly either way to meet rise and drop. Finally, when the bar is up a little too high it is not imaginary to note that the horse understands fully that his master neither expects nor intends him to take it and so he makes only a creditable show of trying it.

The McClellan and other high pommel and cantle saddles were probably devised for comfort on a long march and to offer the novice a more secure seat, but no cavalry officer, even the youngest, will hear of any but the flat saddle of foreign or home pattern with preference for the French. The end and aim of the flat saddle is comfort for horse and not for the rider (though the latter was not admitted) in that it conforms more readily to the average back and is much less conducive to sores and no other or better reason for its use is required. Then, too, a high pommel and cantle, either impose an inflexible seat or encourage lounging and both must worry and chafe a troop horse ridden day after day by the same trooper.

But why retain the open, metal stirrup? It is cold, not easily found by the foot if lost at a rough and rapid gait and may on occasion drag the rider. The wooden hood-stirrup protects from cold or wet and mud and, if lost, swings back automatically until the ball of the foot holds it.

These considerations are very likely trite and commonplace to those familiar with new conditions and methods, but they impress anyone who is not.

Perusal of the Field Service Regulations and of relevant parts of the cavalry drill book leave the impression that the

employment of cavalry in war is treated half-heartedly, typical of much and most else that one finds published on the subject. So it is said that "hereafter cavalry will be used only for field intelligence, patrol, cover and reinforcement purposes" and Sir John French writes that "the true rôle of cavalry on the battlefield is to reconnoiter, to deceive and finally to support." The young officer seeking information must find this exasperatingly vague and non-committal. It is refreshing, on the other hand, to find General von Bernhards's outspoken dictum



CROSS COUNTRY RIDING.

Captain GEORGE M. LEE taking a wire fence.

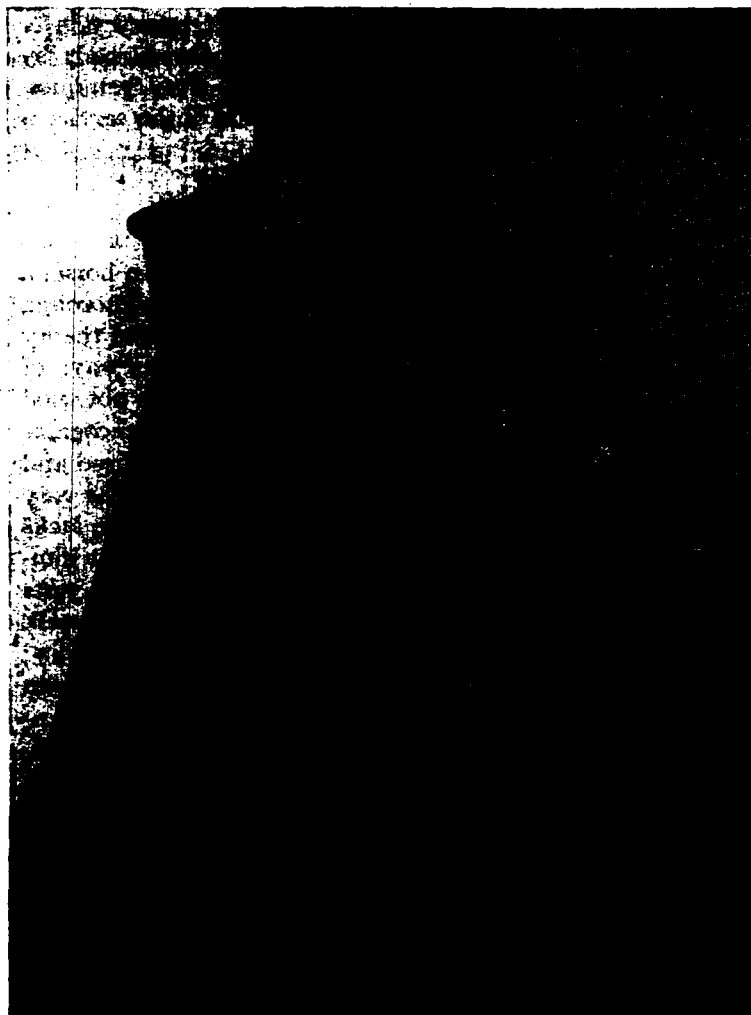
for offensive dismounted fire action combined or not with shock action in attack or defense and in conjunction or not with infantry. Perhaps he might better have urged a combination of dismounted and shock action and the invariable support and coöperation of the sister mounted service, the horse artillery. Discussion is not relevant here, the point is that we knew all this fifty years ago and practiced it with results that are historical; but we recognize now the shortcomings of the long-ago trooper. He rode badly and was not a fighting unit with his horse; and he sacrificed a ruinous number of them.

Given an adequate mounted force, qualified on lines laid down at the Mounted Service School, but trained and equipped otherwise as is ours, with due proportion of guns and confident leaders, it is not over sanguine to conceive an independent arm, self-sufficient and self-reliant in war. If infantry is to be relegated to trenches and artillery on prepared roads by motors to concrete platforms, the cavalymen may yet question any difference of opinion as to which arm of the service is "the backbone of the army."

An officer may never be called on to shoe his own horse, a consideration that has no bearing whatever on his very thorough instruction in horse shoeing. There has been no end of theory as to one kind of shoe or another and as to proper ways of shoeing, even advocating at one time that horses be not shod at all. If one is taught the anatomy of the foot, to recognize defects, to forge, personally, shoes of the patterns required and to put them on, he need theorize no longer; but he will be very competent to superintend the job, will always do so if he lacks confidence in his farrier and if necessary take a hand at it himself. Moreover, the intimate association between them puts horse and rider "*en rapport*" as nothing else can do so well. A horse is said to be stupid, but he has an excellent memory; and it is not "*to consider too curiously*" that he has his own ideas as to the kind of shoe he needs and how it should be applied; and that he recognizes an expert from the first.

The course in hippology has no doubt equal or greater practical value. Instances are on record where graduates of the school have saved valuable animals with the insight and knowledge acquired there, including operations that must have seemed heroic and desperate to an anxious owner. As is natural, the course seems quite difficult including, as it does, anatomy and diseases, hospital work, dissections and operations. All of these apart, an officer *must* be able to tell the age of a horse within close limit, and to judge whether he is sound or not. Together with the patient training of unbroken or partly broken colts at the beginning of the school year this

course, and the course in horseshoeing, establish those confidential relations between man and horse that have been iterated, perhaps unduly, in this paper.



A LECTURE IN HIPPOLOGY.

The School for Bakers and Cooks, which rather incongruously, is a part of the Mounted Service School, is somewhat of a revelation to one who has only vaguely imagined what such

an institution might be like and he will regret it if he gives it only a perfunctory last minute visit. The two occupy separate quarters generously fitted with everything necessary, including scientific appliances that are not ordinarily considered in connection with baking and cooking. Charts, diet tables, monograph booklet and samples of flour and foods for analysis in infinite variety are rather bewildering on a short visit, with everything very trim and tidy notwithstanding the nature of the work, which goes on with the same genuine interest in its



FIELD BAKERY IN OPERATION.

characteristic of all departments of the Mounted Service School. This special branch is probably as suitably placed at Fort Riley as it would be elsewhere for its benefits, widespread, are felt directly throughout the army and few officers have time or opportunity to take the course. Its inception and development appear to be largely due to the intelligent and devoted work of one man.

A retired officer, mindful of the unassisted army ration of the middle '60s, may note pies and cakes and rolls in the bakery,

and dessert on daily bills of fare, with some of the accumulated prejudice of long service.

An officer, still fond of his profession, visiting the Mounted Service School, may well feel hopeful and encouraged. He will be most cordially received and with all doors open to him may go and come as he pleases at his own time, unhampèred by being "*personally conducted*."



WHAT DRILL REGULATIONS FOR THE CAVALRY?*

BY MAJOR F. C. MARSHALL AND CAPTAIN LEON B. KROMER,
ELEVENTH CAVALRY.

IN the introduction to his manuscript, "The Military Policy of the United States," written in 1880, and the years preceding, General Emory Upton says:

In every civilized country success in war depends upon the organization and application of its military resources. The resources themselves consist of men, material, and money. Their organization is wholly within the province of the statesman. Under our Constitution Congress has the power to raise and support armies, and, subject to the supervision of the President, only professional soldiers should command them.

As General Upton so sapiently says, Congress dictates the organization of our military forces. By its power to limit appropriations, and direct their expenditure to the minutest detail, it also very largely dictates how they shall be trained. It prescribes where troops shall be stationed; it sets physical limits to the terrain on which mobile troops shall be trained; it makes it impossible, by these limitations, to do more than give a theoretical training to our soldiers, except in certain very limited localities.

On account of interior disturbances, because of the unrest of our neighbors, and due to conditions in our insular dependencies, the greater part of our army is used as a constabulary force. This adds to the difficulties of giving practical training to our troops, to prepare them for wars that might happen, for invasions that might threaten the nation's existence.

*Although this article was written and received by us before the issuance of General Orders No. 10, current series, War Department, February 23, 1915, yet is it thought that the restrictions therein contained would apply. Therefore, the article, although containing many valuable, important and pertinent facts to illustrate the subject of the paper, has been "*denatured*" to fit the requirements of the above mentioned order. [EDITOR.]

The result is that the influence of the terrain on which our cavalry might be used in defensive warfare is lost sight of, and a system of abstract training, on an ideal terrain, is attempted.

The provisional Cavalry Service Regulations, which cavalry officers are ordered to report upon very soon, is an effort, so one of the members of the board that devised them says, to provide training for our cavalry so that they may fight anywhere.

These Regulations are based, so the Preface says, on Bulletin 18 of the War Department, series of 1912. It is evident that, in framing this bulletin, the terrain on which our cavalry is, or might be used, was not considered, nor the tactics of our potential enemies.

Let us consider, first the present stations of our troops, and their missions there.

In the Philippines we have a small body of troops, kept there solely to furnish aid to the civil officials, if needed, to keep peace and order in those Islands; it is a constabulary force.

In Hawaii another small force is maintained having in view, logically, defensive action against a possible enemy.

In the Canal Zone another force is maintained, like that in Hawaii, far in excess of local constabulary needs. This, logically, should be trained to defend the canal from capture or destruction by small expeditionary forces, acting in conjunction with a hostile naval attack. These troops, and those in Hawaii, are our only troops with a definite mission.

In each of these three places the cavalry, as well as the other arms, should be trained solely with reference to the local problem, having in view the terrain, the character of the possible enemy, and the direction of their attack. These local problems are entirely different, but none of them should include, in their solutions, preparation for combat against large bodies of hostile cavalry.

In the United States, proper, the problem confronting the cavalry is much more complex. Here, as in the places mentioned, one element is constant; the training should be for defensive warfare against an enemy approaching our shores in ships. Not for a minute should our military training contem-

plate offensive warfare on the soil of any of the military nations. The idea is too absurd to be considered.

Wars are the results of long smoldering resentments. Our war with Spain was imminent for years. The blowing up of the *Maine* was but the spark needed to start things. Intervention in the affairs of Cuba would certainly have come, sooner or later, without the *Maine*.

* * * * *

So it is with all wars. The causes accumulate for years, increasing popular antagonisms, until the patience of the people can endure no more; then something happens to suddenly enrage them and the nation is swept off its feet into war.

* * * * *

Such an enemy would attack our large cities, the centers of populations, wealth, and government; Boston, New York, Philadelphia, and Washington, on the Atlantic; San Francisco, Portland, and the Puget Sound cities, on the Pacific. All our mobile troops should be especially trained for defensive warfare in those regions, and their drill regulations should be easily adapted to combined tactical operations there.

At the Army Service Schools, recently and for a number of years, it has been the practice to require students to precede the study of any military problem by estimating the situation. A set formula was laid down that was believed to provide for careful thought of each step in this mental process.

Perhaps it might be well to apply this process to the problem: How shall Our Cavalry Be Trained? Following the formula, consider,

1st. What is its mission?

Unquestionably it is to aid the other branches of the national defense to overcome, by armed force, the active enemies of the United States.

2d. What are these other branches of the national defense, what are their functions, and who are, or may be, the enemies of our country?

Of our own forces there is, first, the Navy, whose function is to seek and destroy the hostile navy, and so prevent transports from bringing an invading army to our shores. Second, there are the coast and harbor defences, that seek to prevent hostile ships from entering our harbors, to provide safe anchorages for our own ships and those of friendly powers, and to co-operate with the mobile army in preventing hostile troops that have got by the navy, from landing within range of their guns. Third, there is the mobile army; the infantry, and the cavalry, field artillery, and other auxiliary arms. They seek to destroy the hostile forces that have evaded or overcome our navy and coast defenses, and have succeeded in invading our soil.

* * * * *

4th. What will the enemy probably do?

First, he will seek to destroy our Navy, or to isolate it, either by blockading it in our own harbors, or by causing it to interne in neutral ports. That done, he will land his mobile forces, principally foot soldiers and artillery, because of transport limitations, and will seek to capture our great cities, to occupy our land, to set up military governments of his own there, to compel us to submit to his terms for peace.

5th. How does the terrain affect the problem?

It has everything to do with it. Cavalry officers unconsciously will accentuate that part of their training that fits best the ground they are operating on, seldom giving thought to what tactics should be employed on different ground.

Officers at Fort Riley or Fort Oglethorpe, for instance, where there are large, unobstructed drill grounds, will yield to the allurements of line formations at fast gaits, and will gradually become committed to shock action as the main employment of cavalry. They will neglect tactics and emphasize drill. At Fort Leavenworth and Fort Sheridan, with restricted drill areas, they will necessarily turn to tactical instruction, and will devote as little time as possible to formal drill. And the terrain at all of these stations is entirely different from that in any of our danger zones. Training at such stations

will have the same value, in strengthening the national defense, that study in college has in preparing men for the struggles of professional life. It is purely theoretical training, preparatory to the real training.

6th. What courses are open?

a. We may continue to train our cavalry, by itself, in small, ineffective groups, using drill regulations that are the development of our own cavalry experiences in the Civil War, and the Indian Wars that followed it, with no thought given to the terrain on which they may be employed, or to team work with the other arms.

b. We may adopt a system of drill regulations, modeled after foreign regulations, adapted to foreign territory, based on Bulletin 18 (of which more will be said later) and accentuating training for shock action, in line, with the saber and the horse as the principal weapons.

c. We may, either by original thought, or by adaptation from existing or proposed manuals, construct a system of drill regulations that will answer affirmatively the following test questions:

1. Do they apply to the terrain of our danger zones?
2. Do they train our cavalry to meet the tactics of all possible enemies?
3. Do they develop leadership to the utmost?
4. Do they emphasize team work?

Before coming to a decision it is necessary to go a little deeper into matters bearing on these tests.

* * * * *

If, on the contrary, our navy were not strong enough to prevent the invasion, how could it protect our transports, so that they might carry our troops to assist in defending our neighbor? Having defeated our navy, does anyone suppose that our enemy would be content? Not at all. He certainly would invade our soil, choosing those places to strike that are nearest his base, hoping, by the issue of the war, to reimburse himself for its cost.

So, . . . our wars on land will all be fought defensively, on our own soil. New England will be our Belgium.

New England is a thickly settled community; it has a close network of good roads. The farms are small, the fields tiny; seldom is there seen a level field covering as much as forty acres. It is hilly, very hilly; the hills are covered with rocks and trees and underbrush; the valleys are swampy; the little fields are separated from each other by thick stone walls; the roads wind in and out among the hills, seldom showing a straight stretch of even a thousand yards.

The streams are all utilized, either for water power, or to feed reservoirs that furnish water to the cities. The many dams have slowed the currents in these little streams for decades, causing deposits of thick beds of mud on their bottoms that make fording impossible. It is difficult even to find watering places for horses along their margins.

"For four summers" (Major Marshall is speaking from his own experience in New England) "I gave instruction to the militia cavalry of New England. During that time Bulletin 18 was published to the army. I loyally made it the basis of my instruction; I insisted that a cavalry leader should always have the word *charge!* on the tip of his tongue, constantly teaching that the cavalry leader who dismounted his command yielded the initiative to his enemy. During my tour of duty there I was present at fifteen maneuver camps; with all but two I drafted the problems and conducted the maneuvers. In all those weeks, covering as they did, either in preparation or in practice, work all over southern New Hampshire, all of Massachusetts, Rhode Island, and Connecticut, while constantly looking for it, I found but one place, except the village greens, where a tactical attack, mounted, off the roads, could be made in column of platoons with any degree of naturalness, and not a single place where a squadron could charge in line. Nor do I believe that there is, in Southern New England, anywhere, a field or place where, without extensive preparation a regiment of cavalry could, logically, charge in any line formation whatever."

The country to the west of New York City, between it and Philadelphia, and south to the Potomac, east of Chesapeake Bay, is also rough, wooded, full of obstacles of all sorts to delay or absolutely to prevent mounted action.

If this is to be our battle ground, our cavalry should certainly be trained especially with a view of operating there. This leads to a discussion of Bulletin 18, its application on this terrain, and its wide divergence from the provisions of the Field Service Regulations.

Let us consider the Bulletin by paragraphs.

1. Mounted action in the main rôle of the cavalry arm and its organization, armament, and instruction should be with a view to rendering it effective in such action.

Dismounted action is, however, a very important rôle of the cavalry, and neither an organization nor the method of instruction which fails to provide for the effective use of cavalry dismounted will enable it to perform fully its functions in war.

A rôle is a part or function performed by anyone. *Mounted action* is a method of fighting; so is *dismounted action*. Neither is a part or function to be performed. These are the ways in which the rôle may be performed but neither one is the rôle itself. The Field Service Regulations say, on page 13:

Reconnaissance in the theater of operations is best performed by the cavalry, which, from the beginning of the campaign, seeks to determine the enemy's strength and dispositions. It protects its own army against surprise, screens its movements, and insures the safety and success of the troops of the other arms.

Here is a part to be performed by the cavalry, in other words, its rôle, from the very beginning of a campaign.

2. The organization should be such as to permit of the greatest mobility, which is the essential quality of the cavalry, while providing units of great smashing power in the charge, and a sufficient number of rifles to make effective its use when required as a dismounted force.

3. Cavalry must maneuver freely and widely without fearing too much for its rear; and being often at a distance from the main body of an army, its commander must be clothed with authority to conform to actual conditions.

These paragraphs are beyond criticism.

4. While the chief task of the cavalry is to assist the other arms in accomplishing the common object, its rôle is often of primary importance. The action of cavalry must be bold and daring; it must, whenever practicable, assume the initiative, seeking out the enemy and placing him on the defensive.

What does this mean? Paragraph 1 of the bulletin indicates that there are two rôles for the cavalry: mounted action and dismounted action. How can methods of fighting be more important than team work? The introduction to the Field Service Regulation says:

Success in war can be achieved only by all branches and arms of the service mutually helping and supporting one another in the common effort to attain the desired end.

And again, on page 69, in speaking of the cavalry:

It must not be given a task, nor voluntarily assume one, that will prevent its fullest coöperation with the other arms in the decisive action.

The discrepancy between the statements in the bulletin, and the provisions of the Field Service Regulations, quoted above, are obvious.

5. The principal weapon of the cavalry in mounted action is the horse, and the force of impact should be utilized to the utmost. The terrain and nature of operations will determine which of the other weapons must be used.

A consideration of the first sentence of this paragraph, in connection with the opening sentence of paragraph 1: "Mounted action is the rôle of the cavalry arm," etc., gives this impression: the principal weapon of the cavalry in its main rôle is the horse, and the force of impact should be used to the utmost. That is, that shock action is paramount. The cavalryman has four weapons, the horse, the rifle, the pistol and the saber. The Drill Regulations teach him how to use each. Cavalry Service Regulations, on page 14, says:

The success of all actions in war depends upon the proper selection of the means to the end. Therefore each cavalry commander must conform his actions to the actual conditions, departing when necessary from the letter of the regulations. The methods prescribed are devised to fit the general case. They are to be regarded as tools furnished to the various leaders, etc.

The majority of American cavalry officers do not believe that shock action is of paramount importance, but do believe that our cavalry should be so trained in the use of their four weapons that they may "make the proper selection of the means to the end" alluded to above, and that in making that selection they have the choice of mounted action with the saber (shock

action), mounted action with the pistol, dismounted action with the rifle, and combination of these.

From the preceding study of the terrain we will most probably operate on, it is evident that opportunities for shock action in masses will not occur. Is it wise then to put so much stress upon this part of our training? Is it not more logical to conduct our training so that each method of fighting will receive its proper share of attention? Not because of any prejudice against shock action in masses, in itself, but simply because it is a method of fighting we do not consider applicable to our needs, because of our terrain. We should certainly train our men carefully for shock action in smaller groups, under situations we believe might come up in campaign, as, for instance, when a small patrol meets, unexpectedly, a hostile patrol.

Is it not more logical to conduct our training so that each method of fighting will receive its proper share of attention, considering the terrain on which we will most probably operate and the situations most probably occurring thereon?

6. When circumstances permit, cavalry opposed to cavalry should fight mounted, thus retaining the mobility and power necessary to its security and success.

7. The historical value of cavalry, including the experience and evolution of our own and that of other countries, must be carefully studied, and due consideration should be given to the greater magnitude of our future cavalry operations as compared with our experience since the Civil War.

To this paragraph might properly be added: "and to the terrain on which it will probably be employed."

8. The use to which cavalry should be put in campaign is summarized as follows:

- (a) To seek and destroy the enemy's cavalry.
- (b) Screening, contact, and reconnaissance.
- (c) Seizing and holding important advanced or isolated positions, thus delaying the advance of the enemy until the arrival of the other arms.
- (d) To operate on the flanks and in rear of the enemy.
- (e) Raids and other enterprises requiring great mobility.
- (f) The mounted charge at the opportune moment against infantry or artillery.
- (g) Energetic pursuit of a retreating enemy or covering the retreat of its own forces.
- (h) When none of the above rôles have been assigned to it, cavalry may go to the assistance (dismounted) of hard-pressed infantry to fill gaps in the firing line.

The uses of cavalry cited above are but incidents in a campaign, and if they do not harmonize with the general plan they are apt to be harmful instead of beneficial. Witness General Stuart's absence in the Gettysburg campaign. He neglected his real mission, as now laid down in the Field Service Regulations, page 13:

Reconnaissance in the theater of operations is best made by the cavalry, which from the beginning of the campaign seeks to determine the enemy's strength and dispositions. It protects its own army against surprise, screens its movements, and insures the safety and success of the troops of the other arms. The defeat of the hostile cavalry and its expulsion from the field are usually the best means to this end.

From the above quotation it also appears that cavalry should not "seek and destroy the enemy's cavalry" unless the hostile cavalry should interfere with our cavalry (although, to be sure, it is almost certain that it would) in its reconnaissance "to determine the enemy's strength and dispositions, to protect its own army, screen its movements, and insure the safety and success of the troops of the other arms." Then the defeat and expulsion of the hostile cavalry should be accomplished, because the mission of the cavalry, in the team, cannot be accomplished until this is done.

Reconnaissance is the rôle; the defeat of the hostile cavalry is an incident in the carrying out of this rôle. What would have happened in the Gettysburg campaign, had Buford sought to find and destroy Stuart's cavalry in the opening stages?

The teachings of the bulletin are not in line with the requirements for team work with the other arms, as laid down in the Field Service Regulations. It confounds incidents with rôles.

The Field Service Regulations consider the duties of cavalry in campaign as follows:

Opening Stages.—Reconnaissance, protection of its army, screening army's movements: team work.

During Combat.—The reconnaissance of the flanks and rear of the enemy by small detachments, keeping the main body of the cavalry close at hand to complete the successes of

the battle (i. e., team work on the battle field with the infantry and the artillery.)

During combat it directs its activities to the support of the other arms and particularly towards insuring the success of the infantry as soon as that arm is fairly committed to the action. (Page 69.)

Pursuit.—Cavalry takes up the pursuit at once.

Defensive Combat.—In all defensive combat cavalry has an even more important rôle than in the offensive. It must always be ready to come immediately to the assistance of the infantry and to make any sacrifice necessary to ward off defeat of that arm.

It must be kept near at hand, and ready for action, mounted or dismounted, in any part of the field. (Page 191.)

Withdrawal from Action.—

Cavalry and horse artillery may be used unsparingly to take the place of infantry withdrawn. (Page 201.)

Retreat.—

In the retreat the cavalry and artillery must be called upon to make greatest exertions and to suffer the greatest losses, when necessary, to check the pursuit. (Page 214.)

* * * * *

It is our opinion that Bulletin 18 should be recalled for revision, because it does not emphasize the true mission of cavalry: team work with infantry and artillery; because its statements are not in accord with the Field Service Regulations; because it confounds rôles, incidents, and methods of fighting; because it is misleading in that it emphasizes methods of fighting for which there will be but little use considering our terrain and probable enemies.

Returning now to complete the estimate of the situation, this seems to us to be a logical decision: To train our cavalry according to Course "C," using as a groundwork for the proposed system the Cavalry Service Regulations, 1914, modified in certain particulars.

The basic faults of the provisional Regulations are few. Minor changes, here and there, will remove these faults. The elasticity of application authorized in paragraph 2 should

not be nullified by such mandatory provisions as that contained in General Principle "A," page 17. The horse should not be characterized as our principal weapon, as it is in paragraph 790. More than all, team work with infantry and artillery should be emphasized.

We believe that the tactical principles of the new book can be harmonized with our present organization. We also believe that it will be easier to modify the new book to our present needs than the old one: *that its adoption will be a long step towards simplifying the training of our men.*

Let us apply the proposed tests:

1. Do the Cavalry Service Regulations, 1914, apply to the terrain of our danger zones?

Answer.—They do, with certain changes in the discussion of the employment of cavalry to make it fit our ends.

2. Will their use train our cavalry to meet the tactics of all possible enemies?

Answer.—They will. They give us the choice of mounted action with the saber, mounted action with the pistol, dismounted action with the rifle, and combinations of these.

3. Do they develop leadership to the utmost?

Answer.—They do. Under the discussion, Basis of the System, Page 14, they say:

The chief must be able to lead his unit to the attack, remaining constantly the master of its direction and gait.

The unit must always preserve the order and cohesion indispensable to its success in the attack, and to this end the movements involved in any evolution must be few and simple.

4. Do they emphasize team work?

Answer.—They do, but not in the desired degree. Some such discussion as that in the Infantry Drill Regulations on this subject should be placed at the commencement of the discussion of Employment of Cavalry, remembering that cavalry is an auxiliary arm, and that the success of the infantry program must be the first consideration in all cavalry operations. Team work, for infantry, refers more to coöperation among the infantry units; for field artillery, usually, to coöperation with

the infantry; for cavalry, to coöperate with both the artillery and the infantry.

* * * * *

There are many times when cavalry should be sacrificed, when the general interest demands a diversion in the hostile attack that can only be made by a cavalry charge. There are also times when cavalry may attack hostile infantry, mounted, with favorable chances: when it has exhausted its ammunition; when retreating in disorder; when its morale has been severely shaken from any cause; when it can be surprised in close formation. These occasions are rare. The thousand other ways in which cavalry may be used, and for which, on account of its mobility, it is the only arm suitable to be employed, cannot be briefly enumerated. The fulfillment of these duties will be the rule, for our cavalry, employed defensively on our own soil; mounted combat, except in very small groups, will be the exception.

A system of training for our cavalry should not favor specializing for the unexpected; it should favor training for duties likely to be demanded of it by its mission.

The naval literature of thirty and forty years ago was flooded with complaints from naval officers that the passing of wooden ships had destroyed the art of naval warfare; that officers were greasy mechanics; that the glory of the sea had departed. These complaints, and the unprogressive spirit that animated them, did not prevent the development of the steel navy into a force requiring higher talents for command than was demanded by the old order of things. Picturesqueness passed; efficiency entered on the scene.

So with our cavalry. Fleeting moments will come, in war—and we must be prepared for them—where the mounted charge will accomplish what nothing else will do. But, day in and day out, the duties mentioned in sections b, c, d, e, g, and h, of paragraph 8, Bulletin 18, will constantly employ the strength of all the cavalry we can raise, will absorb the talents and energies of our cavalry officers. Preparations for these duties should occupy the greater part of our training seasons.

Cavalry is an expensive arm, difficult to train. Its leaders should seek employment in all directions; not stubbornly prepare exclusively for things that will seldom happen. As the German general, von Schmidt, so aptly says: "the Arm is so costly that it cannot afford to do nothing."

COMMENTS BY CAPTAIN FRANK PARKER, ELEVENTH CAVALRY.

I have read yours and Captain Kromer's paper with great interest. With regard to the Bulletin No. 18, Captain Kromer and I were already in accord, but I firmly believe that the cavalry service is unduly exercised over a rather poor exposition of the matter contained therein.

The following principles must necessarily be evident to ninety-nine and ninety-nine-one hundreds per cent. of our cavalry:

1. That team work is the first consideration.
2. That cavalry is the eye of the infantry, and that any other mission is incidental thereto.

Therefore, cavalry in its principal mission will fight only when it has to in order to get information. All other missions are secondary, however important they may be.

3. That what a cavalryman will do with horse, rifle, pistol and saber, can never be prescribed by any manual; the uses of the above elements depending upon an infinite variety of circumstance, are but tools to the hand of the mechanic.

As a member of the board I felt that the following (p.14. C. D. R. 1914) would always give me as a cavalry commander complete liberty of initiative. It would seem that a goodly number of our cavalry officers have either failed to note the following or else have not construed it as I do.

"The success of all actions in war depends upon the proper selection of the means to the end. Therefore each cavalry commander must conform his actions to the actual conditions, departing when necessary from the letter of the regulations.

* * * They are to be regarded as tools furnished to the various leaders."

This paragraph should apply to the training as well as to the use of cavalry in campaign.

Therefore, if you will pardon my saying it, I do not think that C. D. R. 1914, contemplates the use of mounted action in New England. No wider latitude than the above quoted paragraph could be asked.

4. "The principal weapon of the cavalry in mounted action is the horse, and the force of impact should be utilized to the utmost. The terrain and nature of operations will determine which of the other weapons must be used."

The writer of the paragraph evidently meant, cavalry instruction should make the ability to use the horse properly, whether for transport or fight the first basic element of cavalry instruction. In march, maneuver or *mounted* combat the well trained and well ridden horse will certainly be the trooper's best asset. Mobility is the cavalry's first quality. Call him what you may, element, weapon, engine, the horse is the base of cavalry utility.

"The majority of cavalry officers do not believe that shock action is of paramount importance."

With one or two possible exceptions, I do not believe that any of our cavalry officers believe that.

In the *mounted combat* however we must teach insistently aggressive action, and the cavalryman must be taught to "go to" his man, whether in single combat, patrol combat, platoon combat, or such other bodies as may meet for argument on a terrain and under conditions suitable to mounted combat. Any other school is negative and dangerous. This is my understanding of *shock*.

The riding away from one's enemy and firing with pistol at him to the rear is directly opposed to the system of aggressive action, and its weakness increases rapidly with the size of the party employing it. Morale is the first desideratum. Riding away from the enemy is not calculated to increase audacity, and in bodies larger than a small patrol, it is impracticable to control a movement to the rear, in the face of a vigorous pursuit.

I agree with you that our system of training is bad, very bad.

I agree with you that the troops assigned to any particular region should be especially trained for the probable enemy, and according to the terrain but I believe that any cavalryman well instructed as to horse and arms, and field service under the general principles, will render efficient service anywhere and against any enemy.

I can train cavalry here to fight in New England or Mexico.

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I cannot agree with you that large unobstructed terrains tend to develop shock action in serried ranks. It appears to me that small drill grounds produce that effect.

I believe that:

1. Our army should be trained by *division*, no other smaller unit is complete.
2. Our cavalry should be trained principally as *divisional* cavalry, for in time of war we shall be lucky if we get enough good cavalry to supply the Infantry Divisions.
3. We should train and keep on hand a maximum number of enlisted men per troop for our number of officers, (160 or as many as Congress will give us.)
4. The platoon should be a real unit of command and instruction.
5. No cavalry worth the name will be organized after the war commences, and our good militia cavalry is so small in numbers as to be negligible.
6. We must insist on the importance of the horse, his care and use, as the first element of the cavalry's utility, i. e. its mobility.
7. The most important element in an officer or N. C. O.'s instruction is his ability to *command* men, and as a corollary the most important element, by ninety per cent. in the soldier, is discipline with its resulting morale.

Theory and terrain exercises must be made secondary to this, and to acquire this ability there is only one method, actually commanding and training the unit *appropriate to the grade*.

8. *We should tell Congress just what we need to attain the maximum efficiency, and we should commence from the bottom, lay out a policy, and stick to it.* Something we have never tried as I understand it.

If we asked for men and not for officers, we should be starting properly, and I have faith enough in Congress to believe that they will be willing to help what is manifestly an unselfish proposition.

9. We should leave our organization alone, no others is so well suited to our needs.

10. We should have a new system of instruction, a new system of recruiting our regiments, both in men and in horses, and a new system of inspection for the regiment.

11. With more men to our troops, a good progressive system of instruction and inspection and the application of the second part of paragraph 2, C. D. R. 1914, to the self same D. R. we shall get results depending upon the brains, energy and initiative of the cavalry commanders and inspectors.

12. The yearly concentration for instruction of our troops by complete Infantry Division should be insistently and consistently demanded, and all the training of the year should lead up to the instruction for the division, first in a camp of instruction, and then if possible in maneuvers.

When our army is so distributed and directed that we can have our troops assembled by complete division on a proper terrain and for a proper time, at least once a year, we shall begin to understand the meaning of team work, and the proper functions of the elements of the team.

Any army whose divisions are well trained is ready for conflict, especially true is this of our army in which the divisional cavalry is so strong.

The stumbling blocks to rational training in the U. S. Cavalry are:

1. Lack of privates in the captain's command.
2. Continual coming in and going out of men in small numbers.

3. Lack of a progressive scheme of instruction and a definite objective for each year's work.

4. Lack of camps and maneuver grounds where a division of Infantry may be assembled—instructed, maneuvered and inspected—yearly.

It would seem that all four of these obstacles might be removed at an expense negligible in comparison with the results obtained.

COMMENTS BY CAPTAIN A. N. MCCLURE, ELEVENTH CAVALRY.

For brevity in this paper, I accept everything in this Regulations as valuable, except the formation in two ranks one of which is always without a leader, and this I believe to be the key to the Regulations, the only important thing in it and the only thing in it that might be the fundamental cause of very disastrous results to our cavalry.

OBJECTIONS TO THE FORMATION IN DOUBLE RANK.

1. That, it promotes inattention of men, and, increases the labor of training the individual because only half of the organization are required to be on the alert for a command.

(a) Other conditions being the same the instructor's success in improving every man in his unit will be determined by the attention shown by each.

(b) In all movements from column of squads into line or the reverse only fifty per cent. of the men of that unit are responsible for its proper execution, hence the other fifty per cent. are not going to concern themselves in what is taking place further than that a certain distance from his front rank file shall be maintained.

(c) If the average troop horse is left alone he will follow the horse in front of him. The rider knows that and remains contented to let his horse follow, deriving but little or no benefit from such procedure.

What is the result? The interest of the man is not maintained and he is benefitted but little.

Therefore let us object to any formation that does not require the attention of every man in the unit during the execution of a movement.

2. That, there is grave danger of a double rank formation effecting a change in our equipment and that a change in our formation and the arms our troopers carry will produce a change of the American idea as to how cavalry should be employed. A combat may be begun with the pistol in line formation. Certainly the double rank is not adapted for the use of that arm. Then why have a formation from which it is necessary to change upon entering the field of combat?

European countries may have a good reason for employing the double rank formation but whatever it is we have not the same reason because in our country conditions are entirely different.

I offer the following as a fact, briefly, that given either certain arms or a certain formation the arms suggest the appropriate formation or, the formation the appropriate arms, and, the formation and arms the appropriate tactics for employing those arms.

To me the C. S. R. 1914, sounds a warning that the arms of the cavalry soldier may be changed or that he may in the future be required to fight in a manner entirely different from the American idea.

2. Use of signals, leadership, the necessity of training cavalry on an extended and varied terrain, cooperation with other arms are wisely enough receiving more attention than formerly, but certainly no one can justly claim that to do any of these it is necessary to materially change our organization and formation, or, to discard certain of our arms and adopt others. It is obvious that the cavalry Drill Regulations 1902 need revision to better adapt them to certain requirements but with a few changes I can not but conclude that the D. R. 1902 are better adapted to the proper training of the individual than the C. S. R. 1914.

By adopting the double rank there is a possibility, and I believe a probability, that serious consequences may result to the cavalry service.

DIVISIONAL CAVALRY ON THE MARCH AND IN ACTION.*

BY COLONEL J. A. GASTON, SIXTH CAVALRY.

THE smallest body of troops in the United States containing all the arms of the service is the division. To each division in our service is assigned a regiment of cavalry, and this regiment of cavalry is known as divisional cavalry. When sent ahead of the division for screening duty, under the orders of the division commander it is known as "Independent Cavalry." That portion of it attached to the advance guard is known as "Advance Cavalry." The advance cavalry assists the advance guard in protecting the division from surprise and also keeps up communication with the Independent Cavalry. The independent cavalry may be twenty-five miles or more in front of the division. The advance cavalry is usually not over five miles in front of the division and regulates its movements on those of the division.

When divisions are united forming corps or field armies, the cavalry is united to form cavalry brigades or larger units, leaving with the divisions only such small cavalry units as may be needed for divisional purposes.

It is impossible in a short talk to explain all the duties of divisional cavalry. In a general way, they are explained in our Field Service Regulations, the "*Cavalry Service Regulations*," "*Technique of Modern Tactics*" and other text books now in the possession of all officers. It is my purpose to invite attention to only a few things which are either not mentioned in your text books or are given so little prominence that their importance is frequently overlooked.

Armies now have aeroplanes, and the Zeppelin's, armored motor cars, motor cycles, radio stations, and the useful buzzer.

*An address to the Field Officer's Class of the Second Division, a Texas City, January 20, 1915.

Their use in a way revolutionized modern war. The general principles remain the same. Modern inventions relieve the cavalryman from many hard rides but nothing as yet invented does away with the necessity of his services. It is still necessary to form a cavalry screen, defeat the enemy's cavalry—protect the advance or retreat—form flank guards, etc., etc.

In order to learn how to use cavalry, we study history, and note how cavalry has been used. We can frequently learn more from the mistakes made in the past than we can from the successes. If we learn what to avoid, we have made a great advance. We must always remember that cavalry is an expensive arm. We should be careful to so use it as to secure the best results, preferably of course for such duties as cannot as well be performed by other arms of the service.

The records of the Rebellion give many illustrations of the proper as well as the improper use of cavalry. The federal cavalry was not a success for the first two years of the war because its strength was frittered away. In 1863, it was better organized and handled, and it produced excellent results from that time until the end of the war. From that time on the action of the cavalry on both sides is now considered as well worth the study of all armies. In my opinion, our cavalry at the close of the Civil War was the best the world has ever produced.

Before taking up the higher duties of cavalry, we should carefully study the details. Unless we thoroughly understand and appreciate these details, we are liable to make serious errors. It is necessary to first understand the capabilities and the limitation of cavalry before we can properly use it.

While at Fort Leavenworth and the War College, I noticed a hesitation on the part of many infantry officers when problems were given them in which the use of cavalry was involved. By the aid of recent text books and a careful study of the subject, infantry officers are greatly aided in the solution of such problems.

First in order is the treatment and care of the cavalry soldier. He has his rifle, saber and pistol to learn the use of and take care of and besides his hard rides must take care of his equipments and his horse. A cavalry brigade may ride say

fifteen or twenty miles per day—the patrols may make from thirty to sixty miles. If he is to be useful the next day and succeeding days, the trooper must be well fed and given suitable opportunities to rest and refresh himself. The equipments of the cavalry soldier are very important—too great care can not be given to them. Many a cavalryman has been killed or captured because of a rotten bridle, cinch or stirrup strap.

The care of the horse is perhaps of even greater importance than the care of the soldier. Of two equally good horses entering a campaign, one may be dead in a week and the other survive the campaign. The loss or survival of the horse is frequently due to the ignorance or carelessness on the part of one rider, as opposed to the knowledge and care used by the other.

Owing to the manner in which a horse digests his food he should first be watered, then fed hay, and then grain. The horse digests his grain in the stomach—to force undigested grain into his intestines with hay or water is very injurious to him. If a horse is fed a full feed of hay at night and then eats his grain in the morning and is allowed to stand about one and one-half hours or more to digest his grain and is then watered he starts out able to do his work. To water a horse as soon as he finished his grain, throw the saddle on him and ride off may perhaps cause colic. If he escapes the colic, he is certainly not benefitted by such feeding. He cannot properly do his work and his usefulness will be much shortened if such methods are continued.

When a horse stands still for a period of time, blood circulation in the hoof decreases. When first started, he should go at a walk for say one-half mile or more. His circulation is thus started and he can be put to the trot without injury. To start from the stable in the morning at a trot or gallop is wrong.

Modern veterinarian's claim that a warm horse is not injured by being watered with water from which the chill has been removed. Perhaps so. I am satisfied that a little water under such circumstances if not too cold is beneficial. Just the same, it does not do to trust an ignorant or careless groom with such matters. Better use the old methods and forbid watering until the horse cools off. In this way you take no

chances. He can eat hay at any time without injury. Be sure that your animals get all the water they need—at suitable times and in a proper manner. Teamsters will tell you that their mules only eat or drink once a day. Perhaps so—but it is due to the criminal negligence of the teamster, *not* because it is best for the animal.

In each case study the situation and see how you can best use your cavalry. Page 132 Technique of Modern Tactics states that cavalry is used:

- (a) To seek and destroy the enemy's cavalry.
- (b) Screening—Contact and reconnaissance.
- (c) Seizing and holding important advanced positions, etc., etc.

This is all very true. The difficulty is to apply this to the particular case. What you want to know is "What shall I do in this particular situation, shall I dismount and fight, charge mounted, use a combination of the two, or withdraw?" There are such an infinite number of possible situations that no proper answer can be given without a careful study of the particular situation.

Cavalry actions require quick decisions. The commanding ing officer is frequently unable to obtain all the conditions of the problem. Some decision is necessary and at once. Almost any decision is better than none. Inaction at the critical moment is liable to cause as much adverse criticism as a poor decision. Remember the old saying: "Thrice is he armed that hath his quarrel just, but four times he that gets the blow in fust."

Certain things are frequently neglected. I desire to emphasize the importance of a few of these:

1. Always guard your flanks.
2. Never charge until the ground has been reconnoitered, as well as circumstances permit. Don't forget to use your ground scouts. Disaster has been frequently caused in the past by a neglect of this precaution. According to press dispatches, the British Cavalry in the present European War charged on one occasion into a barbed wire entanglement and suffered great loss.

3. In a withdrawal, don't wait too long. Either withdraw in time or stay and fight it out. The greatest losses occur in a retreat when under effective fire.

4. When in command of a support of a cavalry advance guard marching in a difficult country, keep sending out new flanking patrols. Those first out may not be able to cut across country and must rejoin the column in the rear.

5. If it can be avoided, don't make your cavalry march behind infantry. It is very trying on the horses. Either send the cavalry ahead or let it remain in camp until the march of the cavalry on a basis of five miles per hour will not be interfered with. In small commands, the infantry can halt until the cavalry passes in the morning.

6. Always allow horse or man to take a natural gait. Assign a certain horse at the head of a column to set the pace. Don't allow that pace to be faster than the ability of the slowest.

The most of cavalry work is scouting, screening, reconnaissance and dismounted fire action.

The greatest results are produced by the charge when given at opportune times.

The infantry and artillery win a battle—the enemy flees—a pursuit is organized—hammering the rear guard of a retreat, ing enemy give but few results—the cavalry by a parallel pursuit and opportune charges against the flanks of the demoralized enemy can reap the fruits of the victory—then is the time to use “The last breath of man and horse.” Without Sheridan, during Lee's retreat, Grant could not have captured Lee's army. One of the best illustrations of the proper use of cavalry in large bodies in modern times, according to the press dispatches, was made by the Russians when they withdrew on Warsaw and moved a cavalry corps—at a distance of fifty miles from the left flank of General Von Hindenburg's army, to the rear and left flank of the Germans. As a result the Germans were forced to withdraw.

The results obtained by the cavalry in front of an army depend mainly upon the relative strength of the opposing cavalry. The superior drives back the inferior. If divisional cavalry

finds itself inferior to the enemy it is soon compelled to withdraw behind the infantry. If superior it completely screens the advance of the division. The amount of cavalry necessary depends therefore to a large extent upon the special situation.

Cavalry sent to perform a certain mission as for example to break through the enemy's screen, as at Brandy Station in 1863, soon runs against both infantry and artillery. In this case Pleasanton was prepared. He had infantry and artillery to assist him. His efforts were successful and he repeated it a week or so later at Aldie and drove Jeb Stuart back until Longstreet's corps came to his assistance. In both cases, Pleasanton found out just what he wanted to know—viz: where Lee's army was?

The machine gun troop now belonging to each regiment of cavalry will greatly increase its efficiency.

The demolition outfit formerly furnished each cavalry regiment was also an improvement and in war is essential. As the cavalry was not instructed how to use it, it was of course worse than useless. We can not always have engineers with us. Proper instructors in the use of explosives should be furnished the cavalry, and demolition material be reissued.

The recent move to keep cavalry at or near war strength is essential for its efficiency. To send several hundred green horses and recruits to a cavalry regiment on the outbreak of war practically destroys its efficiency as a unit until the new men and horses have been given the necessary instruction.

Cavalry fights mounted or dismounted or a combination of the two. It can charge cavalry, infantry or artillery. It usually charges in successive lines. The formation in each case is determined by the object charged. Cavalry is usually charged boot to boot. The lava formation used by the Cossacks and our American Indians consists in swarming around the enemy—giving way in front when he charges but hanging on to his flank and rear. Very open lines are as a rule used against infantry or artillery. The best chance of success is of course when the enemy is demoralized or surprised.

Obstacles as before said have ruined many cavalry charges. Much barbed wire is used in front of trenches in Europe at present.

Dismounted cavalry is either "Mobile" or "Immobile"—mobile when each fourth man holds the horses of the other three. Cavalry dismounted in this way loses at once twenty-five per cent. of its men. Frequently the element of surprise gives it the advantage in spite of its inferior numbers. Cavalry is "Immobilized" when the horses are linked in pairs or when linked in circles. Three of four men can if necessary for a short time watch 100 horses linked in this way. Cavalrymen are sensitive about their led horses. When mobile, the led horses can easily be moved. When immobile, the cavalry must return to their horses and it takes more time to mount them. Led horses must if possible be screened from view and from fire.

When two armies meet as in Belgium and France, and cavalryman are placed in trenches, the horses are far to the rear and special arrangements would be necessary for their care.

It is frequently necessary to use cavalry as escort or part of an escort to a convoy. It is very trying on the horses to be ridden alongside of a long wagon train on a narrow road. When practicable, infantry alone should be kept with the train, and the cavalry used in front—on the flanks or in rear for reconnaissance work.

In ancient times, infantry was frequently detailed to join the cavalry in a cavalry fight—each infantryman moving to the front holding on to the stirrup of the mounted man nearest him. Press dispatches state that this has recently been done in Europe during a charge of the Scotch Grays. Infantry in the past has been moved rapidly to the front in wagons in order to assist the cavalry by its fire action. Today in Europe, it is stated that they use motor cars and motor cycles for this purpose.

Each new "situation" is a problem for the officer in command—no matter what branch of the service he represents. That officer will be most successful who is full of resources. He should of course know the principles of war as taught in our text books. In addition to that however, by a little thought he may improvise something on the spot which will insure success. For example, each soldier may cut boughs and the line move forward for some distance without being dis-

covered. The use of aeroplanes requires concealment. For this purpose forests, haystacks, etc., etc., are being used abroad. Each situation requires its own special solution.

Horse artillery should be attached to cavalry for screening duty. It is necessary either on the advance or retreat. During an engagement, its position is indicated by the necessities of the particular case.

The capabilities of cavalry are so great that many enthusiastic cavalrymen think they can go anywhere and do anything. It is a good spirit but we must all recognize in our hearts that the best results can only be obtained by a combination of all arms and in each case a suitable proportion of these arms for the work to be done.



CAVALRY REORGANIZATION.*

BY CAPTAIN C. A. BACH, FOURTEENTH CAVALRY.

IN a few months cavalry officers will render reports, required by War Department orders, regarding the Cavalry Service Regulations. But little of individual opinion, concerning this matter, has appeared in the service publications. In the hope of stimulating discussion which will tend to crystallize the general thought of our arm this paper has been prepared.

When the organization of any branch of the service has apparently become obsolete and incapable of meeting the needs of that arm its reconstruction, by those most in interest, becomes essential. The cavalry is confronted by just this situation.

Any plan for reorganization of the cavalry branch should meet the following requirements:

1st. It should provide that the strength of any unit shall, in time of peace, be the same as in time of war. Its peace training should have but one aim and purpose—that of preparing the unit for war.

2d. It should provide the best organization and formation for either mounted or dismounted combat.

3d. It should be one by which evolutions of bodies of troops, regardless of size, can be accomplished in the simplest and quickest manner.

4th. It should be one in which the tactical units are of such size that they can be handled with a maximum of efficiency by their commanders.

*In this article the word squadron will apply to a unit consisting of three troops and commanded by a major. When the word "squadron" is followed by (Reg.) it will apply to a squadron as formed in the Cavalry Service Regulations.

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5th. It should be one in which the integrity of units can be preserved to the greatest possible degree.

I do not believe that the organization contemplated in the present (experimental) Cavalry Service Regulations meets all these requirements.

DOUBLE RANK.

Before proceeding to an analysis of the organization proposed in the Cavalry Service Regulations I should like to state that I believe in and am in favor of the double rank formation—this for several reasons. There is no doubt that bodies of troops can be maneuvered with greater ease and speed when in double than when in single rank. This is true because the force is more compact and the men hence better in hand and more easily controlled and because the mode of ployment and deployment is more rapid. A charge delivered in double rank has a power and strength that a single rank charge can never achieve; the mere weight of numbers operating within a restricted area, is bound to scatter a single rank line like chaff. Furthermore, the cavalry of any European or Asiatic nation with which there is any probability that we will be called upon to contend employs the double rank formation; and ours should be such as not to insure to the enemy any possible advantage.

ORGANIZATION OF THE REGIMENT.

Let us consider first regimental organization. Par. 452 (C. S. R.) states "The regiment is composed of six squadrons (Reg.) and a machine gun unit," and later "Majors are assigned to the command of half-regiments or when half-regiments are detached." To this paragraph which defines regimental organization and control, there are several objections:

1st. A regiment of six squadrons (Reg.) comprises too many independent units to be handled effectively by one colonel.

2d. No training school is contemplated in which majors may learn the duties of colonels—a grade to which they will, some day, be promoted.

3d. The organization does not provide for the most effective subdivision.

4th. The regiment is numerically weaker than it would be under a more satisfactory organization.

Let us examine the objections more closely:

First.—It is the evident intent of Par. 452 that majors shall not exercise command except "when the regiment is in echelon of half-regiments or when half-regiments are detached." In other words the colonel controls his six squadrons (Reg.) directly and not through an intermediary. This, in combat, I do not believe to be practicable. I think that every captain will agree with me that, in combat, he could not effectively handle six platoons. There is no reason to believe that a colonel could direct the operations of six squadrons (Reg.) with greater ease. If Par. 452 had stated "The regiment is composed of two half-regiments, each consisting of three squadrons," there is no doubt that the colonel would find infinitely less trouble in controlling his organization. But this is not contemplated. We might reduce the matter somewhat further. If there is no need for majors, why have captains. The paragraph might then be made to read "The regiment is composed of twenty-four platoons and a machine gun unit." The absurdity of this is apparent. To insure military efficiency the various fractions of a command must be subdivided into units large enough, and not too large, to be successfully handled by one man. A division commander could not effectively transmit his orders to the ten or eleven regimental commanders comprising his division. Nor do I believe that a regimental commander can secure the best results if he must transmit his orders to six captains. Continental nations, generally content themselves with the assignment of three and four squadrons (Reg.) to a regiment. We are the first to advocate the control of six squadrons (Reg.) by one regimental commander.

Second.—A major will some day be promoted to colonel. When he reaches that grade he should be prepared for it, as far as training and experience can qualify him. Under the proposed scheme he gets neither training nor experience,

unless he be serving away from regimental headquarters and have two or more squadrons (Reg.) under his command. At regimental drill he has a prescribed place but no duties worth mentioning. He has no command, no organization to lead and control and teach and worry about. He has no incentive to keep others keyed up to the highest point of efficiency and thereby uncounsciously key himself up to the same point. All he has to do is to do as he is told. He will be a rather unusual man whose military mind, during the period of his majority, does not deteriorate.

Third.—The regiment, as at present constituted, consists of six units, practically independent of each other. This is evidenced in Par. 490 which states (dismounted action) "The colonel assembling his captains, if practicable, directs the disposition of the regiment." Let us see what the colonel has to do immediately preceding and during a dismounted action:

a. Par. 489. He makes a reconnaissance and leads (or directs the leading of) his troops to a point near the firing line.

b. Par. 490. Assembles his captains, gives them information of the enemy, of supporting and neighboring troops and the object sought and directs the disposition of the regiment.

c. Controls its subsequent movements by suitable orders or commands.

d. Designates the squadrons (Reg.) which are to constitute the firing line and those which are to constitute the support.

e. Designates the direction of the objective, the order and front of the squadrons (Reg.) on the attacking line and of the directing squadron.

f. Par. 491. Provides for the reconnaissance and protection of his flanks.

g. Par. 493. Regulates the depth of the deployment and the extent and density of the firing line.

h. Par. 494. Controls the movements of the support.

This is more than any one man, in action, should be held responsible for. But this detailed labor is forced upon him be-

cause of the individual independence of his squadron (Reg.) commanders and by the fact that his regiment is not divided into proper tactical units. If the regiment were made to comprise three squadrons of three troops each, control would be much easier. If desired the entire regiment could be put on the firing line or two squadrons could constitute the firing line and one squadron the support. Such a support, consisting of three troops is strong enough to reconnoiter and guard the flanks and protect the led horses and machine gun unit. Its commander, being a major, is presumably sufficiently experienced to look after these duties and leave his regimental commander free to devote his attention to the enemy. The orders of the colonel to the firing line could be sent to two majors instead of four or five captains. The colonel should not be called upon to concern himself with the disposition of a smaller body than a squadron of three troops.

In view of the fact that the colonel gives his orders direct to squadron (Reg.) commanders it might be argued that there would be less misconception of orders and consequent lack of uniformity in execution; in other words that this method would secure better results. The contention does not appear to be sound. It is more likely that the danger of misconception would be multiplied by three. The majors, because of their age, knowledge and experience, should be better qualified to grasp the colonel's ideas and, having but three troops each to control, are certainly in a position to more quickly rectify faulty dispositions on part of a captain.

The above remarks applying to dismounted combat are equally applicable to mounted combat only in a greater degree. Individual misconception of squadron (Reg.) commanders are much more difficult for the colonel to rectify when the squadron (Reg.) is mounted and advancing than when advancing dismounted. A major, commanding a squadron of three troops, would have little difficulty in making, in his small compact command, any corrections that might be necessary.

It is a rule that cavalry, in mounted attack, should always have a reserve. With three squadrons, of three troops each, in a regiment this reserve is always at hand; a reserve that consists, moreover, of a complete tactical unit.

Furthermore the organization of a regiment into six squadrons (Reg.) under command of a colonel negatives the idea of cohesion so strongly insisted upon as the basis of the system.

Where there are many men there will be many minds. A colonel can direct the evolutions of six squadrons on the drill field without difficulty because they are manipulated by command. But in action, where the regiment covers considerable front and squadrons (Reg.) owing to the terrain may not be able to see each other and where each of the six squadron (Reg.) commanders may, and possibly will, have his own ideas regarding the best method of fulfilling the colonel's directions, there is danger of losing the cohesion that is so essential. This danger is minimized if each three troops are commanded by a major who is acquainted with the plan and maneuvers his squadron as a unit to secure the best results.

Fourth.—The Cavalry Service Regulations place the strength of the squadron (Reg.), in ranks, at 128 enlisted men. A regiment of six squadrons would therefore number 768 enlisted men, in ranks. A regiment consisting of three squadrons of three troops each, each troop having three platoons of four squads each would number 864 men in ranks. As the number of officers contemplated in the Cavalry Service Regulations is not stated, no comparison in that respect, can be made. One thing however is certain. The army needs all the officers it can get; not to further promotion but to further efficiency.

ORGANIZATION OF THE BRIGADE.

Brigade organization should be controlled by two factors—strength and tactics. The two-regiment brigade proposed in the Cavalry Service Regulations appears to have neither the required strength nor the proper tactical organization.

To a brigade there will be attached a battery of artillery and a battalion of machine guns—(consisting of the regimental machine-gun units). In a dismounted action there will also be led horses. All these have no inherent capabilities of defense and must be protected. Certainly not less than a half-regiment could be assigned to this protection and for support. This would leave one and one-half regiments for the fighting line.

In a dismounted action this strength would be still further reduced by necessary horse holders. So that ultimately not much more than a regiment would constitute the fighting line of a brigade. This negatives the idea of brigade action. If, on the other hand, the brigade consists of three regiments, organized into squadrons and troops it will have the necessary strength and the tactical organization that will most readily lend itself to the detachment of integral units for reserve and protection. In this connection, I may call to mind the well-known fact that German military authorities have for years, been at loggerheads regarding the two-regiment brigade. One group, led by General von Bernhardt, has consistently fought for a three regiment brigade and has been opposed by a group of the General Staff. As General von Bernhardt's contentions appear to be sound I can do no better than to quote the following from his book "Cavalry in War and Peace" (1909).

"At the present time we group our cavalry into divisions, each containing three brigades of two regiments. I have repeatedly urged and my arguments have never been refuted that such a division is much too weak for the tasks which would fall to its share on active service.

"This is indirectly acknowledged by the authorities for in the new regulations they assume the necessity of strengthening the cavalry divisions by detachments of cyclists and even of infantry in carts.

* * * *

"In further support of this view I shall endeavor to show that weakness exists, not only in the division as a whole, but also in its component parts. It will frequently be found necessary to detach a brigade for some particular mission, but what fighting strength has such a brigade after the detachment of all the necessary details? This question should be considered from the point of view not only of the purely cavalry fight, but also of dismounted actions, such as the independent conduct of a battle of encounter or an attack on an entrenched position would generally entail. To insure success in a dismounted attack requires a two-fold or even three-fold superiority over the enemy and, in addition to this, the led horses have to be

guarded and the reserves kept in hand. What then can be expected of a weak brigade, such as we now employ, except that its field of action should be reduced to insignificant limits? I am therefore convinced that, if any real work is to be achieved by a brigade, its war strength should be raised to three regiments. *A tripartite formation possesses undoubted advantages under any circumstances*, and would go far towards regenerating the somewhat antiquated system that still prevails, and would facilitate the adoption of more up-to-date tactical methods.

"If, in spite of this, the authorities should still adhere to the existing composition of cavalry divisions, it would evidently be with the object of surmounting the present difficulties by occasionally forming cavalry corps. In my opinion this solution of the question is not an entirely a happy one. It does not help towards strengthening the very weak brigades, while one strong division under a single command is of far more use than two weak ones. The command of a corps, too, is not such a simple matter as is usually supposed unless it has been practiced in peace time. The fact of appointing an officer to command two divisions that have been linked together is not enough. A very large staff is required and the corps headquarters must be provided with ammunition, supplies and technical appliances for communication, unless it wishes soon to find itself absolutely dependent on the divisions, and obliged to conform to the particular and possibly quite unsuitable dispositions that they have made.

* * * *

"The personal equation will play a very important part in this matter and, in my opinion, offers another good reason for limiting the number of divisions. Born cavalry leaders are *rara avis* and the same value cannot be attached to all cavalry generals who may happen to be of equal rank. The more force that can be concentrated under the hand of one able man the better. All the above considerations induce me to believe that my frequently expressed views regarding these desiderata still hold good. For war, as well as for the training of the larger formations, brigades of three regiments should be formed, and

the strength of cavalry divisions should vary accordingly to the importance of the strategical missions entrusted to them. *Tripartite formations facilitates tactical dispositions and the detachment of reserves."*

In quoting the above passages I realize that it may be argued that General von Bernhardt's criticism of the numerical weakness of the German regiment and brigade does not apply to our organization. The German regiment has 512 men in ranks, the brigade 1,024. Cavalry Service Regulations contemplate an enlisted strength of 852 men, in ranks, for a regiment and 1,704 for a brigade. Nevertheless I contend that such a brigade is not strong enough and the general's remarks apply to our organization as well as to the German.

While many may not agree with all of General von Bernhardt's conclusions none will deny that his is one of the clearest military minds that has expressed its thoughts in writing. That his opinions have not changed is shown in his last work "Germany and the next War," (1914). The three-regiment brigade is furthermore approved by Sir John French and employed in the British Cavalry Training.

The formations shown in the plates on pages 212-216 (C. S. R.) lay much stress upon the double column as a formation in readiness for rapid deployment. And the desire to create a convenient unit that would lend itself readily to the formation of the double column may have led or contributed to the division of the regiment into two wings. And, so far as I can see, this is the sole advantage to be gained from such a division. It would appear that instead of adapting drill evolutions to the organization the contrary had prevailed and the organization had been designed for the purpose of most readily and uniformly carrying out an evolution.

ORGANIZATION OF THE SQUADRON (REG.)

The platoon, as at present constituted seems to be the most satisfactory unit, for its purpose, that can be devised. In it a corporal has a command of eight men, a sergeant of sixteen men and a lieutenant of thirty-two men. The squad or section is available for instant detachment from the platoon if necessary. A platoon of thirty-two men in ranks contains as few

men as should be in charge of an officer, for combat and enough for serious and independent employment.

The same cannot be said of the squadron (Reg.) organization. One hundred men, deployed, mounted, is, I believe, about the limit that can be handled, effectively, by one captain. The squadron (Reg.) should consist of three, not four, platoons. Three platoons constitute a unit that insures a maximum of steadiness in leading and ease in maneuvering. The leader is always in front of the center and, in consequence, the articulation of the platoons is as nearly perfect as it can be made. No fraction of the force is so far from the leader that there is danger of its getting out of hand. The time consumed in the execution of evolutions is practically one-half of what is required in the four-platoon organization and no more than would be required in a two-platoon organization. With only two platoons there would be a needless sacrifice of strength and consequent loss of effectiveness.

ADDITIONAL TROOPS.

The subject of machine gun organization is not within the province of this article. However, it may not be out of place to state that two machine guns to a regiment is a force hardly strong enough to become formidable. A machine gun troop of six guns attached to each regiment would be a powerful fighting unit. In the brigade these could, if considered advisable by the brigade commander, be consolidated into a machine gun battalion of eighteen guns; a force that would be a power in an offensive and probably a decisive factor in a defensive action. The British organization provides two machine guns to a regiment of 384 men in ranks; a force somewhat stronger than the proposed squadron. In view of the important rôle played by these guns in the present European War, six guns to a regiment does not seem excessive. The machine gun troop should be an entity, whose numbers are not drawn from other troops but assigned, when necessary, to the machine gun troop as recruits.

From such information, more or less fragmentary in character, as is now available regarding the present European War

the motor-propelled vehicle has demonstrated its value and utility beyond any doubt. Whether the pack train should be discarded by cavalry and supplanted by the motor supply car is a question that must be decided after careful consideration of all our needs. Personally, I believe the pack train should be discarded as obsolete. A pack train large enough to carry supplies and reserve ammunition for a brigade would be a nuisance; one large enough for a division, an incubus. And when it is considered that, in future wars, we shall be called upon often to operate in divisions, generally not in less than brigades, the necessity for motor supply cars is apparent.

The importance of motor cyclists as messengers has been so thoroughly established that a discussion of motor cycles with mounted troops might well be limited to the decision of how many such are needed. The enormous number of men engaged in a modern battle or campaign and the rapidity with which troops may be shifted from one point to another by means of railroad trains and motor cars have tremendously increased the responsibilities of commanders. They must constantly be in touch with the elements of their commands. This touch cannot always be maintained by wire; nor, under present conditions, could it be maintained by mounted orderlies. The motor cyclists, in the present war, has supplanted the mounted orderly, especially for bearing long-distance messages; and it will be so in future wars. In order to insure the possession of an efficient corps of motor cyclists, for the first line, at the outbreak of war, a detachment of twelve motor cyclists should be attached to each regiment of cavalry and be subject to the orders of the regimental commander in the same manner as is the machine gun troop. The attachment of motor cyclists to regimental headquarters is made necessary because we have no brigade headquarters except on paper. When regiments are consolidated into brigades, acting independently, nearly all the cyclists should be attached to brigade headquarters. The same plan could be pursued when the division is formed.

In addition to the twelve motor cyclists there should be attached to each regiment a squad of eight men who have charge of the regimental demolition outfit and such engineer tools as might be considered necessary. Also a detachment of thirty-

six regimental scouts, who should be thoroughly trained in scouting and the delivery of verbal messages. These troops (cyclists, demolition squads, scouts) together with so much of the present headquarters detachment as would be considered necessary, to constitute the "headquarters troop," under charge of a captain and two lieutenants and to be considered a unit divorced in every administrative way from the other troops in the regiment. The scouts should be men carefully selected from the troops in the regiment for intelligence and superior horsemanship, but having once been so selected and transferred to the headquarters troop they would be dropped from the rolls of their former troop and replaced by other soldiers.

The demolition pack and squad, for a regiment, is essential. The regiment is a body of sufficient strength to accomplish successfully small raids on the enemy's lines of communication. A squadron, on the other hand, does not possess this strength. A squadron demolition pack is an unnecessary appendage which, in connection with the squadron, would probably never be used.

Some readers may ask "What is the necessity for regimental scouts? Every trooper is now given instruction in scouting." This is quite true. It is equally true, also, that, of the privates, only about one in twenty ever displays the mental traits, combined with necessary physical characteristics that would entitle him to be designated a good scout. We need men in whose reports reliance may be placed; men who see things, not only things perfectly apparent but things not so apparent; men who can make an intelligent report covering all that they have seen and accompanied, if necessary by a sketch that may be read, understood and used. Men of that type are infrequent. It might be advisable to do what is done in the British Army—make some of them first-class privates.

RECOMMENDATIONS.

For the reasons heretofore stated, I advocate the following organization:

- a. A squad consisting of four files.
- b. A section consisting of two squads.

- c. A platoon consisting of two sections.
- d. A troop consisting of three platoons.
- e. A squadron consisting of three troops.
- f. A regiment consisting of three squadrons, a regimental band, a machine gun troop of six guns and a "headquarters troop" composed of twelve motor cyclists, a demolition squad of eight men, thirty-six regimental scouts and such men of the present headquarters detachment as may be considered necessary.
- g. A brigade consisting of three regiments, the brigade, when operating independently, to have a battery of artillery attached.
- h. A division consisting of two or more cavalry brigades and the auxiliary force designated in par. 534 (C. S. R.).

EFFECTS OF NECESSARY LEGISLATION.

A consideration of cavalry reorganization would be incomplete if we failed to take into account the results, to our arm, of such legislation as would be necessary to make these changes effective.

OFFICERS.

I have no information of the number of officers contemplated in the organization proposed in the Cavalry Service Regulations. It is fair to assume, however, that the regimental officers would consist of the following:

- 1 Colonel.
- 1 Lieutenant Colonel.
- 1 Adjutant (Captain).
- 1 Quartermaster (Captain).
- 1 Commissary (Captain).
- 2 Majors.
- 2 First Lieutenants. (Adjutant for one-half regiment.)
- 2 Second Lieutenants. (Quartermaster for one-half regiment.)
- 6 Captains.
- 6 Captains (second in command).
- 12 First Lieutenants.
- 12 Second Lieutenants.

This gives a total of forty-seven officers. The foregoing embraces practically the strength of a regiment as it now exists. The regiment, as today organized, loses one major, one first lieutenant and one second lieutenant. Multiplying this by fifteen gives us a total of 705 officers, or forty-five officers less than we have today.

Under the organization I have proposed the regimental officers would be as follows:

- 1 Colonel.
- 1 Lieutenant Colonel.
- 1 Adjutant (Captain).
- 1 Quartermaster (Captain).
- 1 Commissary (Captain).
- 3 Majors.
- 3 Squadron Adjutants. (First Lieutenants.)
- 3 Squadron Quartermasters. (Second Lieutenants).
- 11 Captains one for each troop.
- 11 First Lieutenants one for M. G. troop.
- 11 Second Lieutenants one for Headquarters troop.

A total of forty-seven officers. Legislation should provide for two First Lieutenants and one Second Lieutenant for each troop. This would increase the number of officers in the regiment to fifty-six.

A squadron of three troops leaves three troops, in each of the present regiments unprovided for. These troops should be consolidated into new regiments and five new regiments could thus be formed. On the basis of forty-seven officers to a regiment we would have, in twenty regiments, 940 officers. If the additional First Lieutenant to a troop were allowed we would have 1,120 officers.

In other words legislation to meet the proposed organization would provide for—

- 5 Additional Colonels.
- 5 Additional Lieutenant Colonels.
- 55 Additional Majors.
- 55 Additional Captains: 15 Adjutant Q. M. and Comsy.
- 20 M. G. Troop.
- 20 Headquarters Troop.

55 Additional First Lieutenants: 15 Sqdrn. Adjts.

20 M. G. Troop.

20 Hdqrs. Troop.

55 Additional Second Lieutenants: 15 Sqdrn. Q. M.

20 M. G. Troop.

20 Hdqrs. Troop.

And (if the additional first lieutenant for each troops were approved) 180 more first lieutenants; 370 more officers than we have today.

This, at first glance, looks like a promotion scheme. I can only state, in all sincerity that it is not. But if, in the pursuit of a more efficient organization, it is found necessary to increase the number of officers, I do not believe that the fact should operate to defeat it or militate against it.

ENLISTED MEN.

Leaving out of consideration extra strength authorized for certain designated troops, our enlisted strength today may be assumed at seventy-one men per troop—this for 180 troops amounts to 12,780 men. (I am not including staff and band.)

Under the plan proposed in the Cavalry Service Regulations the strength of the squadron (Reg.) may be assumed to be 142 men; this, for ninety squadrons, amounts to 12,780.

Under the organization I have proposed the strength of the troop may be assumed at 105 men; of the machine gun troop 60 men; of the headquarters troop 65 men; a total for a regiment of 1,070 men. For twenty regiments this would amount to 21,400 men. The percentage of increase is greater for enlisted men than for officers.

This is a big increase. But the time is ripe. The present agitation for a larger army offers ground for the hope that the next session of congress will be willing to favor an increase, provided only that the bulk of the arm in interest stands behind the movement.

In conclusion I trust that those in authority will not be compelled by circumstances to initiate legislation for reorganizing the cavalry before, at least, some definite conclusions of value may be deduced from the experiences of the European War.

BRITISH BLUE CROSS SOCIETY.

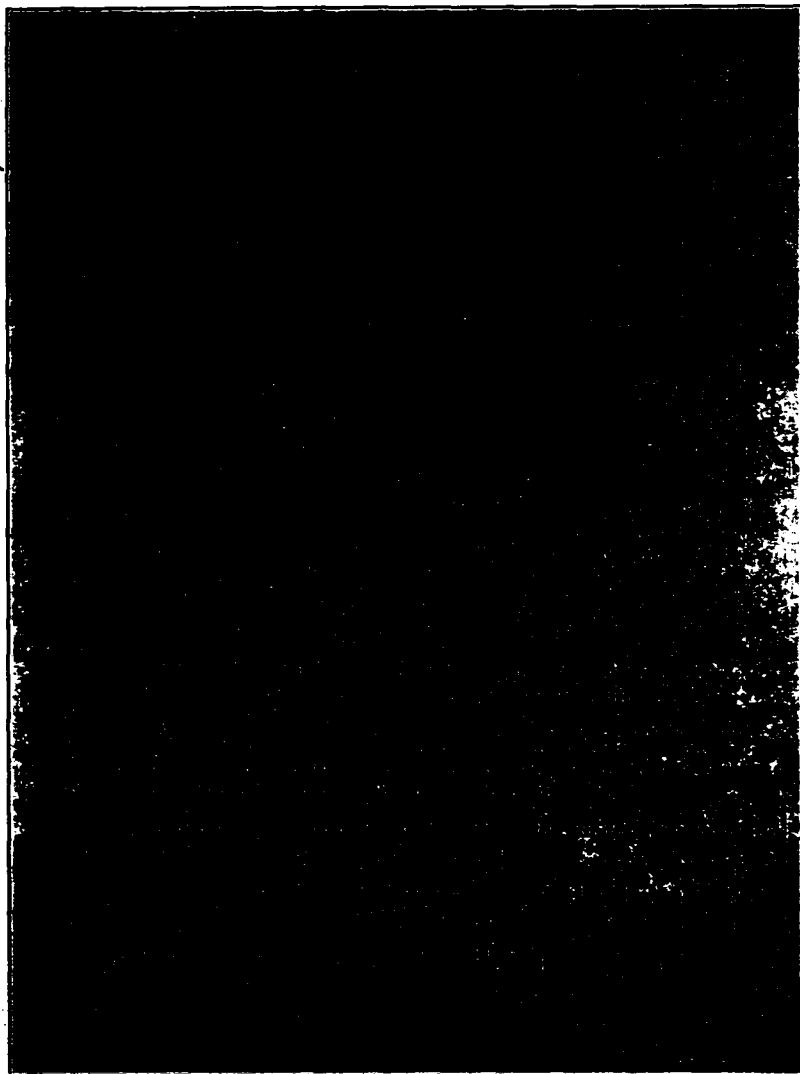
BY FIRST LIEUTENANT J. G. QUEKEMEYER, THIRTEENTH CAVALRY.

A RECENT development of the present war has been the official recognition by the French Government of the English Blue Cross Society. Its object is the aiding of injured horses in war time, and never before has such voluntary help been given during a war. An attempt was first made to establish such an organization during the Balkan War, but "Our Dumb Friends' League" of London (of which the Blue Cross is a branch organization) was unable to get it officially recognized. However, it did forward \$2,500 to the "*Societe Protectrice des Animaux*" at Constantinople to aid the organization in handling humanely the hundreds of wounded and starving animals, which were victims of the Balkan War.

The Blue Cross Society recognized from the start how ineffectual any of their efforts would be, unless they first had the official recognition of the Military Authorities. Consequently, the support of the British Government was requested, but as yet the War Office has given only such sanction as enables the Society to furnish hospital requisites for sick and wounded horses.

In France, Capt. Claremont, the Blue Cross representative, succeeded in arousing the active interest of the French Civil and Military authorities, and returned to England with full authority from the French Minister of War to immediately install eight base hospitals, for sick and wounded horses at the front. The French Minister of War in tendering the thanks of the French Government to the Blue Cross Society, also promised to accord every possible facility to their officials and staff in the relief of wounded and suffering horses.

The outfit for a base hospital (instruments and drugs) costs about \$750, and the Blue Cross Society has already re-

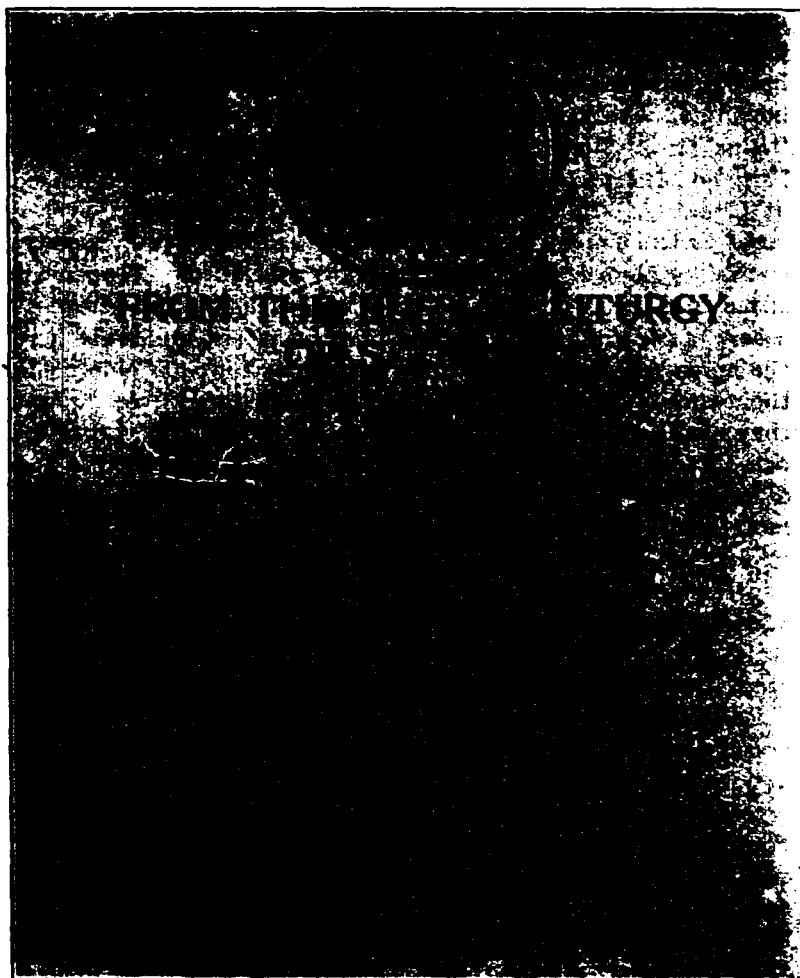


ceived several donations of this amount and are asking for more. They would be only too glad to associate the name of an individual donor with the equipment of each hospital.

The eight base hospitals, above referred to, have already been established, just in the rear of the fighting line. (It is not permitted to disclose their situation.) The French authorities have undertaken to collect and deliver injured horses at these hospitals, which will be entirely under the control of the "Blue Cross Fund Committee." In addition to the eight base hospitals, a large convalescent station has been organized at Chantilly. The French Government have turned over a large establishment at this place to the Blue Cross Society, consisting of over 200 large box stalls and all of the open air space that could possibly be required. This station serves as a sort of clearing house for the base hospitals, and from here the horses are returned to duty as soon as they are able to do their work. The Society estimates that with the present plant they are in a position to handle in emergencies, 2,000 horses at one time. A large number of the horses turned over to the different bases necessarily have to be shot. These are the more seriously wounded ones which are unable to make the trip to the convalescent base.

Naturally, only a very limited number of animals can be accommodated at one time at the base hospitals. All of the stations are equipped with "humane killers," which are always used, and much unnecessary suffering is thus done away with. These weapons, employed almost entirely in this country, are noiseless, kill instantaneously, and can be purchased for about nine dollars.

The Blue Cross Society has had considerable difficulty in obtaining a sufficient staff of skilled veterinarians, as nearly every veterinary surgeon in the United Kingdom is now on duty with the Army veterinary corps. In France, peasants are being employed to do the "handy" work, and it has been found that they are very useful in handling and caring for the horses. Some of the difficulties of the work will be realized when one considers that even the forage, in addition to blankets, drugs, instruments, trolley cars, and all appliances, have to be sent over from England. Then too, it must be remembered



that this Society has not been recognized internationally and its workers have none of the protection accorded the Red Cross workers by the Geneva Convention. A large garage in Paris is now being used as a warehouse, from which supplies are drawn as needed.

In addition to the work in France, the Blue Cross has also done yeoman's service in the British Army.

It seems that in spite of the excellent arrangements and splendid work carried on by the British Army Veterinary Corps, and the New Auxiliary Army Veterinary Corps, much preventable suffering and unnecessary wastage in horses has occurred, and that these organizations have been unable to thoroughly cope with the situation brought about by such a great and sudden strain on the resources of the Government.

For instance in many cases, the War Department has been unable to supply promptly even the most urgently needed veterinary supplies, and into this breach, the Blue Cross has entered. Numerous requests have been received by the Society from officers in command of organizations, asking for supplies and stating that it was impossible to get them through the War Office. Several of these letters mentioned the fact that the officers themselves, had already spent, out of their own pockets, all that they could afford, and that they had drawn every cent permissible from the regimental fund. In every case, these supplies have been furnished by the Society, and I have read several letters from officers, expressing the greatest appreciation of the help given by it.

The following list will give an idea of some of the things furnished:—

Horse ambulances.	Felt swabs.
Humane killers.	Vaseline.
Rolls of cotton wool.	Alum.
Interfering boots.	Olive oil.
Sponges.	Methylated spirit.
Wither pads.	Chlorodyne.
Bandages.	Disinfectants.
Numnahs.	Magnesia sulphate.
Aniseed.	Iodine.
Liniments.	Etc.



Appeals are being made in circulars issued by the Blue Cross Committee for gifts of bandages, blankets, swabs, boots, medicines, etc., and those who are not able to contribute themselves are urged to help by organizing the collection of money for the fund.

The following are some of the schemes for raising money:—

(a) *Window exhibitions.* A number of these have already been held by permission of several business firms. Ladies and gentlemen having influence with the proprietors of similar establishments in London or the provinces are requested to ask them for the use of a window, and when successful, to communicate with the Secretary, giving particulars as to suggested date, size of window, and duration of exhibition.

(b) *Blue Cross Days.* The organization of Blue Cross Days in various neighborhoods has been found most useful. Small bands of helpers collect money, sell badges and distribute literature. When drawing-room or other meetings can be organized, by local workers, speakers will be sent from Headquarters.

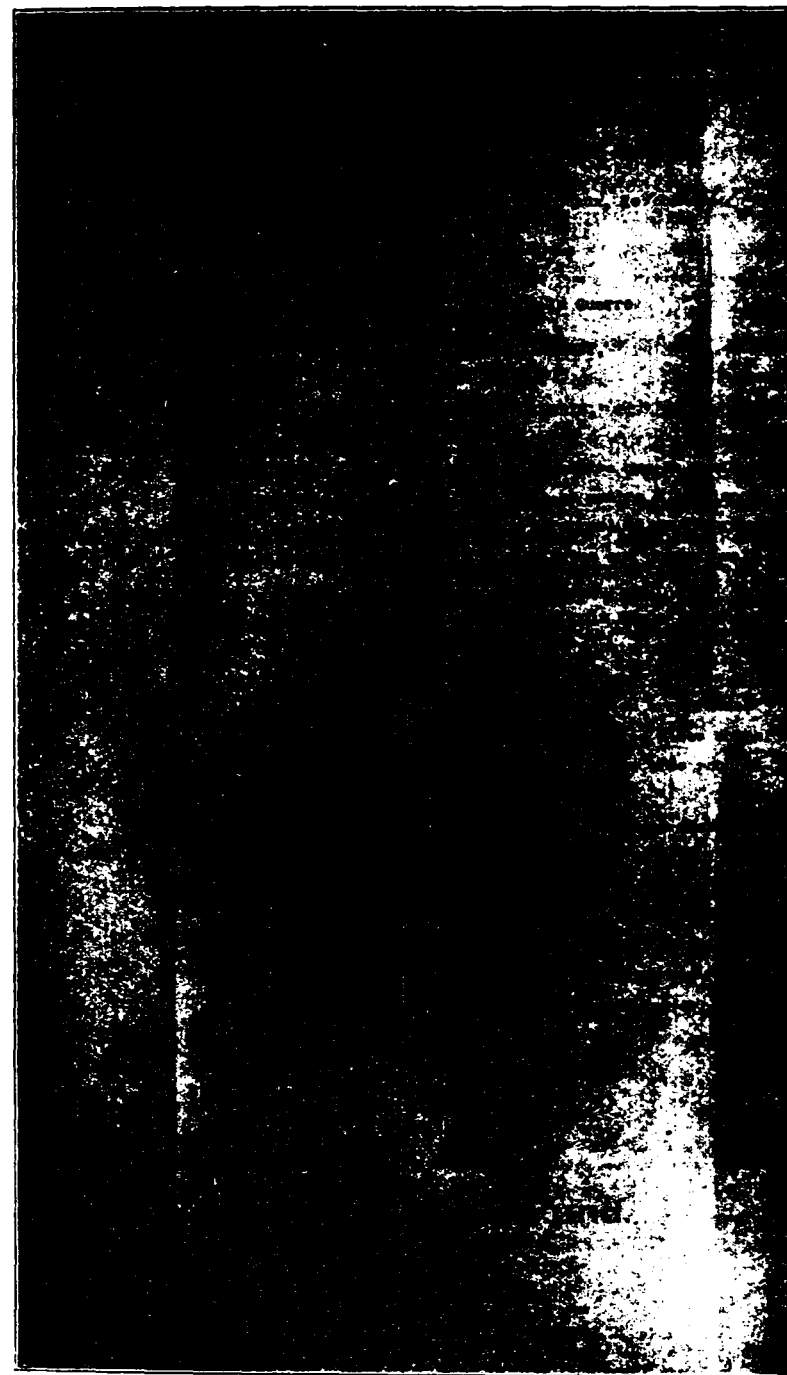
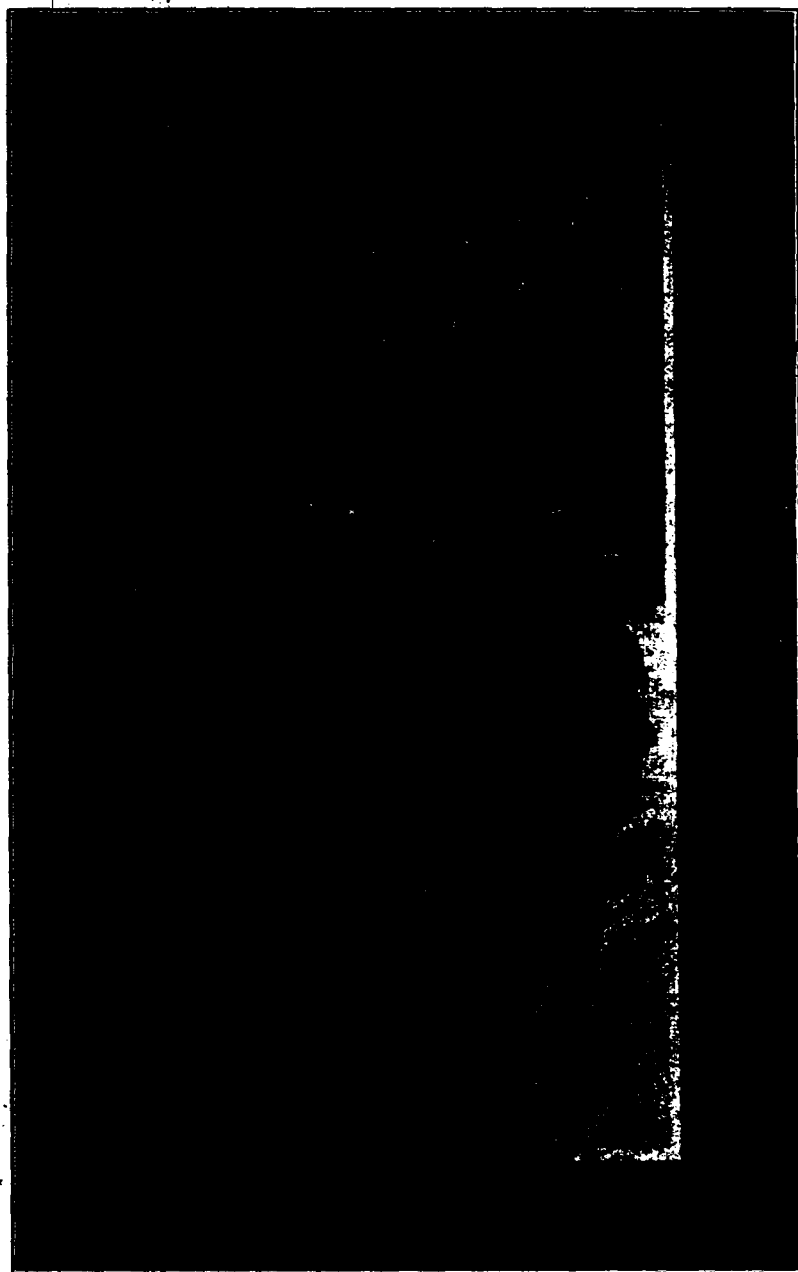
(c) *Collecting Boxes.* These are supplied to approved persons, and are found particularly useful in collecting small sums, by placing them on shop counters, etc.

(d) *Collecting Cards.* These are supplied and used for collecting sums of one shilling and upwards.

(e) *Blue Cross Badges.* These charming badges form an attractive brooch and a good advertisement of the Blue Cross. A dozen may be purchased for 12 shillings and disposed of to friends.

(f) *Blue Cross Stamps.* Sold at one shilling a dozen, they are strikingly designed stamps, and provide an excellent medium for children and young people to help. Children can retail them at a penny a stamp and purchase fresh supplies from time to time, thus augmenting the fund.

The President of the Blue Cross Society, is Lady Smith-Dorrien and the Secretary is Mr. Arthur J. Coke. Contributions can be sent addressed to him at the Headquarters of the Society, 58, Victoria St., Westminster, London.



Headquarters have also been established at the Elysée Hotel, Paris, with Capt. Claremount, as the Organizing Director in France, and Mr. J. L. Middleton as the Hon. Secretary.

Notwithstanding the good feeling that exists between most soldiers and their mounts, war necessarily inflicts many hardships and much horrible suffering on our faithful friends. Human life, is, and should be, the first consideration, and if it comes to a choice between saving the life of a horse or that of a man, the man must be saved and the horse left. At the same time, horses have a special claim to all the protection against suffering in war that can be provided, and it is gratifying to know that such efficient efforts are being made to reduce these sufferings as much as possible. The work of the Blue Cross Society is one that naturally appeals to every lover of the horse, as well as to all those who recognize the great value of horses in all the various operations of war.

COLOR INHERITANCE IN THE HORSE.*

By E. N. WENTWORTH, AMES, IOWA, U. S. A.

WHILE laboratory animals have yielded very nicely to the study of their inheritance of color, the horse still remains a mystery in many of the phases of coat transmission. Hurst and Bunsow have recognized chestnut with the sorrel and liver shades as a true recessive and Hurst has shown black to be epistatic to this reddish pigment. Bays and browns have been with difficulty separated but have been considered as epistatic to both colors mentioned, while grays and roans seem dominant to the entire series of color. One difficulty which seems to have beset all investigators up to the present time, with the exception of Dr. Walther, is the tendency to arrange all colors as an epistatic and hypostatic series, expecting them, then, to conform to the simple laws of presence and absence. That this attempt has been a real stumbling block the writer hopes to show, by means of his arrangement of factors in a manner slightly similar to Walther's and Sturtevant's methods but differing in the factors themselves.

THE PIGMENTS IN THE EQUINE COAT.

A microscopic examination and simple chemical tests reveal only two pigments in the coat of the ordinary horse. These seem to correspond to the red or yellow and the black pigments found in rodents. There is quite evidently a lack of chocolate or else such a close linkage of the brown and black pigments that they are not readily separable.

*Dr. Wentworth is a professor in the Department of Animal Industry, Kansas State Agricultural College, and recently chaperoned a large party of students inspecting and studying remounts at the Mounted Service School, Fort Riley. As a result of his interest in the work of the mounted service, he has kindly granted permission to reprint in the JOURNAL, this interesting study of color inheritance prepared by him at the Iowa State College of Agriculture. This article appeared originally in the *Zeitschrift für Induktive Abstammungs-Vererbungslehre*. [EDITOR.]

Under both the low and high power red pigment granules may be discerned in the sorrel, chestnut, bay or red roan hairs. The granules are sharply distinct and typical in form but there seems also to be a diffuse red, slightly lighter in tinge, distributed quite evenly throughout the cortical layer. This is entirely separate from the effects of spherical aberration, and is quite evidently a basal ground pigment found in all but white or albino hairs.

Black pigment granules rather larger, coarser and more frequently clustered appear in the black horse. They are so numerous and typical that they quite obscure the red ground pigment.

Quantitative differences appear in the amount of pigment in the hair, intense and dilute conditions being readily recognizable. The effects of age and sun are quite noticeable also, fading usually being produced, as in some cases the black hair loses its black pigment almost entirely and gives the rusty black so common in Percherons and general work horses.

THE INHERITANCE OF THE RED PIGMENT.

Hurst and Bunsow have shown that chestnut breeds true. The figures in the table, taken from various sources*, show that out of 1610 matings all but sixteen are chestnut. This is a deviation from a pure recessive of one per cent., but since it has been shown that the average stud book contains two per cent. of errors, this one per cent. may be readily credited to that. It will be noticed that the variates are six bays and ten blacks. Bay is the common color of a colt at birth and a rusty black is nearly as frequent. Since many colts are recorded at from one to three months of age and since the natal coat is not shed usually until the foal is twelve weeks old errors here are not unexpected.

The black pigment seems more complicated in nature. Four hundred and six individuals show it to be forty-one without when black is mated to black and two hundred bear it to one hundred and eight without when black is mated to chest-

*The Government Gray Draft Horse Experiment at Ames, Pedigree and study of actual animals by the writer, Sturtevant's, Wilson's and Anderson's papers principally, with isolated cases from the agricultural press.

nut. Since most of the individuals in the black by black matings are from the Percheron breed in which there are a large number of homozygous blacks the small ratio of chestnut segregates is not surprising. The fifteen bays from the black by black mating are unexpected. Eleven of these come from Sturtevant's records. He offers the possibility of error by explaining it on the ground of error in the natal coat, on the difficulty of distinguishing dark browns from blacks in the parents and by other means. These seem sufficient to the writer to permit disregarding them since he found none in his studies on actual individuals, (i. e. some 100 in number). Sturtevant and the other investigators are disturbed by the high per cent. of bays from the black by chestnut mating, but this is probably due to the idea of bay held by them. It fits the writer's hypothesis perfectly. The factors so far considered may be lettered as Sturtevant has done, "c" for the chestnut ground pigment and "h" for the black pigment, (Hurst's factor.)

BAYS AND BROWNS.

Bay and brown are distinguished with difficulty by each of the investigators and by most practical men. On this account the writer has made no attempt to separate them but has lumped such records together.

Bay is a restriction factor, which will be called "b," that limits the development of the black pigment to the eye, mane, tail, lower limbs and the extremities in general.* It can operate only in the presence of factor "h," black pigment. Brown probably differs from bay in having the dapple pattern combined with the restriction factor "b." This permits some black to appear where the dapples are located and gives a darker appearance. This idea would suit the microscopic as well as visual evidence since brown differs from bay in the presence of black hairs. Most writers have considered brown dominant to bay, a condition which would suit the above theory since the dappling pattern is apparently dominant.

*Black pigment is also present in the skin of the bay horse. It furnishes one basis for the superficial distinction of bay and chestnut coats, claimed possible by some.

Bay to bay gives 5,273 bay, 274 black and 672 chestnut. This varies quite a little from the expected 9:3:4 ratio. However the bays are very largely, (all but about 500), from the American Saddle Horse and Standard Bred records, and bay has been the dominating color among them for seventy-five years. The deficiency in blacks may be accounted for by their lack of popularity.* Bay to black and to chestnut gives qualitatively similar results as would be expected, but there is a lower percentage of bays and a higher percentage of blacks in one case and chestnuts in the other than would be expected.

The high per cent. of bays in the offspring of blacks to chestnuts has been non-conformable to previous theories. The restriction factor "b" does not appear somatically except in the presence of "h" black pigment. Theoretically three-fourths of the chestnuts ought to carry this restriction factor, so that the mating of these to blacks should always supply bays. From this standpoint there is a deficiency rather than an excess of bays.

THE DUNS.

Duns are little known. Their numbers are few and they may be grouped into at least three kinds. The ordinary buckskin with black extremities is probably a dilute bay, the yellowish dun a dilute chestnut and the cream colored with light mane and tail, a dilute sorrel with the yellow extremities, factor "m."

Since the records do not separate them they will not be dealt with further. Factor "i," the dilution factor is probably epistatic to all but gray and roan.

THE GRAYS.

Gray is recognized as a separate factor by all writers. There seems some question as to whether it can operate in the absence of "h," black pigment, but Sturtevant presents evidence to show that it does. It is dominant, to all factors previously named, dappling "d" and restriction "b" excepted, and varies from a deep iron gray in young stock to the white or flea-bitten gray of the older animal.

*This would prevent recording of black animals.

It is a simple factor since animals heterozygous for it produce fifty per cent. grays and fifty per cent. other colors. Dr. L. J. Cole, of the University of Wisconsin, has told the writer in private communication that one of his students has totalled the offspring of grays in the Clydesdale studbook and has obtained exactly fifty per cent. of each of grays and other colors. The Clydesdale breeders have objected to grays and have always bred their gray mares to other stock in order to reduce the chances of its appearance. Gray stallions since 1831 have nearly all been castrated. This has resulted in all the grays being heterozygous.

Sturtevant shows 400 gray to 428 not gray for the heterozygous condition in one sex while he exhibits forty-five gray to fifteen not gray where both parents are heterozygous.

Gray is characterized by an intermingling of pigmented with non-pigmented hairs, usually associated with dappling. It seems possible that gray must be a combination of dappling and the roan factor although the above evidence indicates that it is a unit in action.

THE ROAN PATTERN.

Roan seems dominant to all the other colors and is apparently a pattern entirely independent of the kind of pigment. Two kinds of roans exist visually, strawberry or red roan, and blue roan. These probably correspond to bays and blacks plus the roan pattern. It seems possible that there also exists a chestnut roan, in fact they are apparently quite common, for roans with red pigmented manes and tails instead of black are seen frequently. Such a roan would probably be the type produced by the mating of blue roan to blue roan shown in the table. If the black factor were heterozygous in both sexes, the chestnut roan would result.

Roan differs from gray in lacking the dappling common to gray and in possessing quantitatively a much larger number of pigmented hairs. It has seemed to the writer that gray may be a combination of the roan, dappling and dilution factors coupled together in some way, but since from the present evidence that would necessitate considering gray epistatic to

roan and since this latter is manifestly untrue it is best to consider them as separate factors.

Roan is epistatic to the entire series of factors as may be shown from the three following records. One a roan Belgian stallion owned at a small town in Iowa (the name and address are lost) sired 254 colts of which 230 were red roan and 24 blue roan, these colts coming from all colors of mares. The second a roan Belgian stallion which stood for two years in northwest Warren County, Iowa, sired 112 red roans, 7 blue roans and 6 chesnuts, from mares of various coats. The third also a Belgian owned in Marshall County, Ill., sired about half roan colts and the other half grays, blacks, bays, browns, and sorrels. His owner states that his sire was blue roan, his dam was bay, his second dam was chesnut and his dam's sire brown.*

SPOTTING.

Spotting varies in type but may receive at least two classifications. The white stockings on the legs and blazed face typical of the English breeds, Shire, Clydesdale, Hackney, Thoroughbred and allied breeds, seems to be inherited as a distinct kind of spotting although it fluctuates very markedly in amount of white. The "blaze" may become as small as the typical star in the forehead or may cover more than half the head. The stockings may extend well up to the elbow or stifle or may be restricted to the foot.

Dr. Walther recognizes another type of spotting, Schabrackenscheckung or saddle cloth marking and its recessive absence of same. He finds it also inherited as a distinct unit although fluctuating in its limits. It is a spreading of white over the back, sides and croup, and down onto the legs. It is dominant and may appear with any color so far discussed. It is apparently what the horse breeder calls piebald or skewbald or what the average person calls a "calico" horse.

Albinos are uncommon, but extreme spotting with blue eyes (glass eyes) are frequently seen.

*Since the above records were prepared an instance has been discovered of a roan Belgian stallion in southeast Story County, Iowa, that has sired 256 red roan colts to the exclusion of other colors.

THE REDUCTION OF PIGMENT IN MANE AND TAIL.

Yellow manes and tails on sorrels and cream colored extremities on duns are very common. They are apparently recessive since one chesnut mare Bessie at the Iowa State College has produced eight chesnut colts, six with manes the same color as the body, two with the yellow mane. Another chesnut mare known as the "half-hackney" bred qualitatively the same producing two colts of the first class and one of the second. Four chesnut mares with yellow mane mated to three different chesnut stallions with yellow manes produced thirteen foals with yellow manes. The summary of data on this is appended.

	Chesnut stallions without yellow manes	Chesnut stallions with yellow manes
Chesnut mares with yellow manes.....	25 without 6 with	13 with
Chesnut mares without yellow manes...	17 without 2 with	19 without 3 with

This shows it apparently to be recessive. A cream colored mare with light mane and tail produced three dun colts with black extremities when crossed to a bay. This would fit the above hypothesis although it throws no light on it.

THE DILUTION FACTOR.

The dilution factor "i" is apparently dominant. Mouse is a dilute form of black and three matings of mouse to black have given two mouse colored and one black. The mouse colored parent of the black was produced by a black stallion to a dun mare so was known to be heterozygous. The table shows that duns mated to other colors have produced 13 duns to 19 other colors, near enough to expectation in such small numbers to account for dilution being a dominant factor. It must be remembered that duns are not popular, in America at least, and hence there will probably be a deficiency. Also because of this most duns will be heterozygous.

SUMMARY.

The factors so far discussed will account for the following colors, those qualitatively alike being grouped together:

Sorrel-Chesnut Liver.

Black-Mouse.

Bay-Brown-Bloodbay-Mahogany bay-Seal Brown.

Dun-Buckskin-Cream-Isabelline.

Gray-White.

Blue roan.

Roan-Strawberry Roan-Red Roan.

Piebald-Skewbald-Blaze and white stockings.

Dappling.

The factors themselves follow with the tentative composition for the different colors:

Factor "c" equals Red or yellow basic pigment.

Factor "h" equals Black.

Factor "b" equals Restriction factor producing bay in presence of "h."

Factor "g" equals Factor for gray pattern.

Factor "r" equals Factor for roan pattern.

Factor "d" equals Factor for dappling pattern.

Factor "s" equals Star or blaze in forehead and white on legs.

Factor "p" equals Piebald and skewbald markings, Dr. Walther' Schabrackenscheckung.

Factor "m" equals light creamy yellow mane and tail.

Factor "i" equals dilution factor dominant to "i," intense.

Chesnut equals "c," may have "b & m" in some cases.

Black equals "c h," may have "d" in some cases.

Mouse equals "c h i," may have "d" in some cases.

Dun equals "c i, c b i" or "c m i," according to kind.

Bay equals "c h b."

Brown equals "c, h, b, d."

Gray equals commonly "c, h, g, d," maybe "c, g, d."

Blue roan equals "c, h, r."

Red roan equals "c, r" or "c, h, b, r," latter commonest.

	Red roan	Blue roan	Gray	Dun	Bay	Black	Chestnut
Red roan X red roan.....	45	—	—	—	5	—	—
Red roan X blue roan.....	33	11	2	—	2	—	—
Red roan X gray.....	37	7	27	—	4	2	2
Red roan X bay.....	93	6	27	—	101	7	10
Red roan X black.....	14	4	1	—	5	11	1
Red roan X chestnut.....	18	2	4	—	12	2	4
Blue roan X blue roan.....	1	3	1	—	—	—	—
Blue roan X gray.....	—	—	1	—	2	—	—
Blue roan X bay.....	—	1	—	—	8	3	1
Blue roan X black.....	—	—	—	—	—	1	—
Blue roan X chestnut.....	—	1	—	—	1	—	—
Gray X gray.....	—	—	66	—	13	12	—
Gray X dun.....	—	—	7	5	2	—	—
Gray X bay.....	—	1?	50	—	54	6	9
Gray X black.....	—	—	18	5	14	20	5
Gray X chestnut.....	—	—	14	—	7	2	10
Dun X dun.....	—	—	—	2	1	—	1
Dun X bay.....	1?	—	—	4	4	1	1
Dun X black.....	—	—	—	3	1	1	1
Dun X chestnut.....	—	—	—	1	1	—	—
Bay X bay.....	—	—	—	—	5723	274	672
Bay X black.....	—	—	—	—	1218	476	130
Bay X chestnut.....	—	—	—	—	826	70	497
Black X black.....	—	—	—	—	157	391	41
Black X chestnut.....	—	—	—	—	135	65	108
Chestnut X chestnut.....	—	—	—	—	67	107	1594

GLOSSARY FOR THE NON-TECHNICAL READER.

Allelomorph: One of a pair of contrasted characters which are alternative to each other in inheritance, (as for example, black and chestnut form an allelomorph pair.)

Allelomorphism: A relationship between two characters such that the hereditary determiners of both do not enter the same reproductive cell but are separated into separate reproductive cells during the maturation and ripening.

Alternative Inheritance: A distribution of contrasting parental or ancestral characters among offsprings or descendants such that the individuals exhibit one or the other of the characters in question; combinations or blends or these characters being absent or exceptional.

Coupling or Linkage: Such a relation between the factors for two characters that they have a more or less marked tendency to enter into the same reproductive cell when the individual is heterozygous for both of the factors in question.

Dominance: In crossing individuals with alternative characters it sometimes happens that one character will show to the exclusion of the character possessed by the other individual. This is called dominance. In the absence of dominance the characters blend or may present new conditions found in neither parent. One lacking dominance is called a recessive.

Factor: An independently heritable element within the germ cell which makes possible the development of any particular character in the individual resulting from that germ cell.

Heterozygote: An individual in which a given character or factor has been received from only one of the two germ cells which form it. The germ cells produced by such an individual are typically of two kinds, half of them containing the hereditary factor in question, the other half lacking it. Consequently the offspring of heterozygotes contain a mixture of individuals.

Homozygote: An individual in which any given factor is doubly present due to receiving it from both reproductive cells from which the individual arose. Homozygotes breed true.

Epistatic and Hypostatic: Refers to a series of characters such as colors in horses in which one character is dominant to a number of others, as for example, in the horse bay or brown is recessive, or hypostatic, to gray, but is epistatic or dominant to black or chestnut.

Segregate: The tendency of the hereditary factors to separate from each other and to become distributed independently of each other among the reproductive cells, according to the law of chance, either before or at the time of the formation of the reproductive cells.

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SEATS AND HANDS.

BY VETERINARIAN COLEMAN NOCKOLDS, FIRST CAVALRY.

ONE hears so much said of certain types of saddles, proper kinds of bits and bridles, to say nothing of the correct style of boots, that are worn by people that ride horses, that the man who owns these things must, at least to the unwary, be a finished horseman and a crack rider. While such is by no means the case, at the same time the one who is fortunate enough to be the possessor of the best style of equipments, certainly has the chance to acquire, under better conditions and more quickly, the seat with which comes the more perfect hands. This should be the desire of all riders rather than to be contented, ignorantly or otherwise, with the various trappings that are so often used and that go by the name of equipments, and which they claim as being "an idea of my own, etc."

The word "aids," used by the best writers on the subject of horse training, seems to have a vague meaning, especially to the unfinished horseman. Really the only aid that can be given to a horse by the man on his back is by changing the balance of the body from the hips up, thus altering the position of the weight carried by the horse and helping the animal by the movements of the body. This is very important under certain conditions.

The aids mentioned in what follows are to be understood as helps to the rider when he desires to transmit certain ideas to his mount.

Whether one can stick on almost any kind of a horse at the walk, trot and gallop, or not, it is an advantage to obtain the use of a manège and if possible of a competent instructor. It is of vital importance that one should, at first, use a quiet, gentle and well broken horse.

To become a graceful rider the seat must be natural. Some men are born with a natural adaptation for equitation but these are in the minority. A large number can attain it, but a few, even after having ridden for years, are complete failures as horsemen.

The seat is only obtained by long practice and a natural ability, and then only by those who have or gain enough confidence. The seat that is the most useful and graceful for riding, either for sport or pleasure, is the one in which the rider literally sits down in the saddle. Perhaps the quickest and best way to acquire this seat by one who has ridden and is sure of himself, is a course of riding either bareback, or without stirrups or reins, the object being to place one's self completely in the saddle without the help of reins or stirrups. In this way a person obtains the free use of his hands and legs for the time when they will be required as aids. The hands in this sense reach from the front of the elbows to the fingers and the legs from about four inches below the knee to the heel.

The part of the body involved in the seat is the whole trunk, the legs and hands helping only by their weight and mobility. A great deal of the stability of the seat depends upon balance.

The weight of the body is carried mostly on the saddle and rests on the muscles covering the haunch bones, those muscles which are inside the inner and inclined towards the back of the thigh, from the lower part of the upper third to about four inches below the knee. A small part of the weight is carried by the end of the spine, under certain conditions.

The weight upon the stirrups, except when riding very loosely at rest, should be no more than is necessary to keep them in position. Little or no inconvenience should be experienced by losing one or both stirrups.

Natural posting is accomplished from the seat; the stirrups should not be used for this except to retain the balance.

During the first few months of acquiring a seat, the feet should be in close contact with the inner side of the stirrup, not the inner tread alone, but the side and with the inside of the foot near the joint of the large toe. Although this is at first

a troublesome habit to acquire, yet it is important as it crowds the sides of the seat into such a position that it soon becomes strong and firm. Later, the feet should occupy a position in the center of the stirrups.

Riding with the outside of the foot against the outside of the stirrup, which is a common fault, tends in every way to weaken the seat as it crowds the inside of the thighs away from the saddle. Also, in case of an accident, such as stumbling or the breaking of a stirrup leather by the weight thrown upon it, it is dangerous as; due to the position of the legs, the support of the thigh is lacking. The result is usually a fall.

Included in the term "Sit down" is not only the parts one sits on when in a chair, but all the muscles of the trunk are implicated. The back must be non-rigid, almost to a slouch; the small of the back should, if anything, be slightly bent backward; the back and shoulders should give the impression of bearing down upon and around those parts next to the horse; the shoulders should be carried squarely, the chest natural, head erect and the eyes to the front. The body must be upright, leaning neither to the rear or to the front, but strictly non-rigid. The arms should hang naturally from the shoulders and close to the sides. The hands should be held low, in the center, and the further from the mouth of the horse the better.

Rising to the trot, in the natural seat, is due to, and comes from the motion of the horse. At first, there seems to be a double movement, at each return to the saddle after rising, but this is soon overcome with practice.

The upper and inner third of the legs from the knees down are in constant contact with the horse, but from about four inches below the knee to the heels, they should hang free and naturally.

The legs are used only as aids to the rider, helping him to convey his wishes to his mount; the toes should be slightly turned out and the heels down. This position not only enables the rider to sit close but holds his spurs in position to be correctly used, not by sudden kicks as is often seen when the foot is parallel to the length of the animal or the heels are turned out.

If the horse plays up, or when riding under difficulties, the seat can be made more firm by placing the feet home in the stirrups and by allowing the body to become as non-rigid as possible. Even then, with the proper seat, it will be found that, if anything, there is less weight in the stirrups, and there is not as much chance of losing them as when the feet are not right home.

With the natural seat, the ideal hand will come as a matter of course as well as the use of the legs, and it will be found that the aids are as independent for use as they are in the sports where only the mind and body of the man is concerned. The man and horse should constitute one mass, both to be governed by the brain of the man. These aids of movement, direction and other desires of which the whole is capable, are the hands, the legs and the body of the man. These can be used more energetically when necessary with the help of certain accessories if the form of bits, spurs and the whip.

With the legs and hands free, the kind of mouth that is made is a forgone conclusion. It has been said that there is a key to every mouth. The mouth that cannot be correctly made with the ordinary snaffle, or with it and the curb combined by proper hands is the exception. There are horses that can never have a decent mouth, just as there are men that never will become even fair horsemen. These are accounted for because of their faulty conformation, either of their body or their brain, or both.

Most men have their own ideas of horses that suit them and many have a certain bit that they bank on, but the personal equation of men on the question of horse lore is intrinsic.

Patience and pluck are necessary factors in carrying out the scheme of obtaining the natural seat. Handle the reins as if they were not strong enough to stand a hard pull, or would break if jerked. Believe that the mouth can be injured if harshly pulled; in fact, never pull at all except to correct a fault. Hold the fingers next to the reins apart enough so that they can easily slip through. When necessary to bring pressure to bear, close the fingers and, if the occasion warrants it, close the whole hand firmly. Never hold the reins loose enough to

lose the feel of the mouth, nor tight enough to make the mount fidgety. Use the voice to calm or chide the horse and as an aid.

All occurrences between the rider and his mount must be firm and to the finish. Use the aids singly or together with constancy but without confusion. Make up your mind that you can do a thing as you would if the horse was not under you and do it, as the confidence of your mount is inspired in this manner. Be careful of punishments, if angry leave it until some other time.

Just as certain movements, such as the demi-arrets and the vibrations, are the last resort of the hands, so is the spur the last resort of the legs, in ordinary riding.

Be careful of the whip. Each stroke given in anger lessens the chances of the horse and rider becoming one.



FIELD OFFICERS' COURSES AT THE MOUNTED SERVICE SCHOOL AND ABROAD.*

Memorandum:

1. There appears to be a wide-spread belief in the service that the Field Officers' Course at the Mounted Service School is an innovation not existing in other armies; and that it was originally initiated for the primary purpose of eliminating field officers from active service.

2. The Commandant therefore suggests that graduates of Saumur and Hanover prepare a descriptive article on the Field Officers' Course at the respective schools, describing the character of the course, its purposes, and results accomplished.

3. Sometime during the Field Officers' Course these two papers will either be read or form the basis of informal talks by the respective writers.

4. The Commandant would, however, like to have the two written manuscripts placed in his hands for possible publication, or, if desirable, to give wider publicity to the purposes of the Field Officers' Course, both here and abroad.

INNIS P. SWIFT,
1st Lieutenant, 2d Cavalry,
Secretary.

FIELD OFFICERS' COURSE AT SAUMUR.†

Lieutenant Colonels and Majors about to be promoted are sent to Saumur for a three months' course in equitation, lectures on hippology and horseshoeing, art of war, map prob-

*This memorandum and the two following reports were furnished by the Commandant of the Mounted Service School.—*Editor.*

†Report made to the Commandant Mounted Service School, Fort Riley, Kansas.

FIELD OFFICERS' COURSES.

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lems and staff rides. Mounted work, about four hours per day. The class numbers about thirty.

In the French Army they call this course "a rejuvenation."

In the spring of 1912, when a student officer at Saumur I saw the arrival of the field officers' class, and was pleased to note that in physique, age, rotundity, etc., they were just like our own field officers. There was a great air of gaiety among them. They went about the place as I imagine our older officers would who might for some reason revisit West Point. They had for their instructor in equitation the *Écuyer en Chef*, Lieut. Col. Blacque-Bellair, and I noticed with still more pleasure that they *would not* be serious about their riding, but laughed and jested and called out to each other when riding across country in great good humor at whatever happened.

They did not ride *too well*. Some of their seats were a little old fashioned, for it had been a long time since, as young lieutenants they had graduated, and much progress had been made and many improvements and changes had occurred since their day and time at Saumur. But they rode boldly and confidently and seemed to enjoy it.

The youngsters in my class regarded their antics affectionately and our instructor always pulled out to give them the right of way, and paused to permit us to see them go by. It was a fine sight to me, and I think inspiring to every one, to see the exhibition they made of health well maintained and pride in being "still fit" in the saddle.

My thoughts were that many of our own field officers not only could, but gladly would do likewise, with their own comrades, on such good horses, and with a little well conducted practice. And it was my very great pleasure to be for a little while the instructor for a class of field officers at Fort Riley in the fall of 1912, of about the same age, physique, rotundity, etc., as those field officers at Saumur, and who, at the conclusion of their course under Captain Henry, rode, in my opinion, just as well and just as gaily.

I believe the course for field officers at the Mounted Service School is in fact "a rejuvenation," mentally as well as

physically. For field officers, who have been somewhat inclined to stand aside and say "I am too old—that is for you youngsters," and who dwell lovingly upon the old days on the plains and deserts when they were "days and days in the saddle" and did "marvels," find to their intense satisfaction that their youth has *not* wholly fled and that they *are* after all still capable of doing things on horseback far beyond their own opinions.

I believe that every field officer leaves the Mounted Service School not only with an understanding of its methods and fit to guide and control the work of its young graduates, but with soft legged boots, spurs, and riding whip in hand, feeling himself reenlisted, so to speak, for a much longer period as a mounted officer.

It is the dearest hope of this school to be able to offer for sale to such field officers a safe and sure jumper, a sure-footed, lion hearted thoroughbred horse that will carry them over any country at any desired speed at the head of the officers and men of their regiments.

H. R. RICHMOND,
Captain 13th Cavalry,
Senior Instructor in Equitation.

FIELD OFFICERS' COURSE AT THE MILITARY RIDING SCHOOL AT HANOVER GERMANY.*

The course is six weeks, from the middle of June until the end of July. This time is chosen, principally for three reasons: (1) The rye crop is then harvested permitting cross country rides and drag hunts without making the expense of damages to property too great. These damages are paid by the school out of funds allotted for that purpose. (2) The weather at this season is delightful. (3) The regular officers' classes by this time have been under nine months instruction and show more or less progress and finish in their work.

*Report made to the Commandant of the Mounted Service School, Fort Riley, Kansas.

In Germany, a cavalry regiment is organized on the basis of five escadrons (each of 150 men), which is the smallest administrative unit. These escadrons are commanded by captain (Rittmeister) or by junior majors. Usually four escadrons commanded by captains and one by a major. The regiment is commanded by a lieutenant colonel or a colonel. More often the former than the latter, who is specially designated in orders as the "Regiment's Kommandar." The second in command in each regiment is a senior major, called a "Stabs Offizier" meaning Staff Officer. He is the regimental commander's assistant, corresponding more or less to our lieutenant colonels, although he also performs some of the higher and important duties which our regimental commanders usually delegate to the adjutant. The duties of this senior major are very clearly defined and are very active. He is not a fifth wheel by any means. It is from these senior majors that the details to the field officers' course are made. One is detailed each year from each cavalry brigade. (Two regiments of cavalry commanded by a colonel or a general officer.) This detail is usually made shortly before the officer is due for promotion, that is just prior to the year in which the officer is to attain regimental command. It is the most crucial period in an officer's career, for many are retired to the inactive list in going around this "Major's Corner" as it is called, which determines an officer's ability to command a regiment as judged by his efficiency record and the recommendations of superior officers under whose observation the officer has been kept.

In 1912 the number of senior majors detailed was twenty-five, one from each cavalry brigade. Due to increases in the army voted in the past two years, this number now is from thirty to thirty-five. Their ages vary from forty-four to forty-eight years. Every one of these field officers has graduated from the school as a lieutenant, say fifteen or eighteen years previous.

As with us, the field officers course is a special course of anxiety to these officers. They know that it is one of the acid tests to determine their fitness to command a regiment. Although he may have made good otherwise, his failure to make good in this course will usually cause his retirement to the in-

active list, involving some detail in the remount service, supply department, landwehr inspection and mustering officer cadet school, etc. The result is that every mounted officer who has aspirations for future promotion will keep in good physical condition and keep alive his interest in equitation and horsemanship. Throughout the German cavalry, the regimental commanders are conspicuous for their vigor and hardiness and bold aggressiveness. The regimental commander always takes a hand in conducting the instruction in equitation of the officers class, and especially the instruction in the training of remounts by the junior officers during the winter months.

The course at Hanover is therefore two-fold in its purpose: First, to test the fitness, endurance and horsemanship of the officer; second, inspection and observation of the progress made in equitation and horse training to enable the future regimental commanders to bring about uniformity throughout the cavalry service.

During June and July, the school conducts a series of drag hunts, three each week. These hunts are behind a splendid pack and take place very early in the morning, sometimes as early as 5:00 A. M. The meeting place is usually some eight or ten kilometers out in the country. The field officers' class led by the Commandant, followed by the fourteen different sections led by their instructors. Each section riding as a group, intervals between groups about 10 or 100 yards, ride these hunts three times a week. The first hunt takes place two days after the arrival of the field officers' class. These hunts are fast and furious, covering from six to twelve or fifteen kilometers, the hunts gradually increasing in length and difficulty across agricultural country and pasture and through forests, devoid of all artificiality in the way of obstacles.

On alternate days on which there are no hunts, the field officers ride in a body out of doors under the Commandant, or else in the hall, at which time the latter will give a talk on some phase of instruction or training, touching upon some new developments which require more emphasis; or he may give a talk on the deficiencies noted by the Inspector General of Cavalry at his last inspection and report.

Later in the day, the Commandant will conduct the field officers' class to inspect the work of each section of the regular officers' class (11), and of the non-commissioned officers' class (4). During these inspections the Commandant discusses the work of the section making such criticism of the methods or the officers in the section as he may deem necessary. No mistakes or deficiencies are glossed over by him. He will then invite one of the field officers present to make a few remarks. The latter will usually be more lenient and in a reminiscent sort of way, go back to the work done when he was a student officer. He then usually terminates his talk by some complimentary remarks.

After all sections have been thus inspected the field officers are paired and required to visit a different section each day during a certain instruction period, merely as observers.

Demonstrations are also given in longeing. Also talks in equitation, hippology and veterinary science and horse shoeing. A visit is paid to the Royal Veterinary College, situated in Hanover, where special clinics and lectures are arranged for the class. A visit is also paid to the Provincial Government stud at Celle, and to one or two remount depots in the vicinity.

Very few field officers are found deficient, never more than one in each class. I have been told though that quite a number get the so-called "blue letter" and ask for retirement to the inactive list before their promotion comes up for consideration. This is done to save them the humiliation of a public compulsory retirement.

There is no doubt that the course with other tests made, accomplishes its purpose, *i. e.*, to make and to keep all officers of the mounted service active and vigorous and to make the higher commanding officers just as bold and aggressive in their horsemanship as the junior officers.

E. L. GRUBER,
First Lieutenant Fifth Field Artillery.

Reprints and Translations.

THE HEAD OF THE HORSE.

HIS PHYSIOGNOMY EXPRESSES HIS CHARACTER.

BY ALFRED STODDART.

(From "The Country Gentleman.")

IN JUDGING horses so much stress is usually placed upon the importance of good legs and feet and general conformation that the head, which is just as much an index to character in horses as is the face in humankind, is often overlooked. We are likely to inspect a horse from the ground upward, and though we admire a good head we regard it in the light of an additional rather than a necessary virtue.

From the tips of a horse's ears to the end of his nose, every line has some meaning well worthy of consideration. The ears are important. From the manner in which they are carried we learn not only much of the animals' character—whether he is intelligent or stupid, timid or fearless, lazy or ambitious—but also what he is going to do under various circumstances. The eye of the careful driver is never off his horse's ears for any length of time.

Small, thin-skinned ears are indicative of high breeding. They should be turned forward and the ideal carriage is at an angle of about forty-five degrees with the head. It must be remembered, however, that the horse can turn his ear in any direction in order to catch sound waves, and an intelligent horse will avail himself of this privilege, just as he will look

THE HEAD OF THE HORSE.

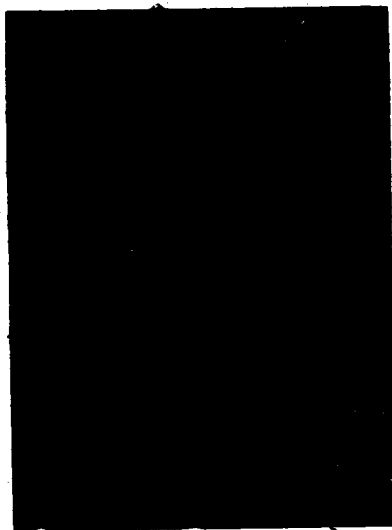
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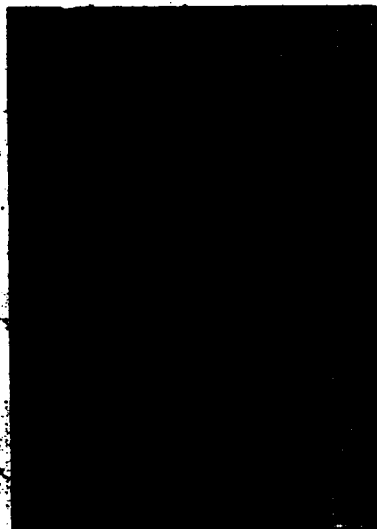
Every Mark of Intelligence and Good Breeding.



Plenty of Breathing Room in These Nostrils.



Small, Sleepy Eyes—Badly Carried Ears.



A Coarse, Bulging Head and Badly Carried Ears

around at many objects, especially if he is not hampered by blinkers. Horses that do not carry their ears erect are spoken of as lop-eared. This ugly carriage usually, though not necessarily, indicates a sluggish horse or one weakened and infirm from old age. It might be overlooked in a draft animal, but not in a horse kept for harness or the saddle.

THE KICKER'S WARNING.

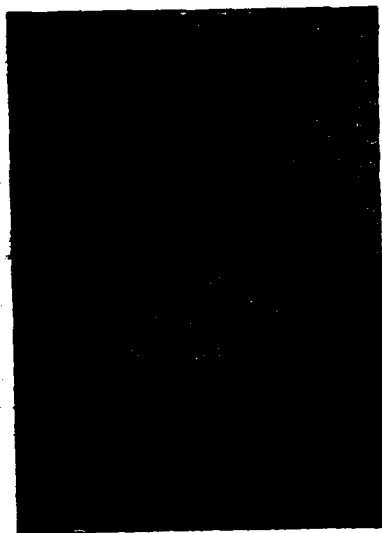
Restless ears, continually moving backward and forward, usually indicate a timid and nervous disposition. But horses that are partially or totally blind often move their ears in this manner, endeavoring to make up for the absence of one sense by the activity of another. Ears carried turned back upon the neck give warning of a bad temper. Even in a horse that is usually well behaved ears so laid back indicate something wrong, and the driver of a kicker knows about what to expect.

The presence of numerous hairs inside the ear is an indication of cold blood or common ancestry, but since the hairs may easily be removed with a pair of shears they are seldom observed in horses offered for sale. Grooms are frequently over-zealous in this respect, cutting away the hair which Nature placed within the animal's ear as a protection for the delicate organism of the inner ear.

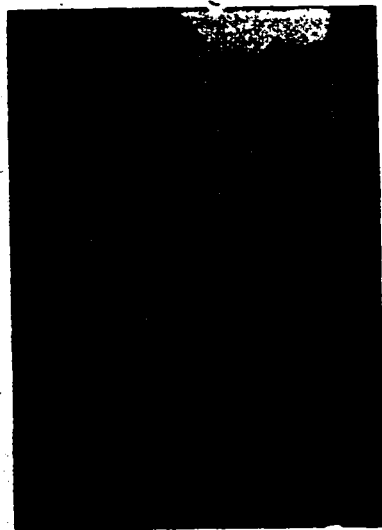
As for the eyes, although the horse may not be gifted with a soul to peer through them, still they have their message for the observer concerning the animal's character. They should be large and full, indications of both high breeding and gentleness; they should be widely separated, for the sake of intelligence, and they should be deeply colored. Abnormally small eyes, known as "pig eyes," betray lack of breeding. They indicate a sluggish disposition, and sometimes a wicked one. This last condition, however, is more generally connected with eyes that show a great deal of white.

WALL EYES CAN SEE.

A wall eye is one that lacks color of the iris. Many people suppose that a horse with a wall eye is blind, but such is not the case, the absence of coloring being simply due to a lack of pigment. This condition frequently occurs in piebald horses in



Badly Carried Ears on a Good Head of Draft Type.



Pendulous Lips. Partly Due to Bad Biting.

which the white spots surround the eyes, or in horses of the lighter shades. On the whole, although it does not indicate blindness or even defective sight, a wall eye is an ugly feature in a horse and may well be regarded as a blemish.

The face of the horse—that portion of his anatomy extending from the forelock to the nasal cavities—should be as straight as possible. A convex line here is a sign of low birth in any of the lighter type of horses, but it is permissible and even appropriate in the draft horse. On the other hand a tendency toward concave formation is found in Thoroughbreds and other types that trace their ancestry back to the desert-bred horses. This tendency is likely to become more marked with the age of the animal. The convex face and the Roman nose go together. But here again the Roman nose is out of place on any horse that is not of the heavy draft type.

The nostrils should be large, well formed and distinctly separated from the lips. It is essential for the animals' wind that these organs be of full size, and the fact that they usually are so in the Thoroughbred or the Arab clearly places this feature among the indications of high breeding. The inner nostril of mucous membrane should be a rosy pink, deepening to red during exercise.

One does not think of the horse's mouth as a very expressive feature, and yet it does not fall far behind the human mouth in portraying character. In anger a horse's lips are drawn back and he shows his teeth, like a dog. In a vicious horse this tendency is often indicated by a nervous twitching of the lips. Drooping, pendulous lips, on the other hand, betray a slothful, flaccid disposition. Sometimes the upper lip droops over the lower one, or the lower lip falls away from the upper. Such disfigurements are not infrequently caused by paralysis of the muscles due to the use of the twitch.

THE "FIDDLEHEAD."

From the expression of the mouth can be learned the horse's age, for it is directly influenced by the shape of the teeth, just as our own faces assume new lines when the teeth become few. In a young horse the front teeth, or incisors, meet in an almost perfect arch and the lips are fleshy and not greatly



A Roman Nose.



Age Shows in Every Line of the Horse's Head.

affected by the shape of the teeth. But as the animal grows older his teeth project outwardly, so that the lips are drawn over them more closely.

Fineness about the mouth is generally accepted as a mark of good breeding, and the boast is sometimes made that a horse's muzzle is so small that he could eat his dinner from a pint pot. But a small, narrow mouth does not mean a good breathing apparatus, and too small a muzzle mars the symmetry of the head, resulting in the appearance known as "fiddlehead."

The manner in which the head is joined to the neck is very important, since it not only affects the entire expression but characterizes the usefulness and value of the animal. A broad throat with ample room for the larynx is especially essential, and a head set at the proper angle is desirable. Under the horse's head there is a small groove that is an important factor. When the head is well set this groove appears in a graceful curve; when badly set it is sometimes almost effaced. Such a horse is heavy on the bit and unpleasant to ride or drive.

THE WORK OF THE GERMAN VETERINARY OFFICERS IN THE WAR.*

ONE HEARS almost nothing connecting the activity of veterinary officers in the field, although it is quite evident that the veterinary work in war has a direct first blow effect upon its success. The veterinary officers who ride with the active troops can effect a saving of life by stopping the hemorrhage of freshly wounded horses. They must on the appearance of contagion, diagnose it and take the necessary measures for isolation. Further, the veterinary officer is present at the inspection of meat and can often prevent sickness that would result from the use of tainted meat. On the establishment (outbreak) of contagion, especially glanders, a correct diagnosis is a life question for the troops. Glanders is an infectious

*Translated from the *Berliner Tageblatt*, of January 27, 1915.

disease with ulcers and festering decay, which is easily transmitted to man. In man and animals, through blood poisoning, it overrides the entire body with ulcerous formations and eventually causes death. Numberless are the number of veterinary investigators, who in silent heroism, have become victims through their investigation of this malignant contagion. The danger of infection is very great according to the investigation and discovery of Dr. Schütz, at the Berlin Veterinary High School, the glanders bacillus penetrates the unbroken outer skin. From this is seen the great danger of infection. Precaution is doubly necessary due to the hateful form of death, which is very similar to that caused by tertiary syphilis and leprosy in man. Fortunately, we possess in Mallein, a preparation similar to Tuberkulin in the manufacture a sure means of diagnosing glanders. The horses upon which Mallein reacts are immediately killed and dissected, and thus can we blot out the terrible infection during the war, if not entirely. So far it has been kept down so that our horse supply is sufficient to keep the army fit for campaign.

The very sick horses, who require long treatment, are sent to the horse hospitals, or horse depots as they are also called. Concerning the horse hospitals in the field, the public may be given a little information. This war is the first in which horse hospitals were prepared. The first attempt was made in maneuvers some six years ago by the 16th Army Corps and it is really to the great merit of the Corps Staff Veterinarian Potschke that a horse hospital was erected and stimulated. It became general to prepare them for the entire army during maneuvers. But the real value of horse hospitals was learnt in this war for the first time. The immediate enormous value to the State of veterinary practice (activity) accompanied by a well organized horse hospital, is now recognized. Horse hospitals, sprung out of nothing, are now provided everywhere and are well organized. Formerly certain veterinary officers were ordered to high (important) stations as technical directors. An older officer was ordered, in order to unite (unify) the military squads thrown together from all corps. He was fully occupied with administrative affairs. Casting appliances,

instruments, etc., were everywhere held together, a dispensary well prepared, reservists trained as assistants; soon a sergeant of horse (sergeant major of cavalry) was provided for by law and in an instant a firmly organized structure was found.

As an illustration, the horse hospitals of the cavalry division that has been established at the station in Insterburg, may be pointed out. From the 23d day of November 1914 till the 20th of January 1915, 1,075 horses were received and treated. The average number present fluctuated from 550 to 660. Eighty-five horses were killed for glanders and dissected. Seventy-five horses were sick of contagious pneumonia with pleurisy, from which 71 recovered and 4 died. The latter when received had gangrenous inflammation of the lungs. Since long treatment would not compensate, 27 were shot and sold to the horse butcher. Altogether, from the 28th of December 1914, till the 20th January, 1915, 84 horses were operated upon, of which 67 were severe hoof operations and 17 old withers injuries, galls, and (Vereitungen) supuration. Up to the present time 350 horses have been healed. The horses while in a horse hospital are well cared for and when they are healed, they are further rested, and when able to work are returned to service. Formerly 12 to 13% of the horses sick from contagious pneumonia (a contagious pleurisy, not transmittable to men) died. By the use of Salvarsan the death rate has fallen to $\frac{1}{2}$ of 1%. Salvarsan is dissolved and injected directly into the blood courses. At the front such blood infusions can be made only under great difficulties or not at all. From the old far advanced hoof and withers diseases, the surgeons's knife can in most cases effect a saving of life. That the injuries are some times very old before treatment is due to the fact that in war bitter necessity requires the horse to be held to work to the limit of his endurance.

The operations are very interesting and instructive, and if inflammation has not set in there is prospect of good results. The operations on horses are now very humane. By the injection of cocaine—adrenalin—solution in the vicinity of the nerves, the operation is conducted painlessly. When it is kept in mind that a horse cannot be treated without a big op-

eration, then the enormous value of a horse hospital to the State can be estimated. Among the horses in the (a) cavalry division hospital within 23 days, there were 84 heavy (serious) operations, of which 75 horses are likely to recover as result of the operation. Estimating the value of a horse at 1,500 Marks (\$375.) there is a saving to the State of 102,300 Marks. To this must be added the recoveries from light injuries and wounds which are treated correctly and cured in a horse hospital, and which otherwise would have become severe and incurable. The number of horses with an army corps in this war reaches an average of 30,000. That makes with the 100 army corps in this war about 3,000,000 horses. This statement is not too bold; we can grasp it by using a little arithmetic with a cavalry division (a cavalry division has a war strength of about 7,000 horses). Thereby we can comprehend the entire horse strength of the army and appreciate that during a long continued period of campaign, well organized horse hospitals are worth hundred of millions to the State.

Dr. N.

THE TROTTER IN THE WAR.*

FIRST Lieutenant O. Jäger, who has already given us information concerning the excellent performance of the trotters in his squadron, writes us recently:

"In answer to your question, how the trotter has fulfilled expectations in the cavalry, I give you the views of the Chief of Squadron of the Chevauxleges Regiment, Captain Schuster. He commanded the reserve (Ersatz) squadron in the first weeks after the mobilization and therefore had the opportunity to observe the numerous commandeered Straubinger (Bavarian town) trotters. They conducted themselves excellently in

*Translated from the "Sport" supplement of the *Berliner Tageblatt*, of January 23, 1915.

their new employment, went well and freely under the saddle, and easily excelled the average of the commandeered horses. In the field the trotters also came well up to the expectations of Captain Schuster. For example, Johauer, Prose, Miss Julia II, Danubia, Feodora, Rubezahl, Berliner and Lauretta. All of these are racing trotters, and are just as good as the horses possessed by the squadron in time of peace. They are very good at the gallop.

"Through the utterances of scientific people, the fiction as to the unsuitability of the trotter for military and saddle purposes has well found a holy end.

"With the anticipated shortage of horses that will come after the war, the breeding of trotters for the remount service is significant, and should attract more attention. May there be no failure in the number of suitable breeding stallions."

NOTE.—All horses gotten by government stallions in Germany are, when found suitable for military purposes, listed and a price fixed upon them. In time of war they are commandeered (brought into the service) by paying the owner the fixed price.

NATIONALIZATION OF THE NATIONAL GUARD.*

BY CAPTAIN FRANK P. TEBBETTS, TROOP "A," OREGON
NATIONAL GUARD.

(From the *Oregonian*.)

MAY I be permitted to make a few suggestions germane to the matter at issue from the point of view of the National Guard line officers. It is a matter of common knowledge that our once proud slogan, "Millions for defense, but not a cent for tribute," has been transposed into the bastard motto, "Millions for tribute but not a cent for defense." From my little corner of observation I have watched and felt this sentiment of disgraceful feminism develop in our people year by

*Extracts from a letter to Representative Gardner of Massachusetts.

year. And I am sure that you, from your higher vantage point, with its wider prospect of National and international affairs, must have observed and felt it with the increased impressiveness that comes with broader vision and greater opportunities.

It is generally believed throughout the line of the Guard all over the country that next to increasing the army and navy the great need of the country is standardization and federalization of the National Guard. This means pay for the National Guard, it means complete control of the National Guard by the Federal Government, and it means a system of instruction and inspection which shall make National Guard troops an effective second line of defense. The proposed pay bill, now I believe in committee, is in the main a good bill and merits the support of every man who advocates a strong policy of National defense. Our country will never agree to a large standing army; we shall always have to depend upon the National Guard as our chief military asset. Above all it is important that the support of the Government be given to the organized militia as against hastily organized and poorly officered regiments of volunteers with which we have always been overwhelmed at the least prospect of serious trouble. These organizations are animated by a patriotic impulse, but bitter experience has taught us that patriotism does not take the place of training. As I said before, I believe the pay bill is a good bill, but I believe that there are some important additions that should be made to it. I will enumerate some of them.

First.—Every year there should be chosen from each state one officer from each arm of the service represented in that state, who should be detailed with regular troops at the usual pay for his grade in the army. One year of service with troops to our National Guard officers would be worth several years of theoretical study at schools. These men would come back to their organizations with a clear understanding of the methods and traditions of the regular service.

Second.—Such states as are in a mood to accept the provisions of the militia pay bill now pending, should be permitted to do so, and the bill should be passed and made operative as to them. Half of the cocoanut is better than none. Those

reactionary Eastern States which are not willing to meet the Government half-way and are holding out for the recognition of supernumerary officers of high rank should be left behind, but the operation of the bill with its scheme for National defense should not be allowed to languish because of them.

Third.—A law should be passed arranging that in all states which come under the bill, every regimental organization should have detailed to it two officers from the Regular Army, one as Colonel and one as Major. These officers should be detailed as follows: The Colonel from officers of the grade of Lieutenant Colonel and Major in the Army and the Majors from the officers of the grade of Captains in the Army. These officers to receive the pay for their grade in the regular service. The Third Oregon Infantry is now working under such a system and is commanded by Colonel C. H. Martin, a Major in the Regular Army. I can only say that the benefits and advantages of this system are so apparent to us here that we cannot imagine a system that would be better for the country at large.

The advantages of having one Major from the regular service with each regiment would mean that the Colonel would have a man at his disposal whom he could depend upon to set the pace for the other Majors in the regiment. It would leave the grade of Lieutenant Colonel open to the National Guard Majors seeking promotion. These two regular officers would not be any additional expense to the state or to the Nation. Under the detached service law they could go back to their respective organizations after four years and be automatically replaced by other regular officers detailed for the same purpose. Under this system all of the inspector-instructors now on duty with the National Guard troops could be dispensed with, as their places would be taken by these other officers. Inspector-instructors now have very little authority and can do nothing but make suggestions, while under the system I outline they would be actually in command of troops and able to work out their own reforms. The introduction of this plan would mean a wonderful stiffening of our entire National Guard organization through the entire United States.

Fourth.—In addition to those things I would also suggest that it be made possible for National Guard officers who have

shown special fitness in their work to accept commissions in the Regular Army irrespective of their age.

I just want to say in closing that I believe the line officers of the National Guard throughout the country are a unit for a strong Federal control of the National Guard. They are for the most part earnest men striving to perfect themselves in a work which is perhaps second to none morally, socially and economically even in this enlightened age. It is a matter for regret that in the discussions which have arisen over these grave questions of National defense the voice of the line officer is seldom heard. It is as a rule true that he is not concerning himself with titles and honors but is grubbing patiently away in the dark, striving with the crude tools at his command to perfect a machine which in time of peril will stand the strain I hold a brief for that officer, as I know him and see him at work performing, without pay, without leisure, without public approbation, and without official support, duties which each year grow more oppressive and each year become a heavier drain upon his pocketbook and his time. Even the satisfaction of popular recognition is denied him by his unappreciative fellow countrymen. He is in times of peace despised and ridiculed, and in times of war he is expected to fight and defeat the world. If there is a finer example of unselfish devotion to an abstract ideal than this I do not know what it can be.

GOVERNMENT HORSE BREEDING.*

By Hon. ISSAC R. SHERWOOD, M. C.

THE ponderous and unusually expensive Agricultural Bill carries a liberal appropriation for horse breeding and experiments in live-stock production. It is the universal opinion among expert horsemen that there are sufficient ways to spend the tax money of the people without going into competi-

*From the Congressional Record of March 6, 1915.

tion with private enterprise in scientific horse breeding. Every intelligent horseman knows that the United States standard-bred trotting horse, bred for over three-quarters of a century by private enterprises and private capital, is the superior of any horse in either Europe or Asia. He is in stamina, quality, speed, and style the superior of the Orloff trotter bred under Government auspices in Russia for a quarter of a century longer than the American trotter.

The following resolution, unanimously adopted, expresses the prevailing views on this subject of not only saddle-horse devotees, but of all other classes of horsemen in the United States especially the breeders of standard trotters and thoroughbreds:

Resolved by the American Saddle Horse Breeders' Association, in annual meeting, this April 11, 1913, That it be, and is, the sense of this meeting that the breeding of horses is not properly within the function of the Government, and the undertaking on the part of the War Department and Department of Agriculture of the United States Government to breed horses for Cavalry service is an unwarranted and unjustifiable interference with private enterprises; and, further, that each member of this association be, and is hereby requested to communicate with his Member of Congress and the two Senators from his State, protesting against this Government's interference with private affairs.

HOSTILE LEGISLATION HAS RUINED HARNESS RACING.

How is it possible to promote scientific horse breeding by the United States Government in the presence of so much hostile legislation by the States to wipe out horse racing or horse culture? Speed horses of high quality commanded very remunerative prices when breeders were allowed to race their products in the grand circuit. There were plenty of ready home buyers at the end of the Grand circuit for tried and educated horses of speed, manners, and quality, and buyers from Russia, Austria, London, Paris, and nearly all the leading capitals of Europe. Millions of good gold dollars were brought into the United States by foreign buyers, prices ranging for stallions of fashionable breeding and extreme speed from \$25,000 to \$75,000. All the stock farms were prosperous, and there was neither a demand nor an excuse for Government patronage or Government aid until the hypocritical blatherers, masquerading as reformers, started on their destructive work.

I am not here to criticise the efforts of the Government to promote scientific horse breeding, but to call attention to the

notoriously unfortunate fact that nearly all the States north of the Ohio River have enacted hostile legislation to discredit and practically ruin scientific horse breeding. This has been done largely by legislation against pool selling on race tracks. This legislation has practically ruined the splendid series of harness racing known as the grand circuit, which a decade ago furnished to millions of horse-loving enthusiasts the most wholesome and recreative and alluring of all the outdoor sports and pastimes of the American people. This legislation has also ruined the county fairs, which for half a century have afforded so much wholesome enjoyment to the boys and girls of the farms.

HAS ONLY INCREASED GAMBLING.

And what has been the result of this legislation upon the speculative element of modern society? Has it stopped gambling? No; it has increased it. Has it elevated the moral tone of society? No; it has degraded it. All peoples—Christian pagan, and Mohammedan—have their recreations and pastimes. If they are not allowed the best they are liable to go to the worst. In the United States we have practically killed high-class horse racing and inaugurated prize fighting, baseball, and football. And we are now gambling three times as much on these games as we ever did in the very heyday of horse racing. And a game that is outlawed in every civilized country around the world—prize fighting—is now the most popular pastime of the sporting element of the American people. The brutal bouts of the nose smashers and rib crackers of the prize ring are the leading features of all our leading daily newspapers. They are even betting disgracefully on the polo game. And the select ladylike are gambling on it far more than was ever known on race horses.

Here is a reliable telegram showing the big hit made by Mrs. Hitt:

LOS ANGELES, CAL., March 4.

Perry Beadleston won the laurels in to-day's polo round robin, his individual score of 6 being the best. Mrs. William Hitt, formerly Katherine Elkins, bid in Beadleston at the auction pool last night for \$35 and won the \$700 pot. Some one estimated that at least \$12,000 a game has changed hands during the season.

And no protest anywhere.

As I never bet a dollar in my life on a horse race and never bought a pool ticket on a horse and never bet on any other sport, not even a twilight tango, I am giving an entirely disinterested opinion on this vital question, based on over sixty years of personal observation.

When the football team of the University of Pennsylvania met in combat the football team of the University of Michigan at Ann Arbor, Mich., this team of high-class university students carried with them \$4,000 to bet on the game, and the game was played and the money was bet within the sacred precincts of that great university. Not a sound was heard against it. Had a horse race transpired on that highly cultivated ethical soil, with \$4,000 bet on the result, all the gamblers in the game would have been arrested and penalized. As an ethical question, is it more of a crime, either morally or by statute, to bet on a four-legged animal than on a two-legged human being?

In England, when Edward VII was Prince of Wales, only a few royal degenerates of his fast set patronized the prize ring; but in all the larger cities of the United States the "four hundred" are in the craze to witness the nose smashing and human blood letting of the prize ring. In view of this deplorable degeneracy, the harness horse offers today the most recreative and morally wholesome entertainment of all the outdoor sports and pastimes—a sport free from both brutality and blood, a sport free from smut and all immoral trend, a sport full of good health and good cheer. The actor and the showman are always the best types of the moral and social elevation of any people. The actor acts to please only. If the people demand smut, the actor is always a smut machine. If the people demand brutality and blood, the prize fighter and the bully become the stars. How far are we away from that condition now? The grand plays of Shakespeare and all dramas of moral import are everywhere being supplanted by the frivolous, vulgar, and smutty vaudeville.

WHY GOD CREATED THE HORSE.

The monkey and the magpie, on their respective perches, are always interesting. The former with his grimaces and antics and face reminding us of the primeval man, and the latter, with his song and chatter, seems the incarnation of the music of the woods. But it is not given to man to know why an All-Wise Creator made them as the companion of the forests. But every intelligent human being knows why God created the horse. In the domain of the utilities of life, in the more esthetic field of the recreations, in poetry and song and sculpture, and on the red fields of war, the horse, since creation's dawn, has been the omnipresent companion and helpmate of his master—man. Let us now scan the law of the inevitable—the natural loves and instincts of man as illustrated by all history. From the ancient Pharaoh of the Exodus to General Phil Sheridan, the horse has shared the honors of war, the glammers of love, the wild witchery of chivalric tournament, and the gloom and glory of all the crusades, Christian or Mohammedan. By a law of Moses the Jews were forbidden to ride horses. The horse at that period, before the invention of gunpowder, was regarded solely as an engine of war, and Moses desired to make his people a pastoral people, devoted to the arts of peace. This is why Christ rode into Jerusalem on the more docile and peace-loving-ass—to symbolize more fully his mission of peace and good will to all mankind. And right here let me turn aside to point a moral. Today we have too much of the machine in our social and political life. The almost universal pursuit of money is trampling in the mire all poetic and patriotic feeling and wearing all the verdure out of men's hearts—and women's hearts, too.

THE HORSE IN THE HEROICS.

From time immemorial the horse has been immortalized with his immortal master. He has been perpetuated in stone and iron and bronze with the poets, philosophers, and soldiers of the world.

In Berlin it is Frederick the Great and his horse.

In Trafalgar Square, London, it is Lord Wellington and his horse.

In Paris it is Napoleon and his horse.

In our National Capital it is Grant and his horse, Jackson and his horse, Sherman and his horse, General Logan and his horse, and glorious old "Pop" Thomas and his horse. In Richmond it is Washington and his horse, Robert E. Lee and his horse, and Stonewall Jackson and his horse.

On the obelisks of dead old Egypt, on the Arch of Trajan at Rome, and the arch of triumph that Napoleon built in Paris to celebrate his victories, the horse and his hero rider are multiplied on every ascending circle.

The Old Testament prophetess Miriam, taking her timbrels to swell the song of triumph which Moses gave to the poetry of the ages, in celebrating the drowning of Pharaoh and his cavalry in the Red Sea, says:

Sing ye to the Lord, for He hath triumphed gloriously. The horse and his rider He hath thrown into the sea.

You will notice that the inspired prophetess gives the horse first mention over the soldier, doubtless on his merits, as the more humane of the two.

Prof. Darwin does not tell us in his great work on the evolution of man the number of years that elapsed between the development of the manlike ape to the apelike man; but, since history began, with its dim and uncertain light, I believe the horse with hoofs to have been coexistent with the devil with hoofs and coexistent with the apelike man, if not coequal.

Prof. Leidy, very high authority, says the prehistoric man had a prehistoric horse for his companion. The same high authority says that while it is true that Columbus discovered no horses with the native Indians when he discovered America, there is no longer room for doubt that the horse lived on the American Continent before the race of Adam.

I believe that he lived alongside of the mastodon as the companion of the prehistoric man.

Dr. Allen, in his great work entitled "Civilization," gives a vivid picture of the first arrival of the barbaric Huns in Europe in the fourth century. The chiefs are all mounted on magnificent horses, richly caparisoned, that, as Lord Byron says in immortal Mazeppa, "look as if the speed of thought were in their limbs."

In Bulfinch's fascinating book entitled "King Arthur and His Knights," which includes the heroic age of chivalry, we find the horse the conspicuous figure in every joust and tournament, escapade and romance. He is prominent in all the songs of the troubadours, many of which were written by women. Indeed, the word chivalry is from the French word cheval, a horse.

The history of all civilizations, Christian, pagan and Mohammedan, prove that God made the horse for man's utility, comfort and pleasure. Those who think that any man-made machine, however artistic, can ever take his place know little and think less. Of course, we shall have machine motors, as we have wax flowers and paste diamonds and crockery dolls. But wax flowers will never shed fragrance on the bosom of a divine woman, like the God-grown blossoms; and crockery dolls will never take the place of real babies; neither will the counterfeit blaze of paste diamonds ever mock successfully the rainbow tints of the real gems. And the live horse, the horse immortalized in song and story and sculpture and romance and war, will ever be animate and imperishable; man's best and most wholesome friend among the animals.

THE HORSE IN HEROIC LITERATURE.

It is a historical fact, with 2,000 years of civilization to verify it, that the introduction of the horse in public amusements has always marked the improved moral tone of every people, either Christian or pagan. In that period of brutal rule so vividly depicted in that great historical novel Quo Vadis, when Nero sat above Rome, wild beasts from the forests of Germany were brought to fight gladiators and devour Christian martyrs in the Roman amphitheater, amid the wild applause of the Roman populace. Later, when Rome was touched with a gentler and more benign civilization, under the Emperor Augustus, the bloody bouts between men and wild beasts were supplanted by the chariot races, where the horse was the main factor of the entertainment.

All the poets of modern times put horses under their heroes. King Richard III, according to Shakespeare, offered his whole

kingdom for a horse, after his game steed fell dead on the bloody battlefield of Bosworth. He could not get another horse on his offer, and thereby lost the battle and the crown, and the blood of Plantagenet was dried up forever, and the blood of Tudor came in to rule England, all for lack of a horse.

All the standard English poets were horse fanciers. Lord Byron's Mazeppa, a poem of horse and romance and escapade, is one of the grandest in the language. Sir Walter Scott in immortal Marmion, puts into Lady Herron's sweet mouth the story of "Young Lochinvar," one of the most thrilling musical gems of the English language. And Young Lochinvar's horse is the supreme factor of the escapade. You remember when Young Lochinvar stole away the bride, that was about to wed "a laggard in love and a dastard in war," he caught her on the home stretch, and throwing her willing form behind his own, astride his prancing steed, while two pair of chivalric legs were thrilling the throbbing ribs of his game fier, the lads and lassies of the laggard bridegroom had no steeds fleet enough to follow and Young Lochinvar got away with everything.

Even Tennyson, late poet laureate of England, with all his finical, fine ladyisms of versification, occasionally braces up into the robust heroic when he mounts the English thoroughbred. He does this in "Locksley Hall," but his best effort by far is "The Charge of the Light Brigade." But Tennyson is hardly in the same class with Sir Walter Scott. In all the minstrelsy of Scott the horse always comes in to gild the heroics, whether he sings of love or war.

And the finest dramatic poem of our great Civil War is "Sheridan's Ride," written by our Ohio poet, T. Buchanan Read, in which the horse is the hero, because without that game fier Sheridan could never have turned defeat into victory in that immortal twenty-mile ride from Winchester to Cedar Creek. It was the fleet black stallion that carried Sheridan that gray October morning in 1864 that made victory possible. And the poet tells it well:

With foam and with dust the black charger was gray;
By the flash of his eye and his red nostrils play,
He seemed to the whole great army to say:
I have brought you Sheridan to save the day,
From Winchester, twenty miles away.

And when their statues are placed on high,
Under the dome of the Union sky,
Be it said in letters both bold and bright,
Here is the steed that saved the day,
By carrying Sheridan into the fight
From Winchester, twenty miles away.

In the language of Lord Byron, in his immortal "Mazeppa" "Bring forth the horse"—the harness horse—man's best, most useful, and most wholesome animal friend. Let us see him, often and again—in the swift-footed flights of the charmed circle, in the bright aurora of the twentieth century, under our benign skies and suns, under our flag with the gleaming stars of States.

Have you ever stopped to think what would have become of General Sheridan and our Army that desperate day had General Sheridan made the ride in an automobile? Could he have made it with a "busted tire?" Could he have inspired the boys with courage anew with a machine instead of the black charger that, with foam on his flanks and nostrils red as blood, carried the courage of his great master into the hearts of the musketeers? An immortal poem was born that day that will go singing down the ages; not inspired by General Sheridan, but by General Sheridan and his horse.

It is not the war horse that Christian civilization of the twentieth century, now in its dawn, should care to exploit. It is the domestic horse. The horse of peace, the horse that carried his master, in the exhilaration of the wind, along pleasant valleys, by running brooks, and meadows green with verdure, by woods vocal with the song of birds, to make him forget his nervous worry over business cares and catch an appetite and the serene joy that awaits good digestion.

THE HORSE IN MYTHOLOGY.

Is it possible that a mere animal like the horse should have been a vital part of the creed that linked men and gods in the religion of the most poetic and accomplished of all the ancient peoples? The religions of ancient Greece and Rome have long since become extinct, but the poetry and literature of the age of mythology have enriched the literature and poetry of all living languages. The religion of these two, now dead, civilizations is the most poetic and irresistible of all the high-wrought witcheries of men or gods in the mystic domain of the supernatural. And if the horse is a vital element in the ministering power of the gods of mythology, it indicates that of all the animals in the animal kingdom the horse in the conception of the pagan world, was endowed with a creative potency ranking with the superior gods.

We learn that the god Neptune controlled all the waters of the great ocean—the Mediterranean Sea being the only ocean the Greeks knew—and that he created the horse. Homer, in his Iliad, sings of Neptune thus: "He yokes to the chariot his swift steeds, with feet of brass and manes of gold, and himself (Neptune) clad in gold, drives over the waves."

Prof. Murray's Manual of Mythology, speaking of Neptune and his sea horses, says: "The sea rejoices and makes way for him. His horses speed lightly over the waves and never a drop of water touches the brazen axle."

In Greek statuary Aurora is represented as a spirited maiden with expensive wings, clad in flowing robes of white and purple, riding the Pegasus, and distilling through clouds of amber the morning dew. For the benefit of all horsemen who dote on pedigrees, I submit herewith the high-wrought pedigree of Pegasus:

When the cruel god Perseus cut off Medusa's head, as the mythical story runs, the blood sinking into the earth produced the winged horse Pegasus. Minerva, the Goddess of Wisdom, caught him wild and tamed him, and presented him to the Muses. And the fountain of Hippocrene, on the Muses' Mountain, Helicon, was opened by a kick of Pegasus's hoof. This seems like a large horse story, but it is as reliable as some of

our modern tales. Minerva gave Pegasus a bridle of gold lace, and with his wings he soared the sky like a bird. In fact, he is the original first-class flier in the grand circuit of the skies. An agile youth, who came to the Court of the Gods, named Bellerophen, rode Pegasus into the upper air and with his spear killed the fiery dragon, Chimaera, as he was cavorting the sky.

Not only is the horse a foremost factor in the religions of ancient Greece and Rome, but he figures still more conspicuously in the religions and mythologies of ancient Persia and India. In the Vedic hymns of Persia, the most interesting and instructive of all the weird and mystic literature of that country, we gather a true idea of the religion of the ancient Persians and learn therefrom the most sublime conceptions of the Supreme Being. These hymns were written a thousand years before Christ. The Vedic theory of the creation is far more poetic than the Mosaic account. It attributes all created things to a single being—the Golden Child, "who established the earth and this heaven, who built the firmament of ether, measured the air, and set the sun on high, and who begot the bright and mighty waters." In the Vedic hymns, running through fifty pages of Prof. Timothy Dwight's great book, *The Ancient Classics*, I find the horse is mentioned no less than sixty times, always as a potent factor in the supernatural control of earth, air, and the heavens. Here is a specimen quotation:

Oh Rudras, friends of the golden chariots, come hither for our welfare, possessed of good horses and chariots, penetrating the clouds, shaking down the rain from the sky; red horses and faultless, noble by birth, golden breasted. Oh, oh, Maruts, you have given us wealth of horses, chariots, and heroes; golden wealth.

In the wonderful religion of Buddha, the first great teacher and prophet of the Golden Rule, the horse has a conspicuous, and ever-abiding place. According to Prof. Ephephanus Wilson, in his fascinating book, *The Life of Buddha*, the great Buddhist prophet taught the perfect life of virtue, temperance, morality, peace, and brotherly love at least 800 years before Christ. In fact Buddha is the first great philosopher of human destiny—immortality—as we now understand soul life. And after the lapse of over twenty-five centuries Buddhism still

stands first among the four great religions in the number of its devotees. In the life of Buddha as translated from the Chinese into English by Prof. Samuel Beal, Buddha was the world's first great teacher of the true life. Like the only Christ, Buddha was sorely tempted to abandon the path of virtue and sobriety, but he was not tempted by a personal devil, but by the spirits of evil doing in the guise of bewitching nymphs, and, according to all the books on Buddhism, it was the horse that carried Buddha away from temptation to a rare air and the calm delights of flower-embowered gardens. The temptation of Buddha forms a most delicious chapter; first, translated from the ancient Sanskrit language into Chinese by the great Chinese scholar Dhar Maraksha, and from Chinese into English by Prof. Samuel Beal:

Dancing women gathered about the Buddha; around his straight and handsome form. Their half-clad forms bent in ungainly attitudes; their garments in confusion or like the broken Kani flower; others pillowed on their neighbor's lap, their hands and feet entwined together, their bodies lying in wild disorder; their hearts so light and gay, their forms so plump, their looks so bright. But the prince (Buddha) stood unmoved by his horse; his milk-white horse—unmoved. And now he said, "I leave this false society. I will mount my horse and ride swiftly to the deathless city. My heart is fixed beyond all change." The Devas then gave spiritual strength, and the prince (Buddha) mounted the gallant steed, fitted with all his jeweled trappings for a rider.

All the above is supposed to have happened over 2,500 years ago. And yet what turf writer of today can give a more dramatic sketch of the high-mettled horse than this? Here let us point a potent moral to adorn this dizzy, divinized history of the escape from temptation of the world's first great prophet.

THE HORSE SAVED BUDDHA.

Was it not the horse that saved Buddha, and carried him away from the environment of evil? Have we not quoted enough of the history of the pagan classics to prove that for a thousands years of the brightest and best civilization known to the pagan world the horse was the divinely equipped motor of supernatural power. And have we not shown that in the most witching civilization of the ancient Orient the horse was the

chosen instrument of the first great prophet of moral ethics to escape from the evil thoughts and evil ways into the rarer region of a divinely appointed life? And in view of all this, have we not the basis of true moral judgment in the claim that the horse, in the evolution of all civilizations, has been always regarded as more than an animal? And is he not indissolubly linked in mythology, poetry, and sculpture with the great prophets, heroes and the divine idols of the world?

A PARTING WORD.

As a parting word, let me voice the universal opinion of the horsemen and breeders of the United States. They are not asking any advice or aid from the Federal Government. All they ask is to be allowed to do business free from the cruel handicap of restrictive and unjust legislation. Let us aim all present and future legislation against the reign of prize fighting and all other brutal and degrading games, and give to the horse and his master, man, a chance to elevate the spirit, and wholesome moral tone of the outdoor sports and pastimes of the American people.

CAVALRY DRILL REGULATIONS.*

IN prescribing that the discipline of the Organized Militia shall be the same as that of the Regular Army it was undoubtedly the intention of Congress to make mandatory a system of training that should be uniform as far as practicable, throughout both services. Uniformity of drill is further necessary in view of the detail to Organized Militia duty of inspector-instructors from the Regular Army, and in view also of the frequent association of troops of the two services at joint exercises. On the other hand, it would seem a hardship to require the militiaman, whose military activities are additional to

*From the Annual Report of the Chief of the Division of Militia affairs, 1914.

the civilian occupation on which he depends for a livelihood, to learn drill regulations that may prove of very temporary application. The solution would seem to lie in deferring the adoption of new drill regulations as long as these retain their experimental character. Accordingly, the Cavalry Drill Regulations have been retained as the official drill book notwithstanding the issue to the Regular service of the new Tentative Cavalry Drill Regulations.

In so far as mechanical principles of drill movements are concerned, it is probable that any system found satisfactory in the Regular Army will prove suitable for the Organized Militia. In many other respects, however, conditions in the two services are so unlike that it is improbable that any system of drill regulations devised solely with reference to Regular Army conditions will prove suitable for the Organized Militia. It is believed that this fact was lost sight of in preparing the new drill book.

Under the present statutory organization the smallest cavalry administrative unit is the troop, consisting of one captain, two lieutenants, and a minimum of sixty-five enlisted men. Nearly all existing Organized Militia troops have difficulty in maintaining this minimum. In the new drill system the captain's command is the squadron of four platoons, each of thirty-two enlisted men actually in ranks, commanded by a lieutenant. To insure this number of effectives the squadron must consist on paper of some 150 enlisted men.

It would seem that, logically, the new drill calls for a reorganization involving the abandonment of the old troop units and the substitution of about half the number of the new squadron units. In the absence of suitable legislation, one provisional squadron may be formed from every two troops by the simple expedient of combining on the drill ground. This is entirely practicable in the regular service. In the Organized Militia, however, it is practicable neither to combine troops for ordinary instruction nor to reorganize into squadron units, in case such an organization should be authorized by law.

Of the ninety troops of Organized Militia Cavalry now recognized by the War Department, fifty-five occupy one-troop stations. There are eight states having but one troop each. But

six stations have cavalry personnel in excess of one hundred, viz: Boston, Providence, New York City, Philadelphia, Chicago and Norwich University (Northfield, Vt.).

In case a law were passed doing away with the present troop units and organizing squadrons of some one hundred and fifty men each, the troop at the six stations above would be able to comply like those of the regular service. The eight troops pertaining to states having but one troop each would have to be disbanded, because these organizations can not recruit to anywhere near one hundred and fifty men each. Of the remaining forty-eight one-troop stations twenty-four would become squadrons (less two platoons), and twenty-four would become two-platoon organizations. The latter would have a lieutenant in command and would be tactical, but not administrative or combatant units. That results would prove highly unsatisfactory in the case of these forty-eight half-squadrons stations is clearly indicated by the experience of this division in several cases where companies have been composed of subunits so separated that they could not be regularly assembled with the parent organization for instruction.

In case no new legislation is had, but troops required to combine in sets of two for instruction, the troops at the six large stations would again be able to adapt themselves like the Regular Army. The eight troops in states having but one troop each would find it exceedingly difficult to combine for instruction in camp because of expense in sending troops outside the state for drill and also on account of questions of command. Similarly the forty-eight troops at the other one-troop stations would find it difficult to amicably pair off in view of local rivalry.

In any case the fifty-five troops occupying one-troop stations would have no squadron drill at their home stations. The squadron being the smallest combatant unit, instruction should normally be by squadron, just as it now is by troop, and the squadron should be instructed at its home station, so that on arrival at its summer camp it can begin its field exercises with little or no preliminary formal drill. This can not

be the case where the platoons of the squadron occupy different home stations.

To sum up: There are now fifty-five one-troop stations of Organized Militia Cavalry; the troops at these different home stations can not assemble for ordinary drill and instruction; Organized Militia Cavalry troops, under present conditions, can not unfortunately be recruited, generally speaking, much above the present legal minimum of sixty-five enlisted men; under the new drill system normal drill and instruction is by squadron of about one hundred and fifty men; the smallest administrative and combatant unit must, in the Organized Militia, unfortunately be as low as sixty-five enlisted men approximately; the Tentative Cavalry Drill Regulations are unsuitable for the Organized Militia service.

The Cavalry Drill Regulations were issued in 1896 and are substantially unchanged, notwithstanding subsequent amendment and revision. It is believed these regulations are no longer suitable as they stand. There are many unnecessary movements and some of these, with the corresponding commands, are too involved. The paragraphs relating to security and information, conduct of fire, and combat, are not up-to-date. The provisions relating to the "follow in trace," should be emphasized and extended, as should also the use of signals, instead of oral commands. Provisions should be made for double rank.

It can not be too emphatically stated that new drill regulations, to be suitable for the Organized Militia, must be applicable to a combatant and administrative unit as small as sixty-five men.

TABLE 17.—Statement showing the Cavalry Organizations existing Oct. 1, 1914.

State.	Regi- ments.	Squad- rons.	Bands.	Machine gun troops.	Total troops.
California.....		1			3
Colorado.....					3
Connecticut.....					2
Georgia.....		1			5
Illinois.....	1		1		12
Louisiana.....					1
Maryland.....					1
Massachusetts.....		1			4
Michigan.....					2
Missouri.....					1
New Hampshire.....					1
New Jersey.....		1			4
New York.....	1	1	1	1	17
North Carolina.....					4
Ohio.....		1			2
Oklahoma.....					2
Oregon.....					1
Pennsylvania.....	1				12
Rhode Island.....					3
Tennessee.....					1
Texas.....		1			4
Vermont.....		1			4
Washington.....					1
Wisconsin.....					1
Total.....	3	8	2	1	91

THE POWER AND AUTHORITY OF THE GOVERNOR AND MILITIA IN DOMESTIC DISTURBANCES.*

A BRIEF.

By HENRY J. HERSEY, Esq.

IN response to your request that I give the commission "an analysis of the Moyer decision," decided by the supreme court of Colorado in 1904, "and the decisions preceding and following it upon the same lines," I am pleased to submit the following:

*Extracts from a report made to the U. S. Commission on Industrial Relations.

Before entering upon the discussion of legal questions involved, it is necessary to have a general statement of facts.

In 1903, the Western Federation of Miners ordered a strike of the metalliferous miners in the Cripple Creek and Telluride districts in Teller and San Miguel Counties.

Thereupon, armed forces of miners engaged in open resistance to the enforcement of the laws of the State, overpowering the civil authorities and destroying property and life until the sheriffs and other public officers and citizens of the respective counties were compelled to petition the governor to order out the National Guard for the enforcement of the laws and the protection of life and property. By these petitions, as well as by personal appeals, the Governor was informed that the civil authorities were wholly unable to enforce the laws, or to provide safety to persons and property, or to suppress the armed forces of the strikers and their sympathizers. An insistent demand was made upon the Governor that he perform his constitutional duty to enforce the laws, suppress the insurrection, restore peace and order and protect life and property by sending the militia into these districts for those purposes.

After due consideration the Governor issued his proclamation declaring the County of San Miguel, where Telluride is situated, to be in a state of insurrection and rebellion, and ordered the Adjutant General to proceed to that county with the necessary troops and use such means as he might deem right and proper, acting in conjunction with or independently of the civil authorities of said county, as in his judgment and discretion the conditions demanded, to restore peace and good order and to enforce obedience to the constitution and laws of the State.

In pursuance of such executive order by the Governor, as Commander-in-Chief of the militia, the Adjutant General proceeded with the troops to San Miguel County, and as a necessary means, in his judgment, of suppressing the insurrection and rebellion and of enforcing obedience to the constitution and laws and restoring peace and order in said county, he caused the arrest of C. H. Moyer, who was President of the Western Federation of Miners, because, in his judgment,

Moyer was an important factor in fomenting disorder, lawlessness and insurrection.

The arrest of Moyer by the military authorities at Telluride occurred on the 29th day of March following, some two months later than the Parker case, and the same attorneys appeared again, this time for Moyer, and applied for a Writ of Habeas Corpus to Judge Stevens of the district court of Ouray, Colo., a county adjoining Telluride.

The Writ was issued and served on the Adjutant General and the Captain of the militia at Telluride, and upon the return day thereof the Attorney General and myself appeared before Judge Stevens at Ouray and by proper motions and pleadings resisted the application of Moyer for release upon Habeas Corpus.

In the answer or return to the Writ, we set forth the proclamation and executive orders of the Governor above referred to, and the existence of a state of insurrection and rebellion so proclaimed and declared by the Governor, and that it was the intention of the military authorities, at the earliest day practicable and consistent with the administration of justice in the suppression of the insurrection and the restoration of order and peace, to turn Moyer over to the civil authorities and civil courts, but that under existing conditions it was unsafe to do so; the answer also stated that they had been commanded by the Governor, as Commander-in-Chief of the militia, to decline to produce the body of Moyer before the court.

In the answer or return we also contended that, under the facts shown by the return, the court had no further jurisdiction to proceed with the cause.

Judge Stevens declined to permit us to present authorities or to be heard in defense of the State's position, and notwithstanding the supreme court and the United States Circuit Court had, previously, in the three cases above referred to, under similar circumstances denied similar petitions for Habeas Corpus, yet Judge Stevens immediately, without even hearing us, fined the Adjutant General and Captain of the militia, five hundred dollars (\$500) each, for not producing Moyer in

court and ordered the sheriff to arrest and imprison them without bail until they should obey the Writ of Habeas Corpus, and also, ordered that they pay the fines to said Moyer.

The military authorities, however, declined to recognize the order of the court and refused to be arrested by the sheriff, to pay the fines or to release Moyer. Notwithstanding the three previous decisions of the State Supreme Court and the Federal Court had established the legality and soundness of the position of the Governor and the military authorities, yet desiring that the questions involved should be still more thoroughly tested in the courts, upon the advice of the Attorney General and myself, Adjutant General Bell sent out a Writ of Error from the Supreme Court to the District Court of Ouray County, for the purpose of reviewing Judge Stevens' orders and judgment.

We applied to the Supreme Court, in behalf of the military officers, for a supersedeas to stay the orders and judgment, above referred to, which supersedeas was unanimously granted.

At the same time, Moyer's attorneys applied in his behalf to the supreme court for a new Writ of Habeas Corpus, setting forth all the proceedings in Judge Stevens' court, as well as the refusal of the military authorities to obey the district court's orders.

Simultaneously with the filing of Moyer's petition for a Writ of Habeas Corpus, he applied to the supreme court for an order admitting him to bail, to secure his release from the custody of the military authorities pending final hearing. Elaborate arguments were made by counsel for Moyer for his release upon bail and opposed by us after which the supreme court unanimously denied Moyer's application for release upon bail. The opinion was rendered by Mr. Justice Steel, and will be found in volume 35, Colorado Supreme Court Reports, page 154. Upon the refusal of the supreme court to admit Moyer to bail, he was, by order of that court remanded to the custody of the military authorities pending the final hearing and determination of his case.

The Writ of Habeas Corpus was issued, however, and served upon the Adjutant General and Captain of the militia; and later, when the case was before the supreme court for oral

argument upon final hearing, Moyer was produced in court by the military authorities and remained present during all the time his case was being heard, but, of course, he was attended by the Adjutant General and the Captain of the militia, in whose custody he was and who were respondents or defendants in the Habeas Corpus proceedings.

Previous to the oral argument of the case, however, the Adjutant General, following the usual course in Habeas Corpus proceedings, made his answer or return to the Writ, in which he set forth the proclamation of the governor, above referred to, declaring San Miguel County to be in insurrection and rebellion, and also the executive order of the governor, above referred to, ordering the Adjutant General to proceed to San Miguel County and suppress the insurrection.

The answer or return also stated that in the judgment of the Governor and military authorities it was necessary to arrest and detain Moyer in order that the insurrection might be suppressed and peace and order restored and obedience to the constitution and laws enforced. To this return was appended a certificate by the Governor asserting the truth of the facts stated in the return or answer of the Adjutant General and, in addition thereto, advising the Supreme Court fully of the gravity and seriousness of the situation, even giving the court a portion of the evidence submitted to the Governor before he issued his proclamation and orders, among which was the statement of the sheriff and others as to the lawless conditions in San Miguel County and the total inability of the civil authorities to protect life and property, and their request to and demand of the Governor that he immediately order the National Guard into active service in that county. The Governor also certified to the Supreme Court that the insurrection and rebellions, declared in his proclamation to exist had not been fully suppressed, owing to its magnitude and the number of lawless persons aiding and abetting the same, and that the ordinary civil authorities were wholly powerless to cope with situation.

Moyer, through his attorneys, sought to take issue with the facts set forth in the answer or return of the Adjutant General and the certificate of the Governor by formal reply thereto,

denying the existence of the facts stated by the Adjutant General and the Governor.

As both the facts, out of which this case arose, and the legal questions involved and decided therein, have been misstated, not only by some persons who have testified before your commission at its hearings in Denver, but also from time to time in the public press and in public meetings, it is most important to remember that the proposition of law for which we contended and which the courts have sustained was this:

That when the answer or return of the military authorities has been filed and presented to the court showing that the Governor, in pursuance of his constitutional power and duty to enforce the laws and suppress insurrection, had issued a proclamation declaring a portion of the state to be in insurrection and rebellion and that the Governor had ordered the militia into the field to suppress such insurrection and enforce obedience to the constitution and laws and to restore peace and order, and when such return also showed that as a means thereto, the military authorities, acting under the Governor's orders as Governor and Commander-in-Chief, had deemed it necessary to arrest and detain any person or persons in their judgment aiding and abetting the insurrection and had arrested and detained such persons that thereupon the jurisdiction of the court immediately ceased.

That is quite different from the proposition that either the Writ, or the privilege of the Writ of Habeas Corpus was or could be suspended by the Governor; that proposition was not involved in the Moyer case and neither was the question of martial law involved; so I shall not discuss them here. I only mention them because it has been erroneously stated that those matters were involved.

It is also important to know that we contended that the Governor and military authorities in acting as they did were as fully and truly within the constitution and laws of the state as are the civil authorities when upon filing of a criminal complaint the court issues a warrant and the sheriff arrests the person charged with the crime and puts him in jail; in other words, *if the Governor in obeying the express command of the constitution to "take care that the laws be faithfully executed," and "to suppress insurrection," finds it necessary to arrest and detain*

a person, that is as truly a legal act and a legal arrest and detention, and also as definitely required by the constitution and statutes, as is an arrest and detention by a sheriff upon a criminal warrant.

The former is a summary procedure to effectively meet extreme cases and conditions threatening the very life of the state, while the latter is a more common and familiar procedure to meet the ordinary and usual violations of law not striking at the very existence of the government.

The above proposition was not only sustained by the Colorado Supreme Court in the Moyer case, but by the United States Circuit Court in two cases (In re Sherman Parker, *supra*, and Moyer v. Peabody, *infra*,) but later by the United States Supreme Court in Moyer v. Peabody, *infra*.

Briefly stated the first and fundamental proposition involved in the Moyer case was:

(1) *That under the constitution and statutes of the state of Colorado, it is the duty of the Governor to determine as a fact when such conditions exist as constitute an insurrection and which require him to call out the militia to suppress it, and that his determination of that fact cannot be disputed, and is conclusive upon all other departments of government and upon all other persons whomsoever.*

That proposition, the Supreme Court of Colorado in the Moyer case held was sound and in so holding, it followed the law as it has existed in this country from the earliest times to the present day, as we shall now see.

Under the constitutions of our several states, as well as under the federal constitution, our state and national governments are divided into three separate departments each distinct and supreme in its own sphere, neither of which can encroach upon the other and none of which can control any of the others in the exercise of its special functions.

The provisions of the Colorado constitution upon the matters now under discussion are in no essential particulars different from the constitutions of other states.

The constitution expressly imposes upon the Governor certain important executive powers and duties, namely:

"The supreme executive power of the state shall be vested in the Governor, who shall take care that the laws be faithfully executed."—Colo. Const., Sec. 2, Article 4.

It also provides that the Governor "shall be Commander-in-Chief of the military forces of the state" and that "he shall have power to call out the militia to execute the laws, suppress insurrection or repel invasion."—Colo. Const., Sec. 5, Article 4.

These are the positive and express commands by the whole people to the Governor, embodied in their constitution, and neither the judicial nor the legislative department can usurp any of these powers nor interfere with them. All that either of the other two departments can do, and what they must do under the constitution, is to aid the Governor and not hinder or prevent him in performing his constitutional duties.

The legislature of Colorado to aid the Governor, early in its history, passed a National Guard act which has since been amended from time to time. When the Moyer case arose, and for some years prior thereto, the National Guard act provided as follows:

"The National Guard of Colorado shall be governed by the military law of the state, the code of regulations, the orders of the Governor, and wherever applicable by the regulations, articles of war, and customs of the service in the United States Army."—Colo. Session Laws, 1897, page 198, Sec. 1.

The same act also provided that:

"When an invasion of or insurrection in the state is made or threatened, the Governor shall order the National Guard to repel or suppress the same."—Colo. Session Laws, 1897, p. 204, Sec. 2.

These statutes show not only the purpose of the legislative department to aid the executive department in the performance of the latter's constitutional duties, but also clearly evidence the intention of the legislature to eliminate all possible question or controversy that "the orders of the Governor" to the National Guard are as much the law of the state when the militia is called out by the Governor to aid him in the enforcement of the laws, or in suppressing an insurrection, as are the orders of any court in matters properly before it.

The duty therefore having been imposed upon the Governor by the constitution to "take care that the laws be faithfully executed" and "to call out the militia to execute the laws, suppress insurrection or repel invasion" as the exclusive duty and function of the executive department of the government it follows, under our theory and form of government, that neither the legislative nor judicial department, can encroach upon that exclusive jurisdiction, or function, of the executive department by interfering with or controlling the discretionary exercise of his constitutional powers and duties.—14 American and Eng. Ency. of Law (2d Ed.), 1106; 6 American and Eng. Ency. of Law (2d Ed.), 1006 (1); 1008 (b); 1010 (2a); 1012 (c); 1014 (title, "Governor").

For a very able opinion, out of many, upon the above proposition, I refer to the following rendered in 1839 by the Supreme Court of Arkansas.—Hakwins v. Governor, 1 Arkansas 570, 589-596.

In other words, where the Governor under the constitution and statutes has a duty to perform he is required to exercise his discretion, and, when he has determined the existence of the facts necessary to call into exercise that discretion, no court has jurisdiction to inquire into the truth or falsity of the facts, for the Governor alone is the sole judge.

Perhaps the earliest case in the United States where this proposition was announced was the celebrated case of Marbury v. Madison, decided by the Supreme Court of the United States in 1803, wherein that great chief justice, John Marshall, said for the court that:

"By the constitution of the United States, the President is invested with certain important political powers, in the exercise of which he is to use his own discretion, and is accountable only to his country in his political character and to his own conscience."—Marbury v. Madison, 1 Cranch (U. S.), 137, 165-166.

The court then immediately after the above quoted sentence, discussed the act of Congress authorizing the President to appoint certain officers to act by his authority and under his orders and held that their acts are the President's acts, adding,

"And whatever opinion may be entertained of the manner in which executive discretion may be used, still there exists, and can exist, no power to control that discretion."

And the court further held that,

"The acts of such an officer, as an officer, can never be examinable by the courts."—Idem, 166.

We see, therefore, that the first and fundamental proposition involved in the Moyer case was decided to be the law in this country over one hundred years before the Moyer case was decided.

The next case was decided by the Supreme Court of New York, in May, 1814. In that case it was necessary to determine the question of the President's powers under an act of Congress approved February 28, 1795, which gave to the President authority to call forth the militia "to execute the laws of the Union, suppress insurrections, and repel invasions" (it should be noted that the language of this act is practically identical with the Colorado constitution and statutes which I have quoted above.)

The Supreme Court of New York in that case held that *the President of the United States alone is made the judge of the happenings of the event which requires the calling out of the militia, and that in such case the President acts upon his own responsibility, under the constitution.*—Vanderheyden v. Young 11, Johnson's Reports (N. Y.), 150, 158.

The same act of Congress, and the same question, was before the United States Supreme Court in 1827, and that learned tribunal followed the New York case and held, in an opinion by Mr. Justice Story,

"That the authority to decide whether the exigency has arisen, belongs exclusively to the President, and that his decision is conclusive upon all other persons."—Martin v. Mott, 12 Wheaton (U. S.), 19, 30.

In our briefs in the Moyer case we cited the foregoing cases, as well as others, among them, another case decided by the United States Supreme Court, in 1849, growing out of Dorr's Rebellion in Rhode Island, wherein the Supreme Court of the United States again held to the same effect.—Luther v. Borden, 7 Howard (U. S.), 1, 43-45.

All these cases were considered by the Supreme Court of Colorado, and followed in the Moyer case.

We find, therefore, that the fundamental proposition involved in the Moyer case, has always (and necessarily so under our theory and form of government) been the unquestioned law in this country.

In our briefs and arguments in the Moyer case, we cited numerous other cases in support of the various propositions involved, among others, an Idaho case growing out of the Cœur d' Alene strike, where the Supreme Court of Idaho went much farther than the Supreme Court of Colorado was asked to go, or did go, in the Moyer case. In that case, the Supreme Court of Idaho, held not only that the facts set forth in the Governor's proclamation could not be disputed and would not be inquired into, or reviewed by any court, but also held that the privilege of the Writ of Habeas Corpus might be suspended by executive action.—In re Boyle, 6 Idaho, 609.

But, as I have before stated, the Governor of Colorado did not suspend the privilege of the Writ of Habeas Corpus in the Moyer case and so that proposition was not involved and I, therefore, do not discuss it here.

The next question involved in the Moyer case, and the really practical question, was this:

(2) Were the arrest and detention of Moyer under the facts narrated, illegal?

The answer to this question, we shall now see, must be in the affirmative.

Of course, to answer this question correctly the fundamental proposition which I have just discussed and which was briefly stated in the paragraph I have numbered (1) above, had to be first answered; and perhaps I should have made this second question the first, but as I consider the other more fundamental and as rather leading up to this practical question, I have discussed it here first.

It is an elementary rule of constitutional and statutory construction (as was held in the Moyer case) that:

"When an express power is conferred, all necessary means may be employed to exercise it which are not expressly or im-

pliedly prohibited."—In re Moyer, 35 Colorado Supreme Court Reports, 159, 166; citing 1 Story on the Constitution, Sec. 434.

The constitution having, therefore, by its express commands imposed upon the Governor the duty to "take care that the laws be faithfully executed," and having expressly made him "Commander-in-Chief of the military forces of the State" and also commanded him "to call out the militia to execute the laws, suppress insurrection," etc., it necessarily follows that he may and can employ all the means which, in his judgment, are necessary to be used to execute the laws and to suppress insurrection.

It also necessarily follows from the foregoing that the executive (being the President in the case of the national government and the Governor in the case of the state government) when he has called out the militia to enforce the laws, or to suppress an insurrection and has determined that it is necessary to arrest and detain any person, and has made such an arrest and detention, has done a perfectly lawful act, and his decision cannot be questioned or interfered with, or set aside, by the courts, or any other department of government.

Ultimate authority must rest somewhere, and, and under both our Federal and State Constitutions, in such cases and under such conditions as we are now considering, it rests with the chief executive of the nation, or state, according to whether it is a national or state matter.

The law as to ultimate authority was well stated by that eminent constitutional jurist, Judge Cooley, in rendering the opinion of the Supreme Court of Michigan, where the court held that:

"The law must leave the final decision upon every claim and every controversy somewhere, and when that decision has been made, it must be accepted as correct. The presumption is just as conclusive in favor of executive action as in favor of judicial."—People Ex rel Sutherland v. Governor, 29 Mich., 320, 330-331.

In the recent strike of the coal miners in Colorado it became necessary for the President of the United States to send the federal troops into Colorado, and I have yet to hear that anyone, lawyer or layman, has had the temerity to even suggest

that the President's action was illegal, or that the courts could inquire into the necessity of such act, or in anyway interfere with it. To state the proposition is to make its absurdity immediately apparent.

The constitution and statutes having vested the Governor with the exclusive powers and duties above referred to, and all the courts (beginning with *Marbury v. Madison*, supra decided by the United States Supreme Court in 1803) having uniformly sustained the power and duty of the chief executive in the premises and having also decided that he is the sole and exclusive judge of the existence of facts calling into operation his executive powers and duties and that he cannot be controlled or interfered with in the performance of such duties by any other department of the government, it naturally followed that the Supreme Court of Colorado, when the Moyer case came before it, in obedience to the constitution was compelled to decide, as it did decide:

(a) That where the Governor has called out the militia to suppress an insurrection the militia has authority to arrest and imprison any person participating in, or aiding, or abetting, such insurrection and to detain such person in custody until the insurrection is suppressed:

(b) That under such circumstances the military authorities are not required to turn such arrested persons over to the civil authorities during the continuance of the insurrection, but can detain them until the insurrection is suppressed, when they should be turned over to the civil authorities to be tried for such offenses against the law as they may have committed:

(c) *And as a further logical conclusion, that where the militia is engaged in suppressing an insurrection and has arrested a person for aiding and abetting such insurrection, his arrest is legal, and his detention in the custody of the military authorities until the insurrection is quieted is also legal, and the court will not interfere to release such person upon a Writ of Habeas Corpus.—In re Moyer, 35 Colo. Supreme Court Reports, 159.*

The foregoing propositions have all been sustained, since the Moyer decision, by the federal courts in litigation instituted

and prosecuted by Moyer after peace and order had been restored and Moyer had been released from military custody by the military authorities.

After the strike was over Moyer's attorneys, Richardson and Hawkins, brought a suit for him in the United States Court at Denver against Governor Peabody, the Adjutant General and the Captain of the militia at Telluride claiming that because of his arrest and detention by the military authorities, acting under the orders of the Governor, Moyer's constitutional rights have been violated and that he had been damaged in the sum of one hundred thousand dollars (\$100,000) and asked for body execution. In that suit Moyer claimed in substance that the Colorado Supreme Court's decision in the Habeas Corpus case, above discussed, had violated the federal constitution by depriving him of his liberty without due process of law. In this case the same questions were again involved and argued as were involved and argued in the Habeas Corpus case and again Moyer was defeated in his contentions. Judge Lewis, who sat in the trial of the case, dismissed the case and in his opinion fully sustained the power and duty of the Governor and military authorities in the premises and followed the decision of the Supreme Court of Colorado in the Moyer case.—*Moyer v. Peabody et al.*, 148 Federal Reporter, 870.

Moyer then took the case to the United States Supreme Court and in January, 1909, that learned tribunal, in an able opinion by Mr. Justice Holmes, unanimously reached the same conclusions as had five years before been reached by the Colorado Supreme Court and fully sustained the power and duty of the Governor to do all that was done in the Moyer case.—*Moyer v. Peabody, et al.*, 212 U. S. Supreme Court Reports, 78.

I shall not quote the learned opinion in full, hoping that the commission will read it from the official report above cited, but I feel it important to give a few extracts therefrom.

It is interesting to know from the opinion in that case, that Moyer and his attorneys had, during the intervening years, learned that they could not lawfully dispute the facts of the Governor's declaration or proclamation, for the United States Supreme Court says in its opinion,

"It is admitted, as it must be, that the Governor's declaration that a state of insurrection existed, is conclusive of that fact."—Idem 83.

The court, after discussing other familiar summary proceedings such as in tax matters and executive decisions for exclusion of aliens from the country, and the Colorado constitution and statutes involved, and referring to the arrests by the military authorities as a means of suppressing insurrection, says,

"Such arrests are not necessarily for punishment, but are by way of precaution, to prevent the exercise of hostile power."—Idem 84-85.

The Supreme Court of the United States later in the opinion shows clearly that such arrest and detention is perfectly legal and as truly so, as is the arrest and detention under the ordinary process of the civil courts, when the court said,

"When it comes to a decision by the head of the state upon a matter involving its life, the ordinary rights of individuals must yield to what he deems the necessity of the moment. Public danger warrants the substitution of executive process for judicial process." Idem 85.

And thereby the United States Supreme Court held that the arrest and detention of Moyer by the military authorities was perfectly legal and sustains the proposition that I announced earlier in this letter that if the Governor in obeying the express commands of the constitution to "take care that the laws be faithfully executed," and "to suppress insurrection" finds it necessary to arrest and detain a person, that is as truly a legal act and detention, and also as definitely required by the constitution and statutes, as is an arrest and detention by a sheriff upon a criminal warrant.

Since these several Moyer cases were decided by the Supreme Court of Colorado and the federal courts, similar cases have arisen in the States of West Virginia and Montana, each of which States has followed the decision of the Moyer cases in the Supreme Court of the State of Colorado and in the federal courts.

The first of these cases was before the Supreme Court of Appeals of West Virginia, several Habeas Corpus cases being

heard and decided together. Among them was one in which it appears that Mary Jones (who had also figured in the recent Colorado coal miner's strike, and is commonly known as "Mother" Jones) who had been arrested and imprisoned by the military authorities of West Virginia, acting under the orders of the Governor of that State, sought release therefrom by a Writ of Habeas Corpus.

Similar questions were involved in that case as were involved in the Moyer case and the same conclusion was reached by that court as had been previously reached by the Supreme Court of Colorado and the United States Supreme Court; and the cases cited in the opinion of that case, in support of its decision, were also cited and presented to the Supreme Court of Colorado for its consideration in the Moyer case.—In re Jones (and three other cases), 71 West Virginia, 567; Ann. Cas., 1914 C., page 31.

That case was decided March 21, 1913, and, just one year thereafter, on March 31, 1914, another case, involving similar questions, was before the Supreme Court of Appeals of West Virginia. In the latter case, that court issued its Writ of Prohibition against one of the circuit courts of that State prohibiting it from entertaining jurisdiction in a certain action there pending brought against the governor of the State, as Governor and Commander-in-Chief of the military forces and certain officers of the National Guard, acting under the Governor's orders, who had suppressed and destroyed a Socialist newspaper, as a means of suppressing an insurrection existing in said State.

The basis of the decision, prohibiting the lower courts from hearing the case, was that the Governor could not be held to answer in the courts in an action for damages resulting from the carrying out of his orders issued in the discharge of his official duties and that his proclamation, warrants and orders made in the discharge of his official duties are as much due process of law as the judgment of a court. In this decision the Supreme Court of Appeals of West Virginia again followed the decisions in the Moyer cases above referred to and the other cases which the Moyer cases followed.—Hatfield v. Graham (West Virginia), 81 Southeastern Reporter, 533.

The Montana case, to which I have referred, was one in which the militia had arrested and detained the petitioners who sought their release from military custody by Habeas Corpus upon the same grounds as did Moyer in the Colorado case. The Supreme Court of Montana rendered its decision on October 8th, last. In that case, following the Moyer cases in Colorado, and the other cases above referred to, the Supreme Court of Montana held that the Governor had authority to proclaim a state of insurrection to exist in a county of the State and to detail the militia of the State to suppress it and that his determination of the existence of an insurrection was conclusive and binding upon the court and all other authorities.

The Montana supreme Court in specifically referring to the Moyer cases decided by the Colorado Supreme Court and the United States Courts after quoting extensively from them said,

"The reasoning of these cases, properly understood and strictly confined to its proper sphere, we take to be unanswerable, and to be entirely applicable to the right and duty of the Governor and the militia, under our constitution and laws."—Ex Parte McDonald, et al. (Montana), 143 Pacific Reporter, 947, 949, 951.

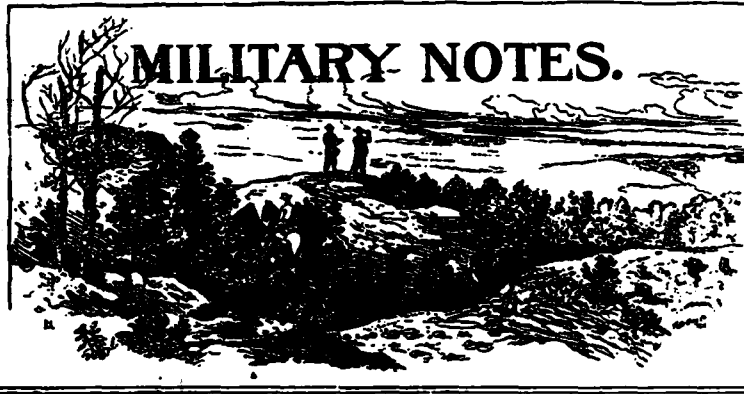
In the foregoing analysis, I have by no means exhausted the adjudicated cases upon the questions involved, for to do so would prolong this brief beyond all reasonable limits. What I have endeavored to do is to show that the opinion and judgment of the Supreme Court of Colorado in the Moyer case is based upon the positive and express mandates of the constitution; that it is not an isolated case, but, on the contrary, is one of many cases upon similar propositions decided by the highest courts of our country, beginning with Chief Justice John Marshall's decision in Marbury v. Madison in 1803 down to the present time.

For the Supreme Court of Colorado to have rendered any other decision than it did would have been an encroachment by the judicial department upon the exclusive functions of the executive department and to have been a deliberate violation of the constitution.

NOTE.—While the question of whether or not an insurrection exists is to be determined solely by the executive department, and is not open to question, it is not out of place to here give the accepted definition of that word.

Insurrection Defined.—"An insurrection is a rising against civil or political authority; the open and active opposition of a number of persons to the execution of law in a city or state."—16 American and Eng. Ency. of Law (2d Ed.), 977. See also 22 Cyc., 1451-2.





CAVALRY SERVICE REGULATIONS.

"Behold what a great matter a little fire kindleth." (James III, 5.)

THE GENESIS.

THE beginning of the present cavalry agitation was had in 1910 and came in with the subordinate personnel incident to a new chief of staff whose good will having been obtained, the powerful machinery of the War Department was available for the propaganda. One of the first evidences of the innovations was the suggestion having in view the elimination of the pistol as a cavalryman's weapon. Next came the inconclusive experiments undertaken by the Eleventh Cavalry at the San Antonio Maneuver Camp in 1911. Shortly thereafter appeared "Cavalry Notes," prepared by a member of the General Staff and issued by the War Department. These notes set forth the advantages of the European normal cavalry regiment of a few large size squadrons. An argument was brought forward to the effect that our regiments could each be cut in half and by the promotion of a few officers the number of

our cavalry regiments would be doubled. Incidentally a few cavalry brigadiers would be needed.

But our officers did not view these suggestions with complacency. The proposed promotion of a few high ranking officers did not attract much enthusiasm. In the fall of 1910 the national election changed the political complexion of the House of Representatives. The newly elected dominant party adopted "Economy" as its slogan and in carrying out this principle threw a bomb shell into the cavalry camp in the form of a bill to cut off five cavalry regiments. Its advocates argued thus: If your regiments are too big and need cutting in two, here is a chance for economy. We will cut off five altogether. It is quite generally believed that the congressional economy advocates got some of their inspiration from "Cavalry Notes."

In October, 1912, the War Department issued Bulletin 18, which appeared in several issues of the CAVALRY JOURNAL causing protests from several members. It is thought that this bulletin had its inception in the same source as the other cavalry innovations of the preceding two years. The cavalry viewed this bulletin with suspicion, as disingenuous, and as having an ulterior object, the correctness of which view was proved in the sequel. The cavalry felt that in Paragraph 1 of this bulletin the most honorable and brilliant exploits of American historical cavalry traditions had been deliberately ignored.

About this time a board was appointed to investigate the subject of cavalry organization and drill. The members of this board visited Europe and made some interesting observations. This board was far from unanimous in the regard by its individual members for the idea on which it was appointed and at least one important member requested to be and was relieved. The majority of the board as finally composed and which was, judging by prior evidences, in accord with the ideas prompting its appointment, adopted as its basis of work the mounted drill and tactics of the French service, and so we are told the dismounted drill and tactics of our own.

Early in the summer of 1912, the camp at Winchester, Virginia, was arranged for two and two-thirds regiments were ordered there. Our cavalry did not take kindly to the idea.

Still fresh in its mind was the genesis of all the agitation, our escape from reduction and a general aversion to all the connected features. At the opening of the camp the assembled officers were informed that they had been brought together for the purpose of experimenting as to the best form of drill and organization for mounted action. This then was the sequel to Paragraph 1, Bulletin 18 above referred to. The Tentative Cavalry Drill Regulations were then issued. The officers were further told that if comment was desired from them they would give it, but not otherwise. It developed in the course of the camp that the experimentation was to be confined to that drill previously determined upon by the majority of the board. Although all concerned loyally executed the directions of the board in every way, the mental attitude of practically the entire official personnel was one of hostility to the purpose of the assemblage. Information of this spirit evidently must have come to the ear of the Department Commander for, on his first visit to camp, he assembled the officers and told them in effect that it was not the purpose of the War Department to force this drill and organization upon them, *willy nilly*, but that all would be given an opportunity to be heard. At a later date he called for a report from the cavalry field officers present.

At the Winchester camp the conditions were as nearly perfect as they could be for demonstrating a pre-determined idea. The terrain consisting of about 1,200 acres of rolling farm land interspersed with woods, had all the fences removed and was as suitable for mounted action as could ordinarily be expected in any section in the eastern part of the United States. The platoons were filled with selected men. These men were always in their permanently allotted place in the their respective platoons. Platoon commanders were permanent. All officers soon acquired a complete knowledge of their duties. Platoon, squadron, regimental, and brigade drills were progressively taken up. A regiment of four squadrons was tried and also one of six. From the standpoint of mobility it was apparent to the majority of officers that the four-squadron regiment gave best results. The board, however, settled on the six-squadron regiment as its choice.

The next development was G. O. 65, W. D. 1913, which directed that for drill and mounted work two troops would be consolidated to form a provisional squadron, six squadrons thus constituting a regiment, all of which would be drilled and maneuvered according to Tentative Cavalry Drill Regulations. In the working of this order there was brought home to the entire cavalry service an appreciation of the consequences to be expected if this drill and organization became permanent. At one stroke, in each regiment the legally designated tactical command of three majors and six captains were eliminated and twelve lieutenants were more or less deprived of their proper duties.

In a letter from the Adjutant General of the Army, dated September 19, 1914, cavalry field officers were directed to report on November 1, 1914, their views on the Tentative Cavalry Drill Regulations. This letter also directed that on and after November 1, 1914, the old Cavalry Drill Regulations should be in full force and effect. Before the reports just referred to were received at the War Department, Cavalry Service Regulations (experimental) were issued and ordered (Par. V, G. O. 79, W. D. 1914) used until further orders. These regulations are the finished labors of the cavalry board. They were completed in the spring of 1914 but various circumstances operated to prevent their issue at that time.

For several years the subject of the need of a new drill regulations has been unofficially discussed by cavalry officers. Many propositions in connection therewith have been advanced. There has been a feeling also that a drill book should be either a drill book pure and simple or else, if any collateral matter is to be included, that the book should be a Manual of Cavalry, including not only drill but also all matters co-related to the cavalryman's instruction. In these respects Cavalry Service Regulations has apparently had one ear open. The name of the drill regulations has been changed. The manual of the rifle is given less thoroughly than before. Dismounted marching, exercise, etc., following the idea expressed in Par. 1 of the above cited Bulletin 18, are given only briefly; the Rarey method of horse training is eliminated but a system of equitation has been elaborated; the old familiar plate illustrating

diseases of the horse is omitted but a plate showing the sole of his foot has been added. The chapter on cavalry in campaign has been improved. Ceremonies, which we have always regarded as of so much value to discipline, have been minimized. The existence of a cavalry regimental band has been ignored and for the prescribed informal dismounted guard mounting "the post band replaces the trumpeters." Packing is omitted but other elements are added, such as the semaphore code. The foregoing are merely a few of the changes, either of inclusion or exclusion. In fact, Cavalry Service Regulations are neither a drill book pure and simple nor yet the hoped for Manual of Cavalry.

But the *raison d'être* of Cavalry Service Regulations is double rank drill, the justification of Par. 1, Bulletin 18, W. D. 1912, to sustain the contention that "mounted action is the main rôle of the cavalry arm," meaning the mounted charge. Anyone wishing to follow the development of cavalry tactics of the world are respectfully referred to an article entitled "*Rôle and Organization of Cavalry*," appearing in the July 1914 number of the Cavalry Journal. The present titanic struggle in Europe has, if anything, only emphasized the lessened value of the mounted charge.

So far as the Tentative Cavalry Drill Regulations are concerned it is generally understood that the reports thereon were overwhelmingly adverse and, as the object of Cavalry Service Regulations is the continuance of the principles of Tentative Cavalry Drill Regulations, we may expect similar treatment when reports thereon are made. All indications point to the necessity of an entirely new start and consideration of the subject.

BASIC PRINCIPLES.

As this writing is merely a sketch, it is not the purpose here to consider exhaustively all the elements concerned. There are however, a few principles which stand out preëminently in connection with any discussion of organization and tactics and it is believed that the following are among the most important of those generally accepted by our officers:

Opportunities for a mounted charge, even when existent, will rarely ever be offered to or be practicable for bodies larger than our war strength squadron.

Our present troop—the basis of organization—is too small a command for a captain either for peace or war. A present-in-ranks strength for efficient service should be about 100 men. This corresponds in actual service size to the European squadron.

An organization of four such troops or units is the most mobile and efficient for mounted work. This organization is our present legal squadron and corresponds to the European cavalry regiment. A combination of three such units is the best for dismounted action and for combined action. This is the organization now had in our legally organized regiment.

Mobility for combined action requires single rank.

There should be provided either a drill book pure and simple or else a Manual of Cavalry covering the entire field of cavalry instruction, and this subject should of course be handled by a committee of cavalry officers who thoroughly understand American cavalry traditions.

In addition to the foregoing principles the following are also pertinent:

The machine gun unit should have a separate coördinate legal organization, not the unsatisfactory provisional makeshift of the present. A reliable gun should be furnished.

Headquarters detachments, orderlies, scouts, etc., should also have legal authorization and not drain from troop strength.

Provision should be made for maintaining an efficient supply of personnel and remounts for war, through depot troops.

Full strength and permanent headquarters, machine gun, and depot organizations are subjects that requires congressional action, but the subject of drill pertains solely to the service itself and can be devised so as to be applicable to our present organization or to one having the above indicated additions.

The agitation in the cavalry arm as a result of the innovations previously referred to has already reached the ears of individual congressmen, some of whom have been heard to remark to this effect: "If you insist on six squadrons per regiment

we will give them to you. We will cut off half of each regiment." If we insist on getting the Cavalry Service Regulations six-squadron regiment we are simply committing suicide. The reason for the six-squadron regiment is solely to revive double rank drill and the waning mounted charge. This brings us down to

THE QUESTION:

Do we want double rank drill and the six-squadron regiment? Shall we sell our birthright for a mess of pottage?

HOWARD R. HICKOK,
Captain 15th Cavalry.

SOME CAVALRY LESSONS FROM THE WAR.

THE following dispatch was published in the *New York Sun*: London, November 28.—The newspapers print a document issued by the German Minister of War on Thursday advising the training of new armies on a system embodying the lessons learned in the early stages of the campaign. Among the points insisted on is the necessity of choosing the best men for officers, regardless of their social status, and preventing the officers from exposing themselves, uselessly.

"An officer ought not to be distinguishable by his uniform in any way from his men," the document says.

The importance of making the greatest possible use of intrenchments by all units is another point taken up. With reference to cavalry the statement says:

"The habit of pampering horses in peace time has caused some bitter disillusionments. In the future our horses should be accustomed to bivouac in the open air and be satisfied with what food can be obtained. On a campaign horses should be left out of doors for days together in order to train them for open air life. There is no question now that the training of cavalry horses for dashing work is infinitely more important than

training them to make long marches at an easy pace. It is important that cavalymen should be trained to use their carbines. A dismounted cavalryman should be able to fight exactly as an infantryman. Cavalry charges no longer play any part in warfare."

Among the instructions for the artillery is this:

"Speaking generally the highest importance must be attached to economy in ammunition. Every shot fired uselessly is a crime. The air service must cooperate closely with the general command and the artillery command. Aviators in reconnoitering should carry pistols and hand grenades. The latter for the most part do not produce appreciable results, but have an important effect in alarming the enemy."

It is not remarkable that the German Minister of War should say that foreign cavalry horses are pampered and are not accustomed to bivouac and will not touch any but the best forage. In a treatise on contact squadrons by Biensan, published some years ago, he said that when in the field, horses should never bivouac. They should always, if practicable, be put under shelter. That one night's bivouac was harder on them than a whole week of hard marching—it is also the custom abroad to keep cavalry horses in hot, poorly ventilated stables, and in some regiments they are kept blanketed in order that their coats may shine when the inspector arrives. They have no corrals.

It is no wonder then that the losses in horseflesh has been excessive, especially when we consider the exposure and the tremendous work that was done by the cavalry in the early part of the campaign.

The Minister of War also says that "the training of horses for dashing work is infinitely more important than training them for long marches at an easy pace." In this connection we have been told that in the early part of the war cavalry was used as follows: With a view to turning the flank of the enemy, brigades of cavalry, accompanied by machine guns, horse artil-

lery and infantry mounted in automobiles, made great detours and raids striking the enemy unexpectedly at long distances in advance of the main army. This is probably the "dashing work" referred to. It is probable that the cavalry in these expeditions, escorting automobiles, were obliged to move at fast gaits. Evidently this also had much to do with the breaking down of the cavalry horses, which has caused such an excessive demand for remounts. It may be the reason why we are told that in many cases cavalry horses have lasted only a few days.

Attention is invited to the statement: "It is important that cavalymen should be trained to use their carbines. A dismounted cavalryman should be able to fight exactly as an infantryman. Cavalry charges no longer play any part in warfare." Such statements are extraordinary, but they indicate a terrible disillusionment. We in this country consider shock action as being a matter of *opportunity*, which seldom arises, it is true, but which may, owing to the greater cover and more frequent chances for surprise, happen more often on this continent.

This document should afford food for reflection to those who wish to abandon entirely a cavalry organization and cavalry methods which have been successful here, in order to adopt in every detail European organization and methods; based as they are, admittedly, on the overwhelming importance of shock action. In adopting some of their methods, let us not forget they had many things to learn which we knew, and that they may eventually adopt methods we abandon.

THE GREAT WAR.

(From *The Polo Monthly*—British—of September, 1914.)

WE, however, digress, as this article is not meant to deal with the cause and progress of the war, but rather to show what good service has been rendered by polo players and their ponies at so momentous a crisis.

It has long been admitted that the polo pony is a most useful type of horse for military purposes. In Indian warfare he has long been *facile princeps* when compared with his larger brother for many purposes, and in South Africa during the Boer War, polo ponies were of the greatest service to mounted infantry.

Though too small, of course, for artillery or ordinary cavalry, he makes an excellent mount for Territorials, mounted orderlies, senior officers of infantry regiments, etc. He is handy, fast and easily accustomed to military service, and for his size up to a considerable amount of weight. His constitution is as a rule excellent and he can stand any amount of fatigue. Small wonder, therefore, that the military authorities, on the issue of mobilization orders, were particularly keen on polo ponies, and we are pleased to note that several prominent players, headed by the Prince of Wales with a string of ten ponies, handed over their entire studs for Army purposes.

Without doubt, one of the best assets to the British Army is the genuine love of field sports which is firmly implanted in the breast of every Englishman. The fitness, which an apprenticeship served to a good outdoor pursuit develops, and the training received in following a sport, are of the greatest value on a campaign. Sport teaches observation, patience in adversity, and doggedness which leads to victory, in a way that no form of regulation drill can accomplish. It also makes good comrades. Men who have hunted, shot, fished, sailed together will fight well side by side and accomplish things highly trained machines are incapable of. In his latest dispatches from the front General Sir John French, pays a tribute to the prowess of the British cavalry when he says the enemy are able to make

no kind of stand against them at all unless they outnumbered them by at least three to one.

The army supplies by far the greater number of high-class polo players in England, whilst on the present occasion the majority of civilian players are also serving the colors in some branch or another of the service. Already it is interesting to note that in the short time the war has proceeded, regiments, whose names invariably figure throughout the season at Hurlingham and Ranelagh, are conspicuous for several dashing performances against the enemies' guns and cavalry. The Ninth and Twelfth Lancers, every officer of which is a polo player, the Royal Scots Greys, the Twentieth and Fifteenth Hussars, have all distinguished themselves and figured in the dispatches. General French has forwarded of the first fighting in the campaign. Now that retreat with the allies has turned to attack, there will be plenty of opportunity for further displays on the part of our cavalry.

The commanding officers, Colonels Campbell and Wormald, of the Ninth and Twelfth Lancers are both keen players and have each a handicap of five goals, whilst Colonel Bulkeley Johnson of the Royal Scots Greys figures on the six mark in the Hurlingham list. The Twelfth Lancers were of course the sensational team of this season, carrying off the Whitney Cup, the Inter-Regimental Cup, the King's Coronation Cup, and the Ranelagh Subalterns Cup, the last-named for the second year in succession. To the Ninth Lancers has fallen the honor of being the first to emulate the famous charge of the Balclava Light Brigade. This was at Compiègne, where after a desperate charge they succeeded in silencing a battery of German guns. Captain F. O. Grenfell was wounded in both legs, and had two fingers shot off. Undaunted by this wounds, he headed a party of his men and was successful in rescuing two guns, whose servers had all been killed, and getting them away.

The death roll of our polo players is, we are sadly afraid, bound to be a heavy one, and already we have to record the loss of the following gallant men.*

L. W.

*Here follows a long list of the cavalry officers who had been polo players and who had been killed or wounded even that early in the war.

THE THOROUGHBRED IN THE WAR.

THE cavalry officers of the German Army and race riders are abundantly supplied with thoroughbreds for the campaign. In the Saxon Hussar Regiment—King Albert's No. 18—Captain Martin Lucke rides the famous Saint-Macedon, John Sameum, who upon the obstacle course (steeple chase) gave a sure performance. As a dead safe jumper and a very fast horse, he adapted himself fully for service, especially for patrol duty. First Lieutenant M. v. Boxberg, the owner of Flittergold, rides the English horse Fenloe which formerly belonged to the fallen Lieutenant v. Raven. Lieutenant v. Rerder, the older brother of the distinguished gentleman rider, guides the Harrischer Rousseau who won a flat race for the Walburger colors. Lieutenant Count Schaffgotsche has with him the older Custozza who year after year has well earned her hay upon the steeple chase track. Lieutenant Freiherr v. d. Decken took with him Unsula Shipton. First Lieutenant of Reserves Hempel was mounted upon Prinzgemahl (Erlershe strain), subsequently killed by an enemy's bullet.

The thoroughbreds, who by their training over obstacles and on varied terrain were especially ready, quickly adapted themselves to the changed conditions and endure well the great exertions of field service.

COLOR OF HORSES.

The Editor:

MY attention has just been called to a "Military Note" on page 860 of the CAVALRY JOURNAL of March, 1913, in which Veterinary Surgeon Gerald E. Griffin of the Third Field Artillery, confesses that after twenty-nine years observation he never noticed that coat and skin pigmentation of horses and mules had any effect on their usefulness. I suppose he

refers to my two articles in previous volumes. I can only reply that he ought not to feel badly over it, as the vast majority of mankind pass their whole lives unable to see anything until it is pointed out to them. I once met a cavalry captain who was an accomplished hippologist, but until I showed him, he would not believe that all the white horses in his troop had black skins. I have recently made many observations of the skin color of wild animals in zoological collections, and they all confirm the principles laid down in my two articles. The fact will be described in my new book on "Medical Ethnology," about to be published by Redman Co., of New York.

CHAS. E. WOODRUFF, M. D.,
Lieutenant Colonel U. S. A., Retired,
Associate Editor, American Medicine.

IDENTIFICATION OF PUBLIC ANIMALS.*

I DESIRE to submit, as briefly as possible, an outline of a proposed system of identification for public animals in the military service, for consideration by a proper committee of the General Staff.

It is designed to replace the system of Descriptive Lists now in use, for dumb animals. The descriptive lists are notoriously inefficient in time of peace, while the system has broken down utterly in war.

The system proposes to brand all public animals upon their entry into the service in an alphabetical and numerical series.

If three characters be used the series will run "A00" to "A99" for the first one hundred animals. Using twenty-five letters of the alphabet (excepting "Q") it will run from "A00" to "Z99" for the first 2,500 animals.

Using the alphabetical character in second place, as "0A0" to "9Z9" will brand 2,500 more animals, and using it in the

*Extracts from a report made to the War Department.

third place as "00A" to "99Z" a third levy of 2,500 is provided for, or 7,500 in all.

Applying the brand successively to the Right Shoulder, Right Haunch, Left Haunch, and Left Shoulder, thirty thousand animals may be given a distinctive individual mark for life, differing from all others.

In describing an animal so branded, in transferring or receipting for him, it will only be necessary to quote the brand and indicate the quarter on which it appears, as "Horse 6B2 L S."

It is obvious that by the use of four characters, one alphabetical and three numerical, four hundred thousand animals may be similarly branded, as from "A000" to "999Z."

The three place system should be ample for peace in our present service, while the four place system could immediately apply in case of war. Ante-bellum animals could thus instantly be distinguished. It hardly needs to be noted that separate series may be applied to horses and mules.

It is proposed that the remount service have centralized control under this system and that the only clerical record regarding animals shall be kept in the office of the Chief of the Quartermaster Corps, and that periodical returns be made to him of all animals by accountable officers, showing the whereabouts and disposition of all animals purchased. It is obvious that accurate statistical data can thus be compiled at any time to account to the Congress for our stewardship of this huge value.

Simply to illustrate the breaking down of our present system, I will say that with five different mounts transferred to me as a captain, after the Spanish War, I either had myself to prepare new descriptive lists out of whole cloth, or my predecessor had recently done so.

From the point of view of economy in the military budget I believe the proposed system will effect a marked saving. It will be noted that Inspectors can be checked at once and required to explain the condemnation of too young horses.

For several years I have proposed to experienced cavalry officers the application to our animals of this device, so widely

used in commercial life. They have invariably acknowledged its striking merit.

I shall refer this paper to three distinguished horsemen who happen, fortuitously, to be members of this regiment at this time, for their comment.

Through years of consideration of this subject I am prepared to answer such objections as will immediately be suggested, but request that I be permitted to do so by correspondence and not in person.

The system is not intended to exclude the continued use of the non-enduring hoof brand for the sole purpose of identifying strays, during active operations, as belonging to particular organizations.

* * * *

At this point the letters of Major Hardeman and Captains Short and McCaskey, in comment on the foregoing paragraphs, were received and are herewith inclosed. The response of these gentlemen moves me to add the following:

The suggestion of Captain Short regarding a brand on the neck is good and acceptable. I understand that system is subject to modification and compromise. If, however, the neck, under the mane, be used, a four place system should be adopted, permitting the branding of 100,000 animals.

It is well known to all horsemen that after a certain maturity only experts can hope to judge the age of a horse, and even they only approximately. Furthermore a human expert is required to identify such horse experts.

The branding system proposed, without complication, affords the opportunity to proclaim the age of all horses on sight. For instance, the A B and C series can be announced in order as applying only to foals of 1910; D, E and F series to foals of 1911, etc.

The suggestion of Captain McCaskey regarding the size of the characters and the general subject of disfigurement of the animal was bound to arise in the discussion and had best be touched on at once.

In American practice, on the western plains, brands were made unduly large and conspicuous to facilitate wholesale

operations at hurried round-ups. Mounted men had to distinguish animals at a distance, and at full speed. We have so come to be prejudiced against all branding as a disfigurement, or blemish, as the Captain says. It is entirely practicable to brand very neat and small, if an instrument of fine web be used. Indeed the US now appearing on all our animals is, itself altogether too large, but not regarded as a blemish.

And with the new system may not the US be dispensed with, thus giving place for two of the three or four characters proposed?

Note that the system enables data to be instantly compiled showing the history of previous purchases by any horse-buyer, when it is proposed to redetail him on that duty.

Upon adoption of any modification of this system old horses now in service should be treated as a class by themselves; with four places for instance, if a general three place system be adopted.

Several years ago this system was first suggested by me to Col. W. D. Beach, 4th Cavalry, then "Acting Chief of Cavalry." It was in a personal letter, he may be able to indorse hereon the history of that effort.

Finally, I wish to disclaim in advance that I am in pursuit of any personal credit. So often have I ridden hobbies in pursuit of the ideal that I know too well the damping, and even damning effect, of the name plate on a new device, or even on an old one, as in this case, in a new application. I have merely enlisted a team of progressive cavalry officers, three of whom are preëminently qualified to pronounce final judgment on any question affecting horseflesh.

* * * *

It is anticipated that objection will be made to the total absence of clerical records of animals at posts, other than "Retained Muster Rolls of Public Animals." This may be met by printing annually in the office of the Quartermaster General a small leaflet pamphlet setting forth opposite the brand of each horse purchased during the year, age, weight, height, where and when and by whom purchased, color, purported or proven breeding, and such other data as may be necessary.

These leaflets may be distributed to the service in form suitable for binding together. Thus, on each administrative desk the initial history of every horse in the service will lie instantly at hand in cold print, subject to no error of transcription.

GUY H. PRESTON,
Major Fourth Cavalry.

JUMPING.*

IN order that a horse should jump readily and freely his head should be free. The natural position of a horse when he jumps is with extended head and neck. The body of the rider should be inclined forward, in order that the reins may be held loosely and in order that the center of weight of the rider should be fixed and immovable during the jump.

At the "take off," the horse leaps from the ground with a tremendous impulse. If the body of the rider is not braced against this shock it will sway backward. The weight of the rider's body will be thrown against the bit bruising the sensitive bars of the horse's mouth, causing him acute pain. This punishment often repeated will cause a horse to fear the jump. Such is especially the case with riders who in jumping keep themselves in the saddle by hanging on to the reins.

During the entire jump the reins should be held loosely, or with a very light touch on the mouth. It is not even necessary that the horse be "supported" by the reins on landing. "Supported" the horse is a myth. It sometimes happens that in travelling along the road the horse is "supported" when he stumbles by throwing the weight of the rider back, thus bringing about a more favorable position of the center of gravity, and this may incidentally cause a pull on the reins. But the horse is never "supported" by pulling on his mouth.

*Extract from General Orders No. 6, Headquarters First Cavalry Brigade, Fort Sam Houston, Texas, March 27, 1915.

Thus the horse's head should be free when "taking off," when in the air, and upon landing. When his mouth is unhampered and unconstrained by pulling on the reins the horse will learn to like jumping and will become accustomed to jumping freely and readily, without excitement, and without rushing at the obstacle.

If the body of the rider is allowed to sway while jumping, the center of gravity of the rider becomes variable and uncertain. This naturally makes the jump more difficult for the horse. A fixed position of the rider's body during the jump is desirable in order that the horse may preserve his stability.

In order that the body may be braced against the shock of the "take off," in order that it may be prevented from swaying, in order that a fixed relative position of the rider's center of gravity may be preserved during the jump, and in order that the reins shall not be pulled on during the jump, it is necessary that the rider's body be inclined to the front before the horse "takes off," and remain in that position until the horse has landed.

To insure this it is often necessary that the stirrups in jumping exercises, be made very much shorter than for ordinary riding. With long stirrups a fixed position is difficult to maintain. It is also necessary that the body be inclined forward while the horse is approaching the obstacle, since the horse often "takes off" suddenly and before the leap is expected.

The above principles will be tested in this brigade.

By command of Brigadier General PARKER.

W. S. SCOTT,
Lieutenant Colonel, 1st Cavalry,
Adjutant.

INDOOR POLO.*

INDOOR polo has been played with great vim at the Durland and Central Park Riding Academies, this city, at the West Point Military Academy and at the Riding and Driving Club at Brooklyn, throughout this winter. On Saturday of last week the Durland team went to West Point and played the cadets, the latter winning by five goals to three. The Army's mounts were larger, and the cadets were keen in riding "off" their opponents throughout the contest. Corbin and King, of the Army, showed to the best advantage.

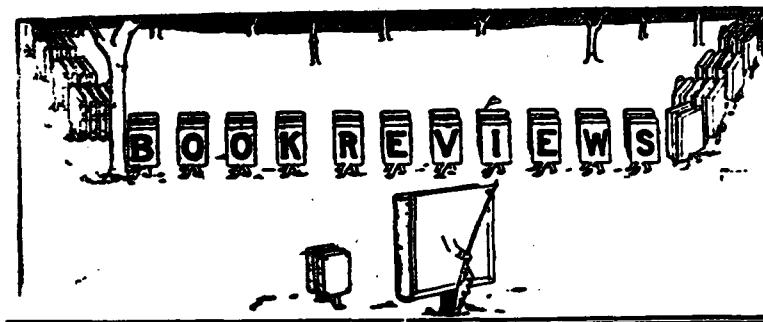
The game was preceded by an exhibition in fancy and rough riding by the cadets of the first class.

The line-up:

Army:	Durlands:
1. Corbin	1. Guggenheimer
2. King	2. Kenney
3. Parkinson	3. Sherman

First period.—No score. Second Period.—Army scoring: King, Corbin, Parkinson. Durlands scoring: Guggenheimer, Kenney (2). Third Period.—Army scoring: Corbin, King. Time of periods, three of 7¼m. each. Umpire.—L. T. Wilson. Referee.—Captain J. R. Lindsay.

*From the *Rider and Driver*, of February 27, 1915.



The
American
Army.*

This book was received for review as the last of the CAVALRY JOURNAL was going to press. It is, therefore, impossible to give but a passing notice of this important, instructive and interesting work in this number. A full and complete review will appear in the next JOURNAL of the Cavalry Association.

The reputation of General Carter as a ready writer and clear thinker is so well established that one naturally expects that a work of this character coming from him will prove valuable as an exposition of the needs of our country for an efficient army of suitable size and a system of reserves suited to our conditions. In this the reader will not be disappointed as a hasty scanning of the book shows that he has carefully considered and clearly describes the unsatisfactory conditions of our present system and indicates how it will result in failure in time of war. He proves, by numerous historical examples, that our lack of any well defined military policy in the past has resulted in unpreparedness for war and as a consequence, all of our wars, have been extravagantly expensive.

*"THE AMERICAN ARMY." By William Harding Carter, Major General, United States Army, author of "Old Army Sketches;" "Horses, Saddles and Brides;" "From Yorktown to Santiago with the Sixth Cavalry," etc. 294 pages, 5½" by 8". The Bobbs-Merrill Company, Indianapolis. Price \$1.50. net.

He maintains that, under the laws and regulation, to say nothing of the restrictions imposed by the Constitution of the United States, the so-called National Guard, the militia of the several states, can never be utilized properly and profitably as a part of our first line of offense or defense. He proposes a remedy for this, and the equally faulty system of procuring reserves now being tried out, by forming and maintaining a localized volunteer reserve that will be under the direct orders of the President, as regards discipline and training, the appointment of their officers, and their use at home and abroad in time of war or threatened war, the same to be entirely independent of the state officials. It is not possible, at present, to enter into the details of this plan as set forth in the book, nor to discuss the many other important suggestions made.

Due credit is given to our Regular Army for services rendered to their country, both in time of peace and war, although hampered by a system, or lack of system, that at times almost paralyzed it.

The volume is dedicated to *George Washington*, "whose customs of war have come down through the generations to mark all that is noblest in the ethics of the American Army." The caption of each of the seventeen chapters is a trite excerpt from the writings of Washington which are pertinent to the subject being considered.

The book is well printed, in large readable type, on good paper, and is remarkably free from typographical errors, showing that the General's experience as Editor of the *CAVALRY JOURNAL*, as well as in preparing his numerous writings for the press, has been of service.

The book should be in the hands of every army officer, but more particularly should it reach every statesman or others interested in the welfare of our common country.

E. B. F.

St. Privat,
German
Sources.*

This book of 498 pages—5½" by 8½"—was translated from the German by M. S. E. Harry Bell, Librarian's Assistant in the Library of the Army Service Schools, and as is usual with his work, it has been well done.

The purport of the work is set forth in the preface by Lieutenant Colonel W. A. Holbrook, Director Staff College, as follows:

"The publication of this collection of translations was undertaken in pursuance of the policy of making available in the English language the materials necessary for the intensive study of the history of modern wars for the use of students at the Army Staff College. Nearly all of our officers read French and can profit by the extensive publications issued by the Historical Section of the French General Staff. The German sources are however a sealed book to many of our officers. The plan has been therefore to give herein the German side and bibliographical notes to guide the reader to the best books on the French side.

"The documents included in this collection were selected by Captain A. L. Conger, with special reference to its use by the Staff College students. Captain Conger was unable however to supervise its publication as he was ordered to a Texas maneuver camp at the time the Service Schools were broken up in May, 1914, just as the printing was begun. That the publication of it was not then given up is due to Mrs. Conger who volunteered to continue the work of editing and checking the translations, so essential in all historical work, adding footnotes and cross-references and doing the proof reading.

"The printing of such a volume is a severe tax on the limited facilities of the Staff College Press. That it has been possible in addition to the heavy routine demands is owing to the enterprise and efficient management of the press by the Secretary, Captain A. M. Ferguson."

"ST. PRIVAT—GERMAN SOURCES." Translated by Master Signal Electrician Harry Bell, U. S. Army. Staff College Press. Price \$1.00.

The book has two maps in a pocket. One is a sketch map of the country around Metz, principally to the west and north-west of that place. The other is a copy of the German General Staff map accompanying Vol. V, of Military History and Tactics, and is a contoured map showing the country around St. Privat.

The book is well printed in clear type on good paper. The price at which the book is sold by the Book Department of the Army Service Schools is ridiculously low. However, our officers should remember that this Book Department is run for the benefit of the officers of the army and not as a source of profit.

Study of Government.* Professor Holt of the United States Military Academy, in his recent work, "An introduction to the Study of Government," has been perhaps too modest in his choice of a title. The book, while it is all the author claims for it, goes somewhat beyond and will serve as a valuable hand-book for those who, while not studying the science of government, desire to refresh their memory or obtain data which the various appendices afford, and which would require a long search in various sources, if Professor Holt had not tabulated them for our information.

It would have been interesting, had the scope of the work permitted the author to extend his remarks in connection with the military functions of government and touch on the question of a nation depending for protection on a volunteer army raised in an emergency. The author says on page 269, "Armies voluntarily enlisted are, it is logically argued, immensely superior to those gathered by compulsory service laws, for a relatively small proportion of shirkers enlist and the army is composed of men who inately love the life." Professor Holt

"AN INTRODUCTION TO THE STUDY OF GOVERNMENT." By Lucius Hudson Holt, Ph. D., Lieutenant Colonel United States Army. Professor of English and History, United States Military Academy. The Macmillan Company, New York. Price \$2.00, net.

from his knowledge of history could have shown that the number of able-bodied men who enlist for the love of a military life is comparatively small, and that while most excellent armies of relatively restricted size may be raised from such men, our country at least cannot count on a long continued and substantial war being waged by men who will spontaneously rush to the colors, either for a love of their country or a love of military life.

It would seem time for our educators to be allowed to drop the teaching of smug, self-complacent views of patriotism, which deceive a large proportion of our citizens with the belief that we have always had an overwhelming body of patriots ready and eager to serve their country. Now that George Washington's cherry tree is admitted to be apocryphal, let the true facts of the recruiting of our patriot armies of the Revolution and of the Civil War be brought before the public in the hope that some of those Americans who feel secure in the belief that many millions of able-bodied men stand ready from purely patriotic motives to defend their country at its call, may learn that these millions will not materialize if history can teach us anything. When we next go to war, as of course some day we are sure to do, many men will volunteer from patriotic motives, but a very much greater number will not. The number of soldiers needed in our time for war is no longer to be numbered by the thousands, but by the millions.

Neutral Nations.*

Lord Bryce in a pamphlet entitled "Neutral Nations and the War," has the weight of his argument on the side of those who seek to show the fallacy of certain of the German contentions, political, ethical and politico-military, which have been offered to sustain the position which Germany has taken in justification of the existing war.

"NEUTRAL NATIONS AND THE WAR." By James Bryce, author of "The American Commonwealth;" "South America—Observations and Impressions," etc. The Macmillan Company, New York. 1914. Price twenty-five cents, net.

It would not be proper at this time, in a service publication, to formulate an opinion as to the right or wrong of the views held by the belligerents in Europe, but there can be no objection to saying that in "Neutral Nations and the War" Lord Bryce presents his views most clearly and shows the analytical powers of mind which his previous writings have led us to expect of him.

No student of the existing situation in Europe should fail to read the pamphlet and so become acquainted with what is said by one of the greatest thinkers of our time, who has ever been an advocate of peace and whose training and public services are such as to permit him to speak ex-cathedra on international questions.

**Germany
and
Europe.***

This is another "justification" of the course of one of the European Nations (England) for her share in bringing about the present European War. It is written by the Lecturer in Modern History at Bedford College, University of London.

The general character of the discussion makes one think of Dr. David Starr Jordan finding the United States at war and trying to square his allegiance to the country with his past ideas and writings—at so much royalty per volume.

Every attempt is made to be just to Germany as well as England, even to proposing terms of peace that shall be most moderate. There is a long discussion of the inadvisability of permitting the Allies to require a large indemnity of Germany or of taking any of her territory. To secure a lasting peace it is proposed that the future map of Europe be arranged on racial and linguistic lines.

Toward the end of the outline of this disinterested and humanitarian program these illuminating quotations may be found from which one may make his own deductions:

"GERMANY AND EUROPE." By J. W. Allen, Barclay Lecturer in Modern History at Bedford College, University of London. G. Bell & Sons, Ltd., London. 1914.

"Before the war, Germany was our best customer; and the loss of that custom is, economically, the most serious feature of this war for us. The more we load Germany with indemnities the less quickly that trade will revive."

"Not only such newly formed States, but all the existing small States of Europe, should be neutralized by agreement among the great Powers, secured from attack from any quarter by the most explicit provisions of International Law, and at the same time their freedom should be restricted in certain ways. No such neutralized and guaranteed State should be allowed to institute commercial protection and set up tariff walls against its neighbors. Free trade should be imposed upon them in return for the guarantees given. * * * I do not see that any injustice would hereby be done."

"Already we have a position in which it would be hardly possible with justice to refuse to allow South Africa to take German South West Africa, if she really wishes to do so, or to refuse to allow Australia to keep the Bismark Archipelago or German New Guinea. Such transfers are not, of course, of the same nature as transfers of territory in Europe. No radical injustice is necessarily involved."

Anyone who is further interested should purchase the book.

**The
World
War.***

We haven't the slightest idea who Elbert Francis Baldwin might be, but, small matter, he is an American, and has given us what, on the whole, is one of the most impartial and sensible contributions on the great war and its causes. At the moment, when the market is flooded with controversial literature anent the war, its causes, conduct, effect, and what not, it is a relief to read the calm, dispassionate views of Mr. Baldwin.

The author gives a clear resumé of the causes that led to the war and adds personal observations and comments on the

"THE WORLD WAR. How it Looks to the Nations Involved and What it Means to Us." By Elbert Francis Baldwin. The Macmillan Company, New York. Price, \$1.25, net.

attitude of the people in the various countries, which make very interesting reading.

One of the most interesting features of the book is the chapter devoted to a comparison between the English and the German Press and that devoted to "What does the War mean to us?"

"The lesson for America," says the author, "is to be the just man armed. We need a strong navy as a national insurance to protect our coasts and our commerce, and to fulfill our international obligations * * *"

"We may not need a proportionately strong army, but we do need a more adequate army. * * * Military training for all the American youth—more for an education in obedience, self-restraint, endurance, courage, than for any possible use in an exigency. * * * Our new and deservedly successful system of army camps for college students points the way. * * * We need a close coöperation between our federal forces and the state militia" * * * "We need to fill up the regiments of our present army to their full quota * * *." "This is not militarism, unreasonable, brutal, destructive; it is reasonable, self-respecting preparedness.

"We need to do all this not for military but for civil ends and by civil authority. We need to do it first, so as to uphold our own public law, for no country has every fully protected the rights of its own citizens which has not prepared itself for possible defense against foreign aggression. But we need also to be prepared to uphold the public international laws which guard the common life of humanity. To protest against the violation of those laws may even be worth imperiling the nations existence."

To quote more would be futile—read the book instead, it is well worth it.

W. K.

War and Empire*

An able exposition of England's views of her military and naval necessities as they appeared to their commanders just before the present great war began.

The frontispiece is a map showing all the British possessions and outlining the sea routes and cable and wireless communications that connect them and weld them into a single complete unit. The text then goes on to show how all parts can be best used in either land or naval warfare.

The main note of the book is the defense of the Empire, which, the author points out, may, nevertheless, be possible only by prompt offensive action.

As a general, non-technical exposition of the relation between land power and sea power with the use of the two combined as applied to a particular case, England's, it would be hard to find this book's equal.

Army officers will find here some valuable information relative to transportation of troops by sea, time necessary for embarkation and disembarkation, carrying capacity for troops of different classes of vessels, etc., taken from British experience.

A few quotations are here added to show the general character of the discussion and how fully most of it can be applied to the situation of the United States today:

"It is of little avail to defend oneself against an enemy unless you are prepared to attack him sooner or later. He may be foiled, but never overcome, by passive defence, which may make an enemy fail in one attack, but will not prevent him from repeating it when and where he likes. To guard yourself is not to beat your enemy, as any boxing match shows."

"Defence to be successful implies war—hard hitting at the right place and the right time."

"Coast defences may become sources of weakness by diverting expenditure from essential requirements * * * warping national aims, and misleading public opinion. The palpable

"WAR AND THE EMPIRE. The Principles of Imperial Defence." By Colonel Hubert Foster, R. E., Director of Military Science in the University of Sydney, late Quartermaster General, Canada; Military Attaché in the United States, etc., etc. Williams & Norgate, London. 256 pages. 5" by 7 1/4". 1914.

and visible means of protection that coast batteries seem to provide appeal to uninstructed minds with much greater force than the seagoing navy and the field army, on which national security must ultimately depend."

"The real difficulties in forming an army do not lie, as usually imagined, in raising, equipping, and despatching men willing and able to fight, but in the organization, administration, and staff work required to make them available at the front."

This book has a place in any military library. Any officer will be glad to have read it and will do well to recommend it to the attention of his civilian friends.

E.

How Belgium Saved Europe*

An authoritative expression of views by one of the leading Belgian scholars. The author proceeds to show how Belgium did save Europe and his views may, no doubt, be considered representative and in a sense semi-official as they have the indorsement of the Belgian Secretary of State who wrote the preface to the book.

Belgium believes that she was left in the lurch by the Allies; that the French made a grievous mistake in advancing into Alsace-Lorraine; and that in consequence Belgium was left alone to stem the tide of Teutonic invasion. This idea crops out continually in the book. Says Dr. Sarolea:

"The French Army hypnotized by Alsace-Lorraine and mainly concerned about the immediate liberation of the Alsatian people made a forward movement toward Mulhouse which could not be followed up, which could only result in a patriotic demonstration and a spectacular display and which could not

"HOW BELGIUM SAVED EUROPE." By Dr. Charles Sarolea, Ph. D. (Liege), Litt. D. (Brussels), Belgian Consul at Edinburgh. With a preface by Count Goblet D'Alviella and an appendix by Gilbert K. Chesterton, taken from the London Illustrated News, entitled "The Martyrdom of Belgium." J. B. Lippincott Company, Philadelphia and London. Price, \$1.00, net.

yield any decisive military advantage. In consequence, the northern French frontier was nearly denuded of troops, and a mighty tidal wave of two million German soldiers threatened the plains of Belgium and France. But for Belgian heroism, that mighty tidal wave would have carried everything before it. If ever there were an historical event where it was possible to trace the direct connection between cause and effect, this was preëminently such an event. In literal fact, it is Belgium which saved Europe."

And in another place: "Although Belgium is fighting the battles of Europe; Europe, mainly owing to the initial French mistake, is not in a position to fight the battles of Belgium. For strategic reasons Belgium must be left to her fate."

The Belgians believed that they were simply to hold the invader in check until the Allies could get ready and come to their assistance, but the expected support never came. To quote:

"It was always understood that the only function of Belgian defense was to delay the German advance and to give the Allied Armies time to rush to the rescue. The theory was that, if the Germans could only be held up for forty-eight hours, Belgium would have played its allotted part. They not only did their duty, they did more than their duty. They held up the German advance for forty-eight hours, for five days, for fourteen days. But the Allied troops did not come to succor the Belgians in their desperate plight. * * * It was always the same question which was on everybody's lips: 'Où sont les Anglais? Où sont les Français?' But both the French and Sir John French were too far away to help the two thousand little Belgian gunners shut up in their cupola forts, isolated from the rest of humanity."

Of course, the Belgians could not be told the real reason for the absence of Allied support, for the truth was that the Allies were not ready. So, instead, they were told that both French and English were prevented from cooperating, from supporting them, for "strategic reasons." "They were told that the general plan of campaign had best be carried out independently of Belgium; that it was better that Belgium should be

left to her fate; that the occupation of Brussels was merely a spectacular display; and that it was better far that Brussels, which was undefended, should be taken than that the Germans should threaten the capital and stronghold of France."

The author does not pretend to be neutral or impassive—he tells us that quite frankly in his introduction—and that is scarcely to be expected, but he gives his views with sincerity. When he tells us that although self-interest should have prompted Belgium to side with Germany in the approaching struggle, she chose to do her duty, to fight to maintain her neutrality, to fight with honor rather than surrender with dishonor, and that she is still fighting though left to her fate by the Allies; his story becomes pathetic.

By no means the least note-worthy feature of the book is the fact that the author does not condemn the Allies for not coming to the rescue of his country, though he freely voices his opinion that the resistance made by his people gave both France and England an opportunity to get ready to defend their own, than in fact, his country saved them.

The book is well printed and well worth reading.

W. K.

Modern Horse Management.*

A new book on the never finished subject of the horse. The introduction by Major General F. L. Lessard, G. B., establishes the author as a connoisseur of horsemanship and horsemaster-ship, which, to the uninformed, is a distinction without a difference, but to the trained, it means much.

The late Prof. Savigear wrote the preface and in it he says that after fifty-six years of experience of schooling, he feels that there is still much for him to learn, a sentiment rarely shared by most riders. He further says: "I strongly advise riders to

"MODERN HORSE MANAGEMENT." By Reginald S. Timmis, Royal Canadian Dragoons (Regular Forces). With an introduction by Major General Lessard, G. B., and a preface by the late Prof. Alfred Savigear, formerly Chief Riding Instructor to R. M. Colleg. R. H. A., Staff College and 17th Lancers. 466 photographs, plans and drawings. Cassell & Company, Ltd., London, New York and Toronto.

read the author's notes on riding. Were it not for his ability and calm methods adopted in riding young horses I would never have allowed him to ride so many of my young horses.

* * * May I emphasize the three important qualifications that a horseman should possess, and which fact the author strongly impresses upon his readers—good hands, good seat, and a perfect control of temper when working with horses?"

The book contains nineteen chapters, covering the several subjects of: History of the Horse; Psychology of the Horse; Foods and Feeding—Exercise and Transport; Grooming and Stable Management; Driving and Harness; Riding and Saddles; Stable Construction and the Circulatory System; Surgical Diseases, Lameness, Teeth and Conformation; Pharmacopoeia and Uses of Medicine; General Diseases—Organic, Functional and Contagious; Anatomy and Use of the Horse's Tail; The Crime of Docking Horse's Tails; Opinions of Eminent Men, Books and the Press on Docking; Humane Education—the Law; Anaesthetics and Anaesthesia—Humane Destruction; Bacteriology, Antiseptics and the Theory of Disease; Shoeing and Care of the Feet; Use and Abuse of Bearing Reins.

There are 466 photographs, plans and drawings of all classes of horses. The collection of these meant much work but makes the book most entertaining as well as instructive. Plate No. 60 shows the mounts of five of our cavalry officers, these being those of Captains Short, Henry and Lear; and Lieutenants Scott and Merchant. These were taken at the Mounted Service School at Fort Riley.

Round Table.*

The *Round Table* for September, 1914, is presented as a special war number.

As indicated by this latter title, the entire contents of the number is devoted to articles bearing on the present war and embraces subject matter predicated on general

"THE ROUND TABLE—A Quarterly Review of the Politics of the British Empire." Special War Number. September, 1914. Macmillan & Co., Ltd. London and New York. Price 2s. 6d.

considerations of the right of the situation, from the British point of view, as well as on special conditions obtaining in the United Kingdom, in Australia, in South Africa and Canada. To many, the article on "Lombard Street in War" will be of peculiar interest as a study of the financial aspect of England at war.

In the article entitled "The Austro-Servian Dispute," we find a foot note, on page 673, which might mislead the reader, if he be not entirely familiar with the Hague Conventions. The footnote has reference to a statement in the text: "The German contention that Austria-Hungary could not be summoned before a European tribunal, was probably put forth in perfect good faith by Berlin; but it shows a failure to reckon with the facts of the situation, since on the one hand it ignored the all important precedent of the Dogger-Bank," etc., etc. The foregoing has reference to the offer of Serbia, as stated in the text, to submit certain points of her reply to the Austrian ultimatum, to the "decision" of The Hague Tribunal. The Dogger-Bank case, which arose from the action of the Russian fleet during the Russo-Japanese War, in firing on certain British fishing boats, was not referred for a decision to The Hague Tribunal, but to a Commission of Inquiry, provided for by The Hague Convention—a very different thing. Where a case is submitted to The Hague Tribunal, it is contemplated that there shall be a judgment, which by the fact of the submission of the case, is to be binding on the parties. The report of the Commission of Inquiry, on the other hand, is limited to a statement of facts and is not in the character of an award.

In the Austro-Hungarian-Servian case it is not understood that a question of fact was presented but that a point to be determined was the extent to which the latter state, without a total loss of self-respect, might permit Austria to intervene in its domestic affairs.

The summary of the English White Book, given in this issue, will be interesting to those who have neither the time nor the curiosity to read the original, containing as it does many dispatches, etc., which are of small interest to the general reader.

Peace Insurance.*

This is a small book of 214 pages—5" by 7½"—which deals principally upon the unpreparedness of our country for war and the remedy therefor. A full discussion of the book, therefore, is restricted by the requirements of General Orders No. 10, current series, from the War Department. Consequently, it will be possible only to give a mere outline of the contents of the book and a few extracts from the preface.

"When one studies these things and attempts to express one's thoughts, the result is but a repetition of the perhaps forgotten writings of notable men, both ancient and modern, both American and foreign. All that is left, therefore, is to apply these old, undying facts to things as they now exist, and in this case to the United States in particular. Nor is it necessary for me to express vague, unproven theories of my own. The approved authorities, even, in fact, my opponents, support me. I have, therefore, no apology to make for numerous quotations from great men and authorities—soldiers, statesmen, scholars, philosophers of the present and the past. I but thank them for expressing what, mayhap, was beyond me.

"Similarly, as Professor R. M. Johnson, of Harvard, remarked in a letter to the author, 'I oppose not the pacifist, but the pacifimaniac.' I wish every success to those who strive to bring about the radical changes necessary for universal peace, but I warn again imaginary things which are not, and, in our life, can not be."

The several chapters of the book cover the following subjects: Is an Army and Navy a Burden During Peace? A less expensive substitute for trained forces. The likelihood of war today; Will war ever be abolished? Underlying causes of war; The cost of war and its horrors; Some advantages of military force and of war; The slaughtering of the soldier; "Common people" and military force; The military history of the United States; Economy of the recommendations of the General Staff; The recommendations of the Naval Board; Demagogue versus Statesman; Conclusions.

"PEACE INSURANCE." By Richard Stockton, Jr. A. C. McCurg & Co., Chicago. 1915. Price \$1.00, net.

RECEIVED FOR REVIEW.

"Field Sanitation—A Manual for Non-commissioned Officers." By James Sprigg Wilson, Major Medical Corps, U. S. Army. Fourth Edition. Illustrated. George Banta Publishing Co., Menasha, Wis. Price, \$1.00, postage paid.

"Military Field Note Book." By Lieutenant George R. Guild and Robert C. Cotton. Adapted for the use of Officers and Enlisted Men of the Forces of the United States. First Edition. 1914. Price seventy-five cents. George Banta Pub. Co., Menasha, Wis.

"A Working Knowledge of Spanish." By Lieutenant Cary I. Crockett, 2d Infantry. Second Edition. Revised. 1915. George Banta Pub. Co., Menasha, Wis.

"Attack and Defense of Fortified Harbors." By Captain Arthur P. S. Hyde, C. A. C., Inspector-Instructor of Coast Artillery Reserves, National Guard of Washington. The Seattle Times Printing Co. 1914.



HORSE INSURANCE.

At the last Annual Meeting—January, 1915—of the Army Coöperative Fire Association, a proposition was submitted to have considered by the Association the question of insuring the mounts of officers against loss by disease, accidents, etc. This proposition was not formally submitted as proposed amendments to the Constitution of the Association, but rather for the purpose of obtaining an expression of opinion as to the feasibility of adopting some scheme along this line.

The matter was duly considered, but a motion to appoint a committee to consider the question was rejected, and a resolution was adopted to the effect that it was the sense of the meeting that such insurance was entirely foreign to the aims of the Fire Association and one in which a large percentage of the members would not be interested.

Since that meeting, several of our officers have broached the question of having the matter discussed through the medium of the CAVALRY JOURNAL with a view of either forming a separate Association for horse insurance or, as some have suggested, of having the Cavalry Association take up such insurance as a part of its functions.

There are such insurance companies but up to the present time, we have been unable to get in touch with but two, the Atlantic Horse Insurance Company of Providence, R. I., and the Indiana and Ohio Live Stock Insurance Company of Crawfordsville, Ind. From the Secretary of the former we have learned that their rate is "\$8.00 per hundred on animals to be used in the military service, not to be covered in time of

war." Nothing is said as to the conditions of such insurance and whether or not it covered death only, or accidents, etc., as well. Their promised blanks and other literature has not been received.

It appears from an examination of the several policies issued by the latter of the two above named companies, in favor of Captain G. B. Pritchard, Jr., Tenth Cavalry, that their rate for insuring horses is \$6.00 per hundred, the animal, however, being only insured for two-thirds of its value. In one case they insured a horse, while in transit between stations, at a rate of \$2.00 per hundred for the period of transit, as per the following notation on the policy:

"It is hereby agreed and understood that this contract is made and entered into for the special purpose of covering the within described animal while in transit between Lexington, Mo., and Seattle, Washington, the Company's liability to begin when the animal is loaded for shipment and cease when animal arrives at its destination."

In all of their policies there are the usual complex and multitudinous conditions that are found in all policies, life, fire, etc., and which require constant care and watchfulness to escape the voidance of the policy. The following is one of the ten paragraphs of conditions, which, however, contains the principal points covered:

"This Company shall not be liable for the death of any animal hereby insured which shall be occasioned by the negligence or carelessness of the assured or of his agent, servant or employee; nor for the death of any animal hereby insured, the age of which or the use of which shall be different from that stated in the application or the cost of which or the value of which shall be less than that stated in the application; nor for the death of any animal hereby insured resulting from disease, sickness or accident if the assured shall have failed immediately upon the discovery of such disease, sickness or accident to employ a competent veterinary to attend said animal or shall have failed to give immediate notice in writing to the Secretary of the Company at the Home Office in the City of Crawfordsville, Indiana, of the fact of such disease, sickness or accident, stating therein also the name and address of the veterinary employed; nor for

the death of any animal hereby insured, resulting from castration or resulting from sickness or disease contracted or injury suffered prior to or upon the day this policy is delivered to the assured; nor for the death of any animal hereby insured which shall be killed by any officer or other person claiming to act under and by virtue of any law or any rule or regulation of any board of health or any other legal authority, or which shall be killed by authority or direction of any such officer or person unless the assured shall before such killing first obtain a certificate in writing, signed by a registered veterinary, stating that the animal is in such a crippled, maimed or diseased condition that it is thereby rendered permanently useless and worthless, and shall immediately forward the same to the Company with the notice of loss hereinafter required; nor for the death of any animal hereby insured, which shall be killed by any officer, veterinary or other person or by his authority or direction under claim that such animal is afflicted with glanders or other dangerous communicable disease, unless the Company be first notified of the intention of killing said animal and be given opportunity to inspect the same; nor for the death of any animal hereby insured which shall have been removed from the state or territory where the same was kept at the time of procuring this insurance unless such removal shall have been first authorized by the written consent of the Secretary of this Company endorsed on or attached to this policy."

Those of our members who are interested in this matter, or who have any knowledge of other companies, their terms, etc., are requested to communicate with the Secretary of the Cavalry Association.

OUR ANNUAL MEETING.

The Annual Meeting of the U. S. Cavalry Association was held at Fort Leavenworth, on January 18, 1915.

The annual report of the Secretary and Treasurer was approved and ordered printed. It showed that the Association had held its own in financial matters during the year, 1914, notwithstanding the fact that the receipts from advertising had fallen off largely, due to the universal business depression throughout the country. The business of the Book Department, however, was larger than ever before and the profits from it more than made up the loss from advertising.

The principal business that came before the meeting was that of the votes on the proposed amendments to the Constitution of the Association to move the headquarters of the Association from Fort Leavenworth to Fort Riley, and the, more or less, dependent amendments as regards the membership of the Executive Council. All of these amendments failed of adoption; the first one, regarding the change of headquarters, by a vote of 132 for the proposition and 215 against it. While the other propositions received a varying majority for adoption, none, except the last, received the required two-thirds majority and were, therefore, not adopted. The last, the one regarding the subscription to the JOURNAL of the Association, was almost unanimously adopted.

Regarding these proposed amendments, the Secretary, in his annual report, said:

"The votes on the proposed amendments to the Constitution of the Association, together with a tabulation of the same, are herewith submitted. From the tabulation, it will be seen that but one of the proposed amendments has been adopted, this one being that regarding the subscription to the JOURNAL of the Association. None of the other received the necessary two-thirds majority and the two relating to moving the headquarters of the Association to Fort Riley failed to receive a majority. It will be observed that less than one-half of the *regular, active* members, those

only being authorized to vote on amendments to the Constitution, sent in their votes.

"Furthermore, quite a number of those that sent in their proxies left the matter in the hands of their proxies to vote, as they thought best. Also, not a few indicated that they desired to vote for or against the proposition to move the headquarters to Fort Riley according as to whether or not the present Secretary, Treasurer and Editor preferred to continue in office and go with the headquarters to Fort Riley. While this is very flattering to that official, yet it is believed that it should have had no influence in passing upon the merits of the scheme. The question at issue was as to which place is the better for rousing and maintaining a greater interest in the Association and its work.

"As was indicated in the circular publishing the proposed amendments and calling for a vote on the same, the atmosphere of these two stations, Fort Riley and Leavenworth, is, in many respects, and necessarily will continue to be very different. At the former station is the School of Equitation where there is very little theoretical instruction, comparatively speaking, and where the Instructors and Student officers are mainly interested in what pertains to the horse, his training, care, conformation, etc., etc., while, on the other hand, the Instructors and Student officers at Fort Leavenworth are mainly engaged in theoretical and practical work along other lines. Which of these two surroundings is the best for the Association was and should be the question for consideration. To be sure there were other minor considerations, such as the facilities for the transaction of the business of the Association, that of office and storage room, etc.

"A few sent in their votes in favor of Washington rather than either Fort Riley or Fort Leavenworth, but as no formal proposition had been submitted for amending the Constitution in this respect, these votes have not been included in the tabulation."

Regarding the change of the CAVALRY JOURNAL from a bi-monthly to a quarterly, which was made during the year, 1914, the Secretary, in his report, said:

"The publication of the JOURNAL of the Association was changed from a bi-monthly to a quarterly, commencing with the July, 1914, number. The experience had in publishing the JOURNAL as a bi-monthly during the five preceding years had convinced the Executive Council that a mistake was made when the change to a bi-monthly was made in 1909. Some of the leading members of the Association, some of whom had been Editors of the JOURNAL, then predicted that it would be found difficult, with our comparatively small number of contributors, to keep a bi-monthly JOURNAL up to a proper standard and that it would become necessary to pad with reprints, etc. It was soon evident to your Editor and the Executive Council that this prediction had come to pass, but still they hesitated about going back to a quarterly for fear that it might be considered a step backward and that the JOURNAL might lose prestige thereby. However, there is no doubt in the mind of your Editor that the change had to come sooner or later.

"No change in the subscription price for the JOURNAL owing to the less frequency of its publication, had been made as yet. This because, first, of the large falling off in the receipts from advertising, due to the universally hard times that has prevailed in the business world, and, second, because it is hoped that the former practice of paying for acceptable articles might be resumed."

The following officers were elected for the ensuing year:

<i>President</i>	Brigadier General JAMES PARKER, U. S. Army.
<i>Vice-President</i>	Major N. F. McCLURE, Fifth Cavalry
<i>Members of the Executive Council:</i>	Major E. S. WRIGHT, First Cavalry.
	Captain H. LA T. CAVERNAUGH, Tenth Cavalry.
	Captain LE R. ELTINGE, Fifteenth Cavalry.
	Captain S. HEINTZELMAN, Sixth Cavalry.
	Captain W. S. GRANT, Third Cavalry.

VARIOUS TOPICS.

RETURNING OFFICERS' MOUNTS FROM THE PHILIPPINES:

Several years ago Captain J. S. Herron, Second Cavalry, then on duty in the Philippines, took up the matter of having the restrictions as to the landing in the United States of animals of any kind from the Islands modified as regards officers' mounts. The arguments he then set forth in favor of such modification of the regulations of the Department of Agriculture on this subject are as pertinent now, if not more so, as at that time. They are as follows:

"Referring to the Special Order of December 13, 1901, of the Honorable the Secretary of Agriculture, Washington, D. C. (B. A. I. Order No. 92), prohibiting the landing of live stock or animals of any kind in the United States or Territories or dependencies thereof from the Philippine Islands until otherwise ordered, I have, the honor, after mature consideration, and if not inconsistent with the policy of the War Department, to recommend that the question be considered of requesting of the Honorable Secretary of Agriculture an amendment permitting officers' private mounts to be landed when of a value exceeding say one hundred and fifty dollars, under such restrictions, inspections, quarantine regulations, and at such port or ports only as he may prescribe.

"The undersigned has presumed to take up this important subject largely because, he is familiar with the circumstances under which the prohibitive order was issued, having been the representative of the War Department to the Department of Agriculture in this matter in 1901.

"The order was, it is believed, a wise temporary precaution to be taken at that time and until more knowledge could be acquired about this then almost unknown danger. Nine years of study, research and practice by the Department of Agriculture, and by the veterinary profession generally have now elapsed and it is believed that, with the exception of finding a specific, the disease is thoroughly understood. It is believed that if the period of incubation is less than the time taken by a transport

to sail from the Philippine Islands to the port of destination there will be no cases of surra to arrive.

"The periods of incubation in naturally contracted cases given by different authorities are five to eight days. Moore, 1906, gives six to eight days; Law, 1906, gives five to seven days.

"Surra suspects are isolated no longer than twenty days in the Philippine Islands by existing orders.

"As the voyage from the Philippine Islands to the United States consumes thirty days or more it is believed the voyage itself would be ample quarantine. It is needless to state the importance of this question to all mounted officers and to the army generally, not only financially but in the interest of encouraging what is believed to be a much needed improvement in mounts of officers."

THE RASP:

One of our members writes regarding the discontinuance of the publication of "*The Rasp*," as follows:

"I had a letter from Riley a short time ago, saying the *Rasp* would not probably be published again by the School, but that the JOURNAL would probably take it over. This would be all right if the Association headquarters are moved to Riley. In any case I hope that you will take the fight up and insure the continuance of the *Rasp*. Its discontinuance would be a distinct loss to the cavalry. Lack of time was given as the reason for the discontinuance, but it seems to me that it should be continued, even if some time must be taken from the school work. It helps to disseminate the teachings of Riley in the Service and that is exactly what Riley is for. It is for the entire Mounted Service and is not for the sole benefit of the limited number who have the opportunity to attend the school.

"After the arrival of this year's *Rasp* a very noticeable amount of discussion took place in this regiment. As a matter of course the graduates were drawn into it not only for their opinions but also to clear up and amplify points made in the various articles in the *Rasp*. It is a very healthy stimulation to the

interest in the subject of riding. Without any particular person in mind and without animosity, I ask 'Have not some of the people at Riley forgotten the real reason for the Mounted Service School, viz., that it is for all the mounted services and not for the lucky few who are able to attend?' "

HEADQUARTERS TO FORT RILEY:

The following is from one of our Captains of Cavalry:

"I am enclosing my vote on the proposed amendments to the Constitution of the Cavalry Association, and in doing so I feel that a few words of explanation and apology are due you.

"With your duties as Librarian at the Army Service Schools I suppose you would not care to still continue to edit the JOURNAL at Riley, and in losing your services I believe the JOURNAL will lose a great deal that will be hard, perhaps impossible, to replace, and we are going to miss you.

"But do you remember a conversation we had a long time ago, while we were together at Leavenworth, about the lack of interest shown by the younger cavalry officers? I remarked then that I thought that most of the material in the JOURNAL shot over the heads of the younger element and that they wanted more horse talk and illustrations. I believe the Riley atmosphere will tend to bring out more of this and I believe the JOURNAL would soon show a decided increase in circulation.

"I see no good reason however why the War College should have a hand in the running of our JOURNAL, and for that reason I have not voted on that amendment. I should like to see the Executive Council composed of seven members, four to be stationed at Riley on Duty at the Mounted Service School, and three to be from those cavalry officers on duty at the Army Service Schools."

Another Captain writes on the same subject, as follows:

"I do not care to vote on these proposed amendments. A change to Fort Riley would accomplish little. In my opinion the JOURNAL should be located in Washington where it could keep right up-to-date and being so have some influence on

cavalry matters and proposed legislation in reference to the cavalry.

"The two most important branches of the JOURNAL should then be in Riley and Leavenworth.

ONE LIST FOR PROMOTION:

One of our members believes that the present is an opportune time to again revive this subject. Regarding it he writes:

"A rumor has reached us that Mr. Anthony says that the army will be increased shortly by 50,000 men, but that there will be no increase of cavalry. Now why isn't this a good chance to get through that *one-list* proposition and the one giving all branches a chance at the benefits of any increase? In a word, the General Staff bill. I admit that I think that it would help me, though with my age I am bound to be up in the cavalry service in time if I stick. But the resultant good to the whole service and in consequence to the country at large is to my mind immense. A policy could then be adopted without regard to any one individual's gain and we would get something tangible. When I was more in touch with matters while at Fort Leavenworth it looked at one time as though we might get something like that, but so far as I now know that died a natural death. Why can't you, who are in touch and know the past work in that line, push it along. With Mr. Anthony there and with the other people you know, this is the time that looks favorable to me!"

A MILITARY PROPAGANDA:

The following is from one of our members, whose suggestions are wise. At the same time those taking up the matter should be careful not to violate the present orders and restrictions from the War Department as to publications, discussions, etc., on the preparedness or unpreparedness of our country for war.

"It seems to me that the time is ripening for an increase of our military forces. There is, however, one opportunity for the spread of a military propaganda which has been overlooked by a great many of our officers, particularly those on detached service in or near cities which support daily papers.

"The present war in Europe is causing many of our thinking citizens to sit up and take notice on military matters. This manifests itself in requests for military officers to discuss the War and the Military Policy of the United States before business men and also by various letters written to the daily papers. In the latter case I have personally answered the letters and have sent literature such as they have never seen before. The result has invariably been a letter of thanks of which the following is a sample:

"I was very much pleased with your second letter and with the reading matter you sent. I have already read one of the pamphlets and part of another. The line of argument presented is very interesting and for the most part quite new to me. I feel in your debt, and shall remember your kindness with friendliness."

"All the people of the country need is enlightenment and we must give it to them.

"Now if our officers will take interest enough in the matter they could aid in a great degree, the spread of ideas and thus increase the chances of our getting a good army and a good military policy.

"The literature above referred to is sent by the War Department without cost and some of it is as follows: 'The Military Policy of the United States' compiled by Maj. E. M. Johnson, Inf. 'Facts of Interest Concerning the Military Resources and Policy of the United States,' by General Wood. 'Some Economic Aspects of War,' by H. C. Emery, Professor of Economics at Yale University. 'Pacifism and Militarism' and 'The Significance of Bull Run,' both by R. M. Johnston, Professor of History at Harvard University.

"There is a book by Professor Albert Bushnell Hart of Harvard University 'The War in Europe,' published by Appleton & Co., which is most excellent reading along this line and should be read by all officers. The cost is only one dollar."

CAVALRY SERVICE REGULATIONS:

One of our prominent members submits the following:

"Personally I hope that the Cavalry Service Regulations will die in June, but fear my hopes will be in vain. All the older officers realize that this hanging on to this new fad * * * is working a serious injury to the efficiency of the cavalry arm. Of course there is a lot of good in it that could be embodied in a revision of the old Cavalry Drill Regulations. I have taken the pains to inquire and find that the old officers are almost unanimous against this new scheme."



+ + **Publisher's Notices.** + +

Revere Rubber Co.

The attention of our readers is called to the advertisement of this firm which appears for the first time in this number of the CAVALRY JOURNAL. They are the manufacturers of the well known Rubber Horse-Shoe pad. Their claim that this pad prevents slipping, cures lameness and keeps the foot healthy is confirmed by many horsemen.

Henry Schick & Co.

A new firm of Military Tailors is in the field. They are prepared to furnish uniforms for the Army and Navy and make civilian dress a specialty. Mr. Schick was formerly with the well known firm of JOHN G. HASS.

James Reynolds—Insurance Agent.

MR. JAMES REYNOLDS, of Poughkeepsie, N. Y., appears as an advertiser in this number. He offers all kinds of Life Insurance and in any Company. He will furnish facts, figures and specimen policies upon application. He refers to a long list of Army Officers in all branches of the service.

Bobbs-Merrill Co.

This well known firm of publishers advertise in this number the late work of Major General CARTER, entitled "The American Army." An incomplete review of this book appears in this number of the CAVALRY JOURNAL. Every officer of the Army should read this work of an expert on military affairs and every statesman should read and study it. It contains much matter for reflection as to the needs of our country.

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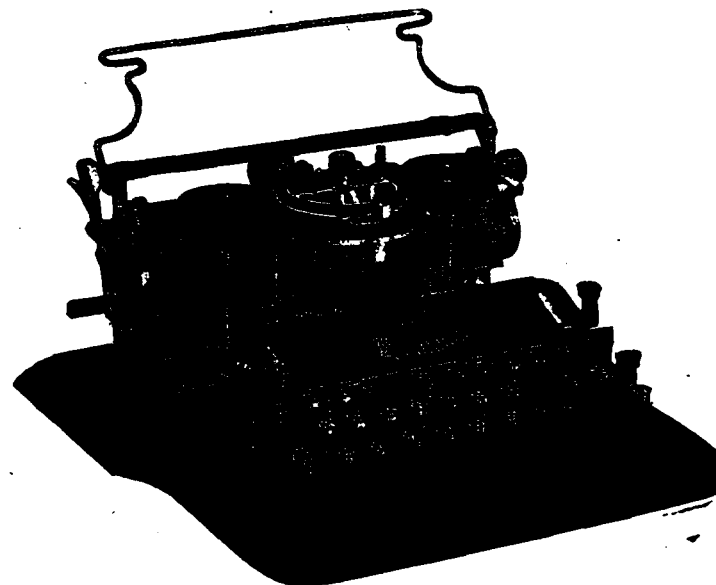
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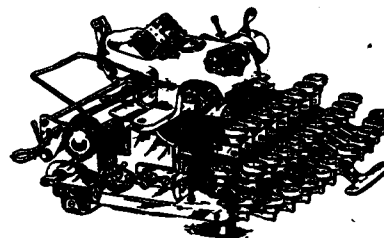
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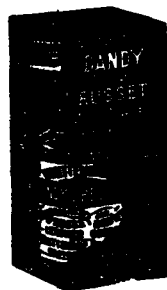
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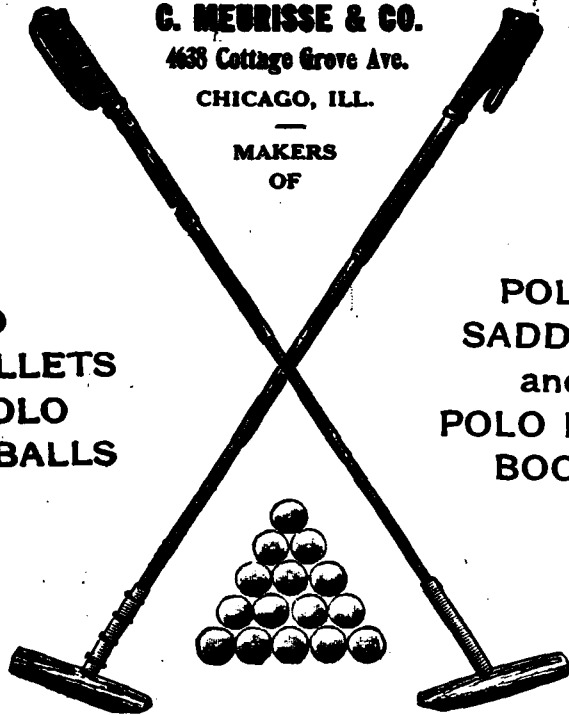
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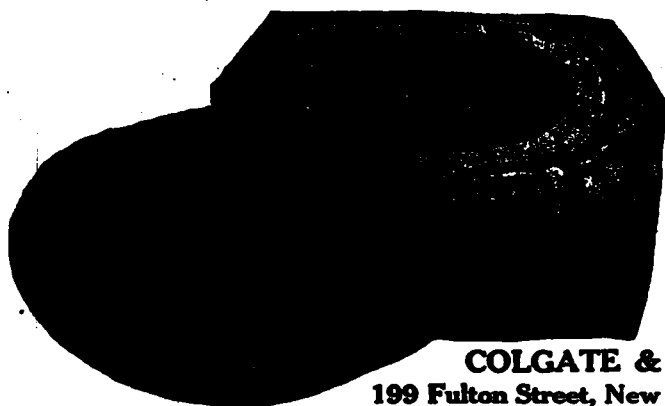
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No. 107

CAVALRY DRILL AND ORGANIZATION.

BY LIEUT. COLONEL FARRAND SAYRE, SEVENTH CAVALRY.

DISCUSSIONS of the proposed changes in the drill and organization of the cavalry arm during the past three years have worn the subject threadbare, but it is one which concerns cavalry officers nearly, and a full and free discussion of it is more important to us now than at any former period.

Some prejudice has undoubtedly existed against the drill contained in the Cavalry Service Regulations, 1914, because it is believed to be of foreign origin, and in favor of the drill in the Cavalry Drill Regulations because the latter is believed to be of American origin and the outgrowth of our experience in the Civil War. This prejudice should not be permitted to blind us to the merits of the Cavalry Service Regulations. If by means of the drill and organization described in it our cavalry can be made to perform more efficient service against an enemy, to be better able to meet the various problems which confront us in the field, we should favor their adoption. I do not need to say that we should loyally carry them into execution, for that has been done already.

Those who have favored the new drill have alleged that the force of inertia has operated against it. Our officers knew

the old drill and it was supposed that they did not care to make the effort to learn the new one. But this condition has ceased to exist. Practically all are now familiar with the new drill, probably more so than with the old. The preponderance of the force if inertia, whatever it amounts to, is now on the side of the Cavalry Service Regulations.

The importance of the change is not apparent to all. So long as the change consists merely in a different way of doing the same thing it is not important. The precise method of deploying columns, forming column from line, changing direction, the question as to who is to hold the horses, etc., are not important. In the field American officers do not follow drill book methods very closely. But the change of organization and the double rank formation, involving as they do the questions as to the chief use of cavalry and the direction which our training should take, are of vital importance.

The Cavalry Service Regulations, 1914, are so dependent upon a change of organization that we can scarcely believe that they can be adopted in their present form unless our organization is changed or some probability is believed to exist that it will be changed. So long as the division of our regiments into three squadrons of four troops each has the support of law there will be difficulty in using the provisional organization into six squadrons. The passages: "Majors are assigned to command of half-regiments," "In line the majors are in front of the center of their wings," "The majors supervise the movements in their half-regiments," etc., (Pars. 452, 455 and 456) do not make it clear how the regiment is to be divided into three halves or how the third major is to be provided with a wing. The adoption of the Cavalry Service Regulations, 1914, will at once bring up the question of the necessity of legislation to change our organization to make it conform to the drill. Consequently, the change of drill cannot be considered apart from the change of organization.

Our cavalry is of a different type from European cavalry. So long as European cavalry is armed with the lance and we are not, this difference must be acknowledged and reckoned with.

Historically, our cavalry was developed from two regiments of dragoons, each composed of ten companies and main-

tained for service against Indians, and from one regiment of mounted riflemen organized immediately after the Mexican War, presumably on lines indicated by experience in that war. During the Civil War (1862) our cavalry gained its present organization. Between the Civil War and the war with Spain our infantry made frequent efforts to obtain the same organization for themselves but did not get it until 1898. Is it not logical to suppose that our cavalry, which was developed to meet our own needs and for use on our own terrain, should assume a somewhat different form from that developed in other countries? The French cavalry drill (Poinsett's Tactics) was adopted by our dragoons before the Civil War (1841). Two companies of dragoons were combined to form one provisional squadron for drill, very much as we are doing now, and Poinsett's Tactics, involving the double rank formation and two-company squadrons, was used throughout the Civil War by a considerable portion of our cavalry, especially in the eastern theaters of operations. Cooke's Tactics, based on a single rank formation, was published for the use of the Federal Cavalry in 1862. Wheeler's Tactics, also based on a single rank formation, was published for the use of the Confederate Cavalry in 1863. Thus the two systems, American and European, were tried out side by side in a war which lasted five years and gave opportunities for the use of cavalry under all conceivable conditions on our own soil.

The authors of Cooke's Tactics and Wheeler's Tactics (Gen. P. St. Geo. Cooke and Gen. Joseph Wheeler) claimed for the single rank drill that it was a great improvement on the double rank drill then in use. Gen. Cooke says in his preface: "In undertaking this important work I was led to give much consideration to a growing military impression in favor of an important change to a *single rank* formation. Whilst the conservatism or prejudices of European establishments have slowly yielded, in the infantry arm, to the extent of reducing its formation from six to two ranks, the one great step from two to one rank in cavalry has not yet been made; but it was tested very successfully in the war in Portugal in 1833-34 in a British legion. I found that it greatly simplified all cavalry movements * * *. Adopting then the single rank formation,

my work of revision became one of construction." General Wheeler says in his preface: "Much has been said regarding the relative advantage of single and double rank formation. We have seen that the depth of formation has been gradually decreasing during the last two thousand years. * * * The most perfect system of formation is that which enables the commander to do the most service with a given number of men. * * * With the single rank formation the brigade will be formed in four lines and inflict upon the enemy four successive shocks, each of which would be nearly as severe as a charge in two ranks, and the number of ranks being double, the amount of execution would certainly be much greater. Another advantage in single rank is the greater facility with which troops can be handled."

Forrest and Morgan used single rank formations from the beginning of the war. Wheeler began to use single rank in 1863 and did not return to double rank. In the eastern armies double rank was the nominal formation but single rank was used whenever the ranks were depleted and they were usually depleted. Gen. G. B. McClellan recommended the use of single rank for cavalry. In the Spring of 1865, Upton drilled his division in single rank. All of the cavalry in the western army used single rank during Wilson's Sema raid. When Gen. Cooke rewrote his "Tactics" after the war he adhered to the single rank. Gen. W. Merritt reviewed this work and highly commended it. Upton's "Tactics" was written after his war experience both in the eastern armies where double rank was used and with western armies where single rank was used; he adopted single rank.

In view of the weakness of our army in cavalry and the fact that cavalry cannot be expanded readily in war, it is apparent that our cavalry is not likely to be employed in masses as is contemplated in foreign armies. In any war in which we are likely to engage our cavalry will be more dispersed than is the case in Europe. Delaying actions, screening and reconnaissance will form a great part of the work of our cavalry and this will necessitate throwing a great deal of responsibility upon the commanders of small groups. For work of this character our present legal organization is ideal. Strong

regiments already divided into twelve permanent units capable of taking care of themselves separately are conveniently grouped into three permanent squadrons of four troops each. Economy of administration is secured in the regiment by bringing a maximum of strength under one administrative head. Facility of tactical handling is secured by the permanent grouping into three squadrons. In Europe economy is an important consideration, and this involves handling as large numbers of men as possible with comparatively few officers. Economy is not so important with us because we do not maintain our war armies in time of peace. With us the problem will be to make a small number of men cover as much ground as possible.

Experience on American soil shows that our cavalry should be grouped into companies (troops) of not to exceed 100 men under an experienced officer accustomed to the exercise of initiative (a captain) and that a loss in efficiency would result from raising this numerical strength above 100. Conditions in America differ from those in Europe in many respects. Our enlisted men possess more intelligence and initiative and, while they are capable of forming a cavalry superior to European cavalry, they are not so readily controlled as Europeans. They need more officers. And our troops must do their own horse training; they cannot expect to be furnished trained horses.

In Europe systematic recruitment replaces losses quickly and units are maintained at a practically uniform strength. It is a peculiarity of the American service that the strength of our units fluctuates greatly. This necessitates, for us, an elastic organization; and the organization of our cavalry is more elastic than the European organization.

The Cavalry Service Regulations are based on the principle that troops must always be formed in double rank except under certain exceptional conditions. History shows that the depth of both cavalry and infantry formations has steadily decreased from the earliest times to the present day. During the Civil War our infantry fought in double rank; combats between thinner lines was called "skirmishing." Now our infantry forms for combat a thick skirmish line which is practically a single rank; when our cavalry dismounts to fight on foot,

it will fight in single rank also. A change now from single to double rank would be like moving the hands of a clock in a reverse direction, retrogression rather than progress.

Infantry still maneuvers in double rank because it can change from line in double rank to column of march by wheeling by fours. Cavalry in single rank can change from line to column of fours, but if formed in double rank it cannot do so. In France, the column of platoons is the normal column of march; there the roads are wider and better than ours and the country off the roads is practically free from fences. We are always compelled to use the column of fours or the column of twos as our column of march because our roads are narrow and have frequent bridges which are still narrower. And when we leave the roads we find ourselves in a country intersected by fences, usually wire. Cavalry in column of fours can march expeditiously through a country intersected with wire fences by sending a few men ahead to open a panel in each fence. If we attempt to march in column of platoons, several panels in each fence must be removed and this would cause considerable delay. Of course, we can march in column of platoons between fences and pass through single panels "at will" but nothing is gained by doing so.

There is a disadvantage in training men and horses to march in a rear rank. Habitual marching in the rear rank does not give the training that a cavalry soldier should have. The reason most commonly given for the existence of the rear rank is that the rear rank men will press forward during a charge and will fill gaps in the front rank. Observation and experience show that the rear rank falls back during a charge, except when a rear rank horse bolts and then he is more likely to throw the front rank into disorder than to fill a gap. It is doubtful if any considerable number of rear rank men will find their way into the front rank during the charge; and those who do not do so are wasted, for the rear rank does not push against the front rank and adds nothing to the momentum of the charge. Only those who come into contact with the enemy produce any physical effect.

Of course, depth is essential in a mounted attack. A serious mounted attack should never be made in less than two

lines, even when a double rank formation is used. But by forming the same number of men in single rank a greater depth can be obtained. And the victory goes to the side which brings up the last formed reserve.

A single rank formation is less likely to fall into disorder during a charge and can be reformed much more quickly after a charge than a double rank formation. By forming the same number of men in single rank a broader front may be opposed to an enemy; this tends to protect our own flanks and to jeopardize those of the enemy. In a mounted combat one man on the flank is worth ten in front. If the front rank charges with the lance, a justification can be found for a rear rank armed with the saber on account of the difficulty of using the lance in the *mêlée*. But our front rank charges with the saber and can use is also in the *mêlée*.

Comparing a line of cavalry in double rank with two lines of equal length in single rank, it is believed that the greater advantages will be found with the latter. The double rank formation is cheaper because there are no officers with the rear rank. On the other hand the second line in single rank has an advantage over a rear rank in that it is still under control after the first line has closed with the enemy; it could change direction or deliver a second shock. Gen. F. K. Ward says in discussing the probable results of a collision between a single rank line and a double rank line (*Cavalry Journal, March, 1912*) of the effect of the rear rank: "It can add nothing to the momentum of its front rank at the instant of collision for it will be two yards behind it * * * . Previous to the shock some of the rear rank men may move up into the front rank to fill openings occurring there but with well instructed men there will be no occasion for that at very many points. A single rank fairly well closed makes a formidable obstacle. It cannot be cleared or pushed aside. It may be knocked down but the horses doing it will have little or no go left in them for a while, even those that are not down themselves. While the single rank line may be pierced in some places by individual men * * * the two lines will be brought to a halt and immediately after the collision the men remaining in the rear rank, being too close to avoid doing so, must plunge headlong

into the mass with more immediate damage to friend than foe." In discussing the probable results of a collision between a double rank and two lines in single rank, Gen. Ward says: "Throughout the advance to the attack, the rear rank of the double rank line must keep closed to the prescribed distance of two or three yards. On the other side when the rapid gait is taken up during the advance, the platoon commanders in the second (line) should take * * * such a distance (say about seventy or seventy-five yards) that when the shock takes place they can halt their platoons just short of the engaged mass. They would then get there before the disentanglement is completed, in perfect order, and in condition to take the most effective part possible in the *mêlée* to follow."

Drill in single rank is simpler than drill in double rank. There is less for the soldier to learn. The time required for mastering the technicalities of the drill in single rank is about half that required for double rank.

Aside from the question of the suitability of the double rank as a charging formation, what are the advantages claimed for the drill in the Cavalry Service Regulations, 1914? So far as I know them, they are as follows:

- (a) "The drill has great mobility."
- (b) Use of signals.
- (c) Leadership.
- (d) Fan shaped deployments.
- (e) That it shortens columns and facilitates the handling of cavalry masses.

(a) The expression "the drill has great mobility" is sometimes heard; but it is not clear what is meant by it. It is true that the horses were ridden pretty hard at the Cavalry Camp of Instruction at Winchester, Va., in 1913, but they might have been ridden just as hard if they had been formed in single rank and in troops instead of provisional squadrons. A form of drill might hamper or diminish the mobility of the troops being drilled, but could scarcely add anything to it. Mobility depends on the speed and condition of the horses, their shoes, packs, etc., not on the drill. If flexibility or pliability are meant, the advantage in this respect is all with the single rank drill. In double rank changes of direction are ordinarily made

by wheels by platoons on a front of sixteen men; in single rank similar changes are made on a front of four men. With the double rank formation, in order to march a route column to the rear or form a line to a flank in route column, each platoon must ordinarily make two changes of direction and march its own length before it is fairly started. The facts that wheels by fours cannot be made without loss of formation, that the right of each platoon must always be on the right or in front introduce an element of rigidity into the double rank drill which frequently causes delays, especially in movements to the rear or by the flank. The rallies, the wheels by fours and the individual about are expedients introduced to compensate for this lack of flexibility. They do not compensate for it fully because they are attended by loss of formation. This could readily be shown by requiring troops to execute some other movement immediately after a rally, a wheel by fours or the individual about. Suppose that a squadron comes under shrapnel fire and must move quickly to a flank for cover and immediately afterward finds a favorable opportunity for using rifle fire. If it is in single rank it can move quickly to a flank by wheeling by fours and can immediately dismount to fight on foot. If it is in double rank and gains ground to a flank by rallying it is thrown into such disorder that it cannot reform without considerable delay. The Cavalry Service Regulations say (Par. 481): "The line of platoon columns (or the line of squadron masses) favors deployment to the front and is advantageous in utilizing the small folds of the terrain; however, it is not favorable to a deployment to a flank." Similar formations in single rank may be deployed readily to a flank. A line in double rank is easier to lead, provided it continues to move to the front or makes only slight changes of direction, than a line in single rank of the same numerical strength, because it is shorter. If the same number of men were arranged in four ranks they could be led still more easily. In other words, a column is more easily led than a line. But in order to fight we must deploy. The maximum of fighting efficiency is to be expected from the line in single rank because every man can be brought into contact with the enemy; and the double rank is under the dis-

advantage that it cannot move to a flank or to the rear readily without loss of formation.

(b) Signals can be used quite as well with single rank formations as with double rank formations. They were used freely in most of our regiments before the appearance of the "Tentative Drill Regulations" or the "Cavalry Service Regulations." There is no basis of comparison of the two systems on this head. The fact that signals have been required in connection with the double rank drill has extended their use; and, even if we discard the double rank, signals will be more generally employed in the future than they have been in the past.

(c) Leadership exists in the Cavalry Drill Regulations in a slightly different form from that in the Cavalry Service Regulations. Under the Cavalry Drill Regulations the commander could always become the guide both in gait and direction by giving the command "Follow in trace." Exercises in leading were prescribed (Pars. 383, 384, 385, 386, 547, etc.) and the commander was always the guide when charging or rallying (Pars. 346, 532, etc.). Under the Cavalry Service Regulations he can cease to be the guide at any time by indicating the gait and direction (Par. 455). The commander often wishes to supervise the execution of his commands and he cannot do so while he is the guide. The arrangement prescribed in the Cavalry Drill Regulations is often the most practical one; but leadership could be made normal instead of exceptional without changing our formation and organization. The control of the gait is an important function of command. The commander should be the guide as to gait or should indicate it. The gait should not be subject to such mechanical rules as those of Par. 8, C. D. R., and the Cavalry Drill Regulations could be improved by omitting that paragraph.

(d) Fan shaped deployments may be used as readily by single rank formations as by formations in double rank. They have their limitations; the commander does not know exactly where either of his flanks will rest when the deployment is completed. For this reason they cannot be used in extending a line occupied by other troops or when for any other reason the location of a flank is important. The importance of fan shaped

deployments has been greatly exaggerated. They apply only to deployments to the front from column and deployments of this character are usually made by orders from the commander directing each unit to designated points, by designating units for the performance of certain duties or by personally leading them to desired positions. Deployments are ordinarily made to a flank when practicable. Cavalry avoids deploying to the front in the presence of an active mounted enemy because it cannot be done without holding the leading unit at a walk or trot. The commander will ordinarily prefer to direct the march of his column so as to bring it upon the ground which he wishes to occupy and then form line to a flank. In deployments to a flank the single rank possesses a great advantage over the double rank.

(e) A column of platoons in double rank is shorter than a column of fours of the same numerical strength, but the column of platoons cannot be used as a marching formation anywhere in the United States. The column of platoons does not possess, for us, the importance assigned it by the Cavalry Service Regulations. There seems to be no good reason for us to adopt formations which are suitable only for operations in France and Germany. The length of columns depends on the number of men who can march abreast, and this depends on the road. If it is known that the roads and bridges ahead of us are wide enough to permit eight men to march abreast, we can, under the provisions of the Cavalry Drill Regulations (Par. 662), march in column of eights. It is not likely that we will ever have an opportunity to march with a front of sixteen troopers. When it is desired to assemble a large number of men in a small space (for concealment, etc.) the "masses," "column of masses" and "line of masses," provided for by the Cavalry Drill Regulations, afford as dense formations as any in the Cavalry Service Regulations. Distances and intervals may be reduced to zero if desired.

The provisional organization of our cavalry regiments into seven units (six squadrons and machine gun unit) is difficult to handle. It is worse in this respect than the Russian and Austrian regiments of six squadrons and their organization is not so good as that of the German and French regiments,

which have four squadrons only. On this subject, Balck says (Taktik, Vol. II): "Six-squadron regiments actually offer a temptation to make detachments, as they are unwieldy in difficult country, cannot, even under favorable conditions, be controlled by the voice of a single leader, and necessitates the introduction of an intermediate unit between regiments and squadron, the so-called 'division,' consisting in Russia of two, in Austria of three squadrons. Four-squadron regiments are more easily managed, and are capable of deploying quickly in any direction—even from the most favorable formation, the column of platoons and the regimental column (mass). They can form line from route column more quickly than the six-squadron regiment (this movement taking four minutes in the former and six minutes in the latter), and their size actually demands that each regiment be kept intact and employed as one unit. * * * Thus, tactical considerations argue for four-squadron regiments, considerations of economy for six-squadron regiments."

In regard to three-squadron regiments he says: "Three-squadron regiments possess great mobility, but they are so weak that the personality of the regimental commander is not properly utilized." Here it should be remembered that the European squadron is smaller than the American unit of the same name.

In regard to single rank for cavalry, Balck says: "Lord Wellington objected to a second rank, even when cavalry had to charge cavalry, because it did not augment the shock power but increased disorder. Prince Frederick Charles likewise believed the single rank formation to be the formation of the cavalry of the future. It is claimed that the single rank formation has greater mobility than other formations; that it facilitates movements and assembling after a charge; and, that it suffers less from fire. On the other hand, it is claimed that the single rank formation is difficult to handle and easily pierced, and that it breaks easily during movements, whereas a second rank, if provided, fills gaps occasioned by losses and resists any hostile troopers that may have succeeded in breaking through the front rank."

Conservatism and considerations of economy have prevented the single rank formation of cavalry from being tested to any considerable extent in Europe; it has, however, been thoroughly tested on the American continent, and the objections, which Balck, mentions "that it is difficult to handle" and that "it breaks easily during movements" have been found to be groundless. There seems to be no good reason for thinking that it is "easily pierced;" the utility of the men who "fill gaps occasioned by losses" does not justify the existence of the entire second rank; and "hostile troopers who may have succeeded in breaking through the front rank" can be taken care of better by a second line than by a rear rank. On the other hand our observation and experience warrant us in believing that the advantages which he mentions are real and important.



AN OFFICERS' ENDURANCE RACE.*

BY MAJOR F. C. MARSHALL, ELEVENTH CAVALRY.

THE Eleventh Cavalry is very fortunate in the active spirit of its officers, and in their devotion to the development of horsemanship in their regiment. This spirit has been manifested in a number of ways, but in none more than in the inducements offered by officers and their civilian friends to secure excellence in that direction by all sorts of competitions.

Cups are offered and competed for annually for steeple chases, point to point races, jumping contests and polo. An annual Horse Show stimulates officers to secure suitable mounts, and enlisted men to care for and train the horses assigned to them to get the best results from them.

These prizes for excellent performances were, however, limited to what might be called the embroidery of cavalry work: none of them taught sense of direction and orientation that cavalymen must possess, or demonstrated the endurance of horses and men.

After one of these races—a three mile point to point race over very rough country, with many jumps—I was in conversation with a group of youngsters. We were talking about the need for developing a knowledge of what our horses could do, under service conditions, and I said: "The kind of race I would like to see pulled off is a long distance race, at night, over unfamiliar country." The youngsters came back at me with: "All right, Major, you give a cup and we'll show you what we can do." I replied: "I believe I will."

The result was that the letter contained in General Orders No. 6, Headquarters Eleventh Cavalry was written, which order is as follows:

*This report of a very novel and interesting endurance race has been compiled from letters and reports and is credited to Major Marshall, although not written as an article and not so authorized by him.—Editor.

HEADQUARTERS ELEVENTH CAVALRY.

General Orders }
No. 6.FORT OGLETHORPE, GA.,
March 29, 1915.

1. The following letter from Major F. C. Marshall, Eleventh Cavalry, to the Commanding Officer is published for the information of the regiment:

FORT OGLETHORPE, GA.,
March 22, 1910.

From: Major F. C. Marshall, 11th Cavalry.

To: The Commanding Officer, 11th Cavalry.

Subject: Trophy for Officers' Contest.

1. The duties devolving on Cavalry Officers, connected with distant patrolling in time of war, will call for frequent long rides into unknown country, an expert knowledge of the capabilities and endurance of horses, and, more than all, a sure sense of direction and location, in order that the officer may deliver the information he has collected to the person who is to use it.

2. In order to stimulate preparation for these duties among the officers of this regiment, I wish to donate a trophy to be competed for annually, during time of peace, by officers of the Eleventh U. S. Cavalry, subject to the following conditions:

- a. Each officer shall ride his own horse.
- b. The hour of starting shall not be earlier than 3:00 o'clock in the afternoon.
- c. The course over which the test is made shall be triangular, not less than sixty miles in perimeter, as the crow flies, the turning point not to be located within two miles of a city or village of more than 500 inhabitants. These turning points to be determined by the Field Officers of the Regiment, and are not to be announced until the competitors are ready to mount for the start.

d. No restrictions are to be imposed as to uniform or equipment. During the competition officers may use any sources of information as to roads, short cuts, etc., that would

be available to a patrol leader operating in friendly territory in time of war.

e. In determining the winner but two elements shall be considered and they shall have equal weight; the time consumed in the test, and the condition of the officer's horse at 8:30 o'clock on the morning of the day after the test is completed.

f. The trophy shall be kept in the personal possession of the successful officer until another officer shall win it, or until he leaves the regiment, when it shall be turned over to the Adjutant for safe keeping until again competed for.

3. It is recommended that the first competition be held during the last week of April, and that competitors be handed, just before the signal to mount, instructions similar to these:

Go to and report from there to the Adjutant by mail; then go to and report to him from there also by mail. Then return to Fort Oglethorpe, and report in person to the Commander of the Guard.

F. C. MARSHALL.

2. The acceptance of the trophy is announced and it will be known as the "Marshall Trophy."

The thanks of the regiment are extended to Major F. C. Marshall.

3. The date of the first competition will be announced later.

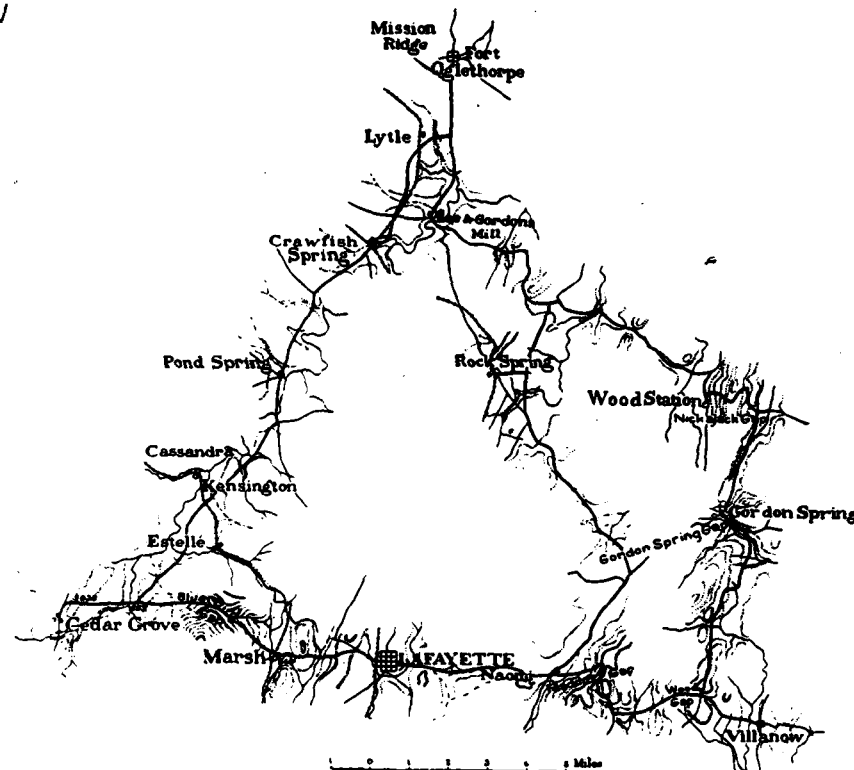
By order of Colonel LOCKETT:

V. LAS. ROCKWELL,
Captain and Adjutant, 11th Cav.

The response was most gratifying. Officers at once began to train their horses and to study their capabilities from this new angle. The race was run on April 27, 1915, and commenced at 3:06 P. M. The following officers participated in the race: Captains Parker, McKinlay and Swift, and Lieutenants Hunsaker, Flynn, Viner, Crutcher, Clark and Robertson.

The course prescribed is outlined on the accompanying map, the only requirements being that each contestant should report at Cedar Grove and Villanow, each choosing his own route and direction of travel. The distance by the nearest practicable route was seventy-one miles, but the actual

distance was several miles farther, due to the turns and detours in the roads not shown on the map.*



Four officers elected to go by Cedar Grove: Captain Parker and Lieutenants Hunsaker, Viner and Robertson.

*The map referred to was the Ringgold quadrangle of the U. S. Geological Survey. The sketch map here reproduced is made from that map. The route taken by the contestants who went first to Cedar Grove was via Crawfish Spring, Pond Spring to 893, thence west and south to Cedar Grove, thence back along this same road to 893 and on through Blue Bird Gap to Lafayette, Naomi and Villanow. From Villanow the route to the Post was back through Wood Gap, Maddox Gap to Naomi and thence through Rock Spring to Fort Oglethorpe. The other contestants, with the exception of Lieutenant Clark took the reverse route over the same roads. Lieutenant Clark was the only one to take a different route in going to Villanow, he having taken the apparently somewhat longer and rougher road through Wood Station and Gordon Spring.

The other six took the reverse route. The excellent judgment of the first group was demonstrated by the fact that they were the first four officers to complete the race.

Captain Parker was the first to arrive at the Guard House, at 11:45 P. M. He covered the distance in eight hours and thirty-nine minutes, after receiving his order. He actually delayed at the Post until 3:20 P. M., studying the map and estimating the situation. His actual time was eight hours and twenty-five minutes.

Lieutenant Robertson finished second at 12:28 A. M. Lieutenant Viner third at 1:15 A. M. Lieutenant Hunsacker fourth at 2:00 A. M., and Lieutenant Clark at 3:40 A. M. Five officers finished in less than thirteen hours, and the other five got in early in the morning.

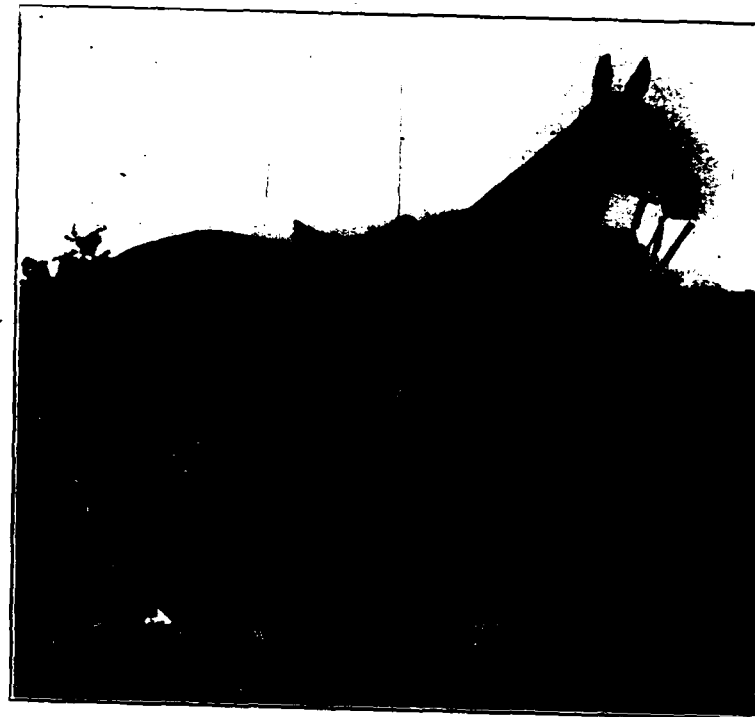
When it is considered that none of these officers knew where the course was to lie until they were ready to mount, that all were entirely unfamiliar with the greater part of it, that the turning points were in obscure places, hard to find, that two mountains had to be crossed on roads that were little used, and that it was dark in four hours and a half after starting it must be admitted that the performances of these officers were notable indeed.

Captain Parker has written a very interesting memorandum, which, with two pictures of the winning horse, is herewith shown.

Lieutenant Robertson has two excellent thoroughbreds. One, a horse 16 hands $1\frac{1}{4}$ inches in height, that won the race for the Roger Bayley Cup (the race that led up to the conversation noted above) was rejected in favor of the other, a smaller animal, a mare, 15 hands 2 inches, weighing 1,000 pounds, because Lieutenant Robertson believed she had more stamina and was a better weight carrier than the larger horse. He did not go into the systematic course of training described by Captain Parker, but he gave the mare a lot of slow work every day, and an occasional ride of two hours or so on hard roads. His work was all, practically, at a slow, steady trot.

Lieutenant Robertson presented himself for the race with the load reduced to the smallest possible. He carried no food either for himself or for his horse. He carried no whip or spur,

and takes the greatest pride in the spirit of his mare, who seemed to realize that she was racing, and needed absolutely no encouraging. Both he and his mare drank at every opportunity. He travelled the course at a ten mile trot nearly all the time. At first he dismounted and ran up hill, but he soon discovered



Q. E. D.

OWNED AND RIDDEN BY CAPTAIN FRANK PARKER.

Bay gelding, nine years old, 15-3 hands, sired by Panpankeewis (Virginia thoroughbred) out of standard bred mare. He came from the Front Royal Remount Depot.

that he could make better time by dismounting and running alongside down hill. To save time he always dismounted at the trot, and mounted at the walk. He carried a map, compass, watch and matches, but seldom used them, orienting himself by the stars and the moon, and keeping to the right

road by continual questions asked of people he met. He did not take time to consult either his map or his compass. At Lafayette, about half way of the course, he dismounted near a drug store, and massaged his horse's legs with witch hazel, rubbing the forelegs from the lower arm, and the hind legs from the gaskin, briskly for ten minutes. At Villanow he repeated this massage for three minutes. He occasionally galloped up the gentler slopes, and walked up very few, in spite of the fact that the race carried him across three narrow and steep ridges 400 to 500 feet high. She never hung her head on the road, but was bright and alert every minute. When she got to her stall, after the race, her mouth was swabbed out and her back and legs rubbed with aromatic spirits of ammonia. He wound up with brisk leg massage with witch hazel, then wound all four cannons with flannel bandages, wrung out in cold water. After forty minutes she was fed hay. Forty-five minutes later she got a small quantity of water, and one and one-half hours later, two quarts of oats. She ate and drank with a relish, but did not lie down during the night. In the morning she ate her regular ration of hay and grain with a relish.

I enclose Lieutenant Clark's memorandum, because he set the pace for the group of contestants that went first to Villanow.

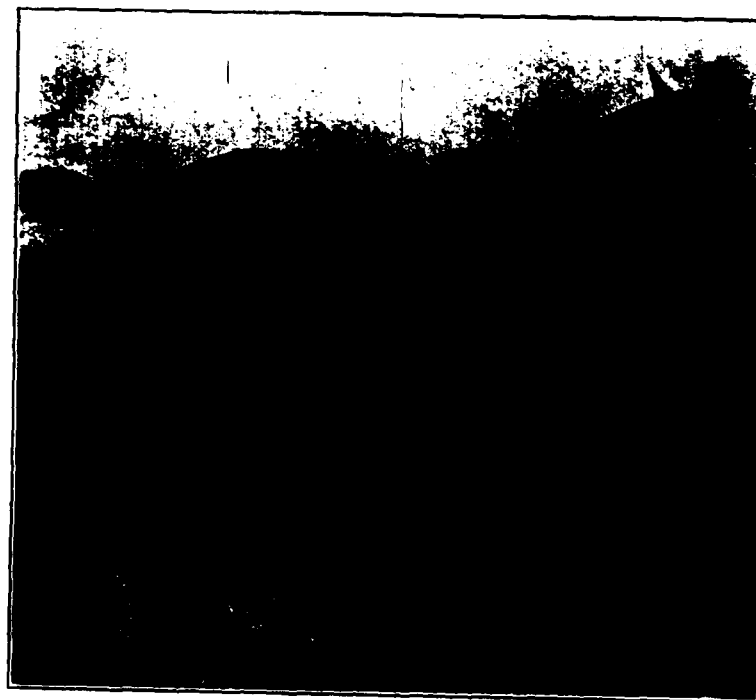
You will note that he met Captain Parker when the latter had completed about three-fifths of the race, and at once changed his pace and his plans. He could see, of course, that the race was lost, but he made a plucky finish and is entitled to a lot of credit.

Lieutenant Viner's horse was cold blooded. It was a small horse too, and the finish he made, competing with thoroughbreds, was really remarkable.

Lieutenant Hunsaker's horse was carrying at least a hundred pounds of fat that might have been worked off, and was soft in consequence. Lieutenant Hunsaker weighs twenty-five pounds more than any of the men who finished ahead of him, and this, with the hundred pounds of fat his horse carried, caused him to lose. His pace was well set to the capacity of his horse, and his race run was with splendid judgment.

None of these horses suffered the slightest injury as a result of the race; all of them have been doing their daily work ever since the race.

Long distance military races have been frequently run before, but I have never heard of one that was run over as long a course as this one, at night, and over obscure trails, in country



SHENANDOAH.

OWNED AND RIDDEN BY LIEUTENANT I. L. HUNSAKER.

entirely unknown to any of the contestants. They did not even know where the race was to be run until they were about to start.

Villanow and Cedar Grove are not villages at all, but are merely postoffices located in cross-roads, country stores. Blue Bird Gap is criss-crossed with a net work of wood roads, any of which is as plain as the shortest road through the Gap, and it

was here that the delays occurred that caused the last six of the contestants to finish so much behind the first hour.

In a personal letter to me, Captain Parker says: "I avail myself of this opportunity to express my deep satisfaction in being the first winner of the Marshall Trophy, a prize which heralds a departure in our cavalry in the department of mounted sport, and which, in my opinion, represents more practical value, from the cavalry standpoint, than any other trophy that I have seen offered during my service."

The cup bears this inscription: "Presented by Major F. C. Marshall to the officers of the 11th Cavalry, for annual competition in long distance riding, at night, over unfamiliar roads."

REPORT OF CAPTAIN FRANK PARKER.

Referring to your letter on the subject, I shall divide this report into the following:

- A. PREPARATION OF HORSE.
- B. MY OWN PREPARATION.
- C. NARRATIVE OF THE RACE.

A. PREPARATION OF HORSE—About twenty-eight days.

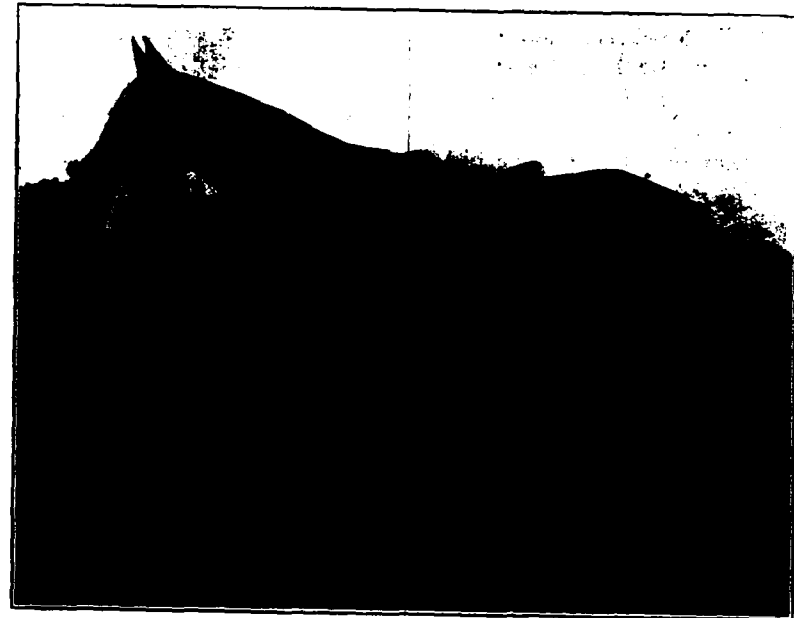
First week—four hours a day.	} Gait—walk and trot. The time and pace of the trot being progressively increased.
Second week—five hours a day.	
Third week—six hours a day.	
Fourth week—except last two days. 7 hours a day.	

This schedule was affected by an accident, causing the last week's work to be kept at six hours a day.

The work during the first week was slow; walk and trot, with an occasional halt to allow the horse to relieve himself, if he wished. Constant attention was paid to regularizing the gaits, especially the trot. Commencing the first week with the eight mile trot, the last week's work was done at the ten mile trot.

Food.—Oats and hay only, fed at first call and 10 A. M. whole, at 2:00 P. M. and 6:00 P. M., crushed and mixed with sugar (two pounds per day). Ration reached about twenty pounds of oats after first week and was maintained at that. Hay regular allowance.

Sugar is a tonic and stimulant, is entirely digested, keeps up the flesh, and gives a relish to the oats.



SILVER DICK.

OWNED AND RIDDEN BY LIEUTENANT J. W. VINER.

Horse Shoes.—Light steel shoe and rubber pad. The rubber pads are necessary where the training is on hard roads, as was the case.

B. MY OWN PREPARATIONS.—

A circle of twenty miles radius about the Post showed that the southeast and southwest quadrants would probably contain the race triangle, due to the position of the Tennessee River and so I became fairly familiar with the general topo-

graphy of these quadrants. Polo and the conditioning of my horse kept me in good physical condition.

C. NARRATIVE OF RACE.—

Received instructions at 3:06 P. M. to proceed to Cedar Grove, Villanow or vice versa, and return to Post. I went to my quarters at once, put on a pair of enlisted men's cloth leggins, carefully studied my map, saw that Pigeon Mountain must be negotiated before dark and at once decided on Cedar Grove as my first objective, leaving the gently rolling country from Naomi to the Post for my last lap. I applied the following ideas. Outline a schedule and stick to it as far as conditions will allow.

Slow, steady trot up hill, and increase of pace down hill.

On steep slopes, both up and down, dismount and run as far and as fast as possible. Increase the pace progressively during contest. Let horse drink frequently.

Relieve the horse of your weight, ten to fifteen minutes in each hour, if possible, choosing the terrain where it will help the animal most and least interfere with rate of progress, *i. e.*, best terrain for this purpose steep descent.

Keep on the hardest and smoothest part of the road if you have rubber pads on your horse.

Run against time and not against the other competitors.

My schedule was to reach Lafayette at 7:00 P. M., and the Post at 11:20 P. M., eight hours.

My first effort was to average nine miles an hour to Lafayette, but Pigeon Mountain and the vile, abandoned trail leading over Blue Bird Gap spoiled that figure and I was lucky to reach Lafayette with an average of eight miles to the hour, according to map, at 7:10 P. M.

The distance, so far, by the straight lines drawn on the map, is thirty-one miles, but it is easily thirty-three, allowing for the turns and twists of the route.

I stopped in Lafayette about ten minutes, got something to drink, and information as to the next lap, and left at 7:20 P. M. I now had forty miles by the map to do, and I proposed doing it at the rate of ten miles an hour.

I reached Villanow at 8:10 P. M. and the Post at 11:45, covering what is easily forty-two miles in four hours and

twenty-five minutes, which, taking the distance as measured on the map at forty miles, gives an average of nine miles an hour for this stretch. I ran beside my horse frequently while on the portion of the route Lafayette, Villanow, Naomi, but thereafter only occasionally not averaging more than five minutes on foot to the hour.



ROMEO.

OWNED AND RIDDEN BY LIEUTENANT CUTLER L. CLARK.

My horse showed no signs of weakening. He came in with his head up, and I at no time had to urge him, and always had to pull him down to the walk on the steep slopes even toward the end.

The only part of the route difficult for man and horse was Pigeon Mountain. The trail from 893 to Marsh (U. S. Geological Survey) appears to have been abandoned, or but little used for a long time. It is no longer a road, and a pack animal

would find the latter part, toward Marsh, fairly difficult. Pigeon Mountain is covered with trees and heavy underbrush, and I was much relieved when I found myself at Marsh. At Lafayette I secured the services of a guide who accompanied me in a buggy far enough to get me safely on the road to Villanow, and later, awaiting my return, on the road to Rock Springs.

I wish to state that prior to the start I made no preparations for this race beyond my horse's and my own, and that I received no assistance except that of the guide at Lafayette.

I wish to call attention to the fact that my horse was injured on April 11th, striking his knee with violence against a solid jump, and that at the start of the race he was still lame. The lameness however, was due to inflammation of the membrane covering the knee, and he stood the training, with one day's lay off just after the accident, appearing to improve steadily and going smoothly after twenty minutes of warming up. I called the Judges attention at the start to his lameness, showing him at a trot, and stating that the lameness would not be affected by the race as neither muscle nor tendon were involved.

I reached Cedar Grove at 5:35 P. M., Lafayette at 7:10 P. M., Villanow at 8:10 P. M. and the Post at 11:45 P. M.

I believe the total distance of this race to be at least seventy-five miles, and that my average speed was about nine miles an hour.

REPORT OF LIEUTENANT CUYLER L. CLARK.

I left the Post at 3:20 P. M. followed the Lafayette Pike to a point three quarters of a mile south of Lee and Gordons Mill and took the road to Woods Station, where I arrived at 5:30 P. M. Thence I proceeded to Nickajack Gap and south by a wood trail to Gordons Spring, east to Villanow Pike, and south to Villanow, where I arrived at 8:40 P. M.

Here, although I found three men ahead of me on the road west, I halted one half hour, and fed one half of a full feed of oats to my horse.

I left Villanow at 9:10 P. M. At Woods Gap I met Capt. Parker going east and decided to increase my gait. By so doing I overtook all three men ahead of me at Lafayette, which point I reached at 10:30 P. M.

At Lafayette I inquired of the sheriff for road information. Following his advice, I took the main pike through Bluebird Gap to Davis Cross-roads, thence south two miles and west two miles to Cedar Grove. Leaving Cedar Grove at about 12:00



INDEAL.

OWNED AND RIDDEN BY LIEUTENANT W. A. ROBERTSON.

M. I returned to Davis Cross-roads by the same route previously followed and proceeded from that point to the Post by the Pike through Frick Gap, Pond Springs and Crawfish Springs. I arrived at my destination at 3:40 P. M.

During the first third of my journey I allowed my horse to take his own gait, which I estimated at five miles per hour, but I dismounted at all steep hills. During the second third of my journey I endeavored to make up for lost time. My gait from Villanow to Lafayette was ten miles per hour. The rest of

the way, due to frequent delays in searching for roads, the best rate that I could make was seven miles per hour. During this part of my journey I found it necessary to dismount and lead frequently, but rode at a trot and at a canter all the time when mounted. I found that the canter, when employed for short distances, relieved my horse of the weariness due to continuous trotting.

Throughout the journey I employed no guide. The weight of my horse was 825 lbs. My own weight, with equipment complete, was 172 lbs.



BREEDING TO COLOR AND CONFORMATION— MENDELISM.*

BY VETERINARIAN ROBERT VANS AGNEW, FIFTH CAVALRY.

THE foundation color in horses really consists of only two pigments, although there are innumerable shades and varieties of color which we see daily before us.

An individual hair is a hollow shaft surrounded by a layer of characteristic cells that bear the pigment. Covering this is a layer of long, roughened, epithelial cells that serve as a protection and correspond to the surface cells of the skin. It is this layer of cells that gives to wool the valuable felting property, as the roughened fibers of one fiber assist in clinging to another. In the horse this layer is comparatively smooth.

The inside layer is of interest since in colored horses it is the part that bears the pigment.

Rather evenly distributed through this structure in all except white, or so-called gray hairs, there is a basic ground pigment that is reddish-yellow in appearance. It is difficult to determine under the microscope whether this is entirely a fine granular pigment or whether it is partly diffuse, as though stained with a sap or dye. It is quite uniform except for a greater density at the tip.

When this pigment is present in large amounts it gives a strong red under the microscope and produces externally what is known as the dark chestnut. In proportions quantitatively less, it shades more in to a yellow and shows sorrels and duns.

The hair of the bay or brown presents exactly the same condition microscopally, but looks different externally because the black skin, mane and tail, and dark extremities give it a *stronger* look.

*Synopsis of a lecture to the Staff Class at the Army Service Schools.

This may seem a dogmatic statement to those who are sure that they can distinguish the different colors externally; nevertheless, it is impossible to separate chestnut, bay and the colored hairs of the strawberry roan when the three are mixed together.

The second pigment is composed of larger black granules that have a tendency to lie in clusters. These granules obscure the red ground pigment and produce the deep black of the mane, tail and body. The body hairs over the shoulders, sides, croup, thighs and belly do not seem to carry quantitatively as much pigment in proportion to the red as the hairs of the head, neck, limbs, mane and tail. Consequently, when fading under a hot sun takes place, the extremities hold their black color longer than the body.

It is the presence of the basic ground pigment underneath that gives the rusty color to the hairs. The hollow shaft or medulla of the hair has a very important function since the pit of air serves to help reflect the rays of light and gives a much more opaque appearance.

Hereditary factors determine whether the color be intense or dilute in nature, *i. e.*, whether there be much or little pigment. In the cat, the black is an intense condition of this second pigment, in the maltese or blue, a dilute condition. So in the horse we find mouse color a dilute black, sorrel a partly dilute chestnut, and dun a dilute bay, or a more greatly dilute chestnut, according to kind.

Many other mechanical factors operate to produce roans, grays, browns, piebalds and others, but in all of them only these two fundamental pigments occur.

In breeding for color we have certain statistics to go on. We have to thank Gregor Mendel for his profound experiments in laws of heredity and color. He has enabled the breeder to anticipate color and characteristics in perpetuating a breed.

It is not in my province to expound his theory very fully, but I strongly urge upon you the necessity of reading one of the several treatises upon Mendelism, as it is called.

Before Mendel, breeding was more or less haphazardous. For ages man no doubt was, in spite of his ignorance, improving his domesticated races of animals and plants, but it was not

until Aristotle's time that we have any evidence of hereditary phenomena. The accepted laical and biblical view was that the male furnished the seed and the female provided the soil, and many centuries elapsed before the female was recognized as being more than a passive agent. As the time went on, the microscope was evolved; by it we made vast strides in our lore of the sexes, and we find that the male contributed spermatozoön and the female the ovum. They were to be seen, we could classify and name the different cells that we could see so easily. So we called these sexual cells, whether ovules, or spermatozoön, by the general term of gametes, or marrying cells. And we called the individual formed by the fusion or yoking together of two gametes, a zygote.

This zygote is regarded as a double structure formed by the component parts of the gametes into a partnership for life. But when the zygote in turn came to form gametes, then this partnership was broken and the process reversed.

This intricate relationship between the gamete and the zygote baffled all researches until Mendel practically founded the modern science of heredity, just as Darwin had given us his great idea on the Evolution of Species.

Darwin's Origin of Species came out in the year 1859. Before that, in spite of much experimental hybridization, the determination of the relation of the species and varieties to one another seemed as remote as ever, but Darwin's theory was so consistent and lucid and he had such an array of facts marshaled together in support of his ideas that it rapidly gained the approval of the great majority of biologists and thinking people throughout the world. For the next forty years zoologists and botanists were busily engaged in classifying the great masses of accumulated anatomical facts by the light of this theory of Darwins.

Briefly put, his theory was this: In any species of plant or animal the reproductive capacity tends to outrun the available food supply and the resulting competition leads to an inevitable struggle for existence. Of all the individuals born, only a portion, and that often a very small one, can survive to produce offspring. But according to Darwin, the nature of the surviving portion is not determined by chance

alone. No two individuals of a species are precisely alike and among the variations that occur some enable their possessors to cope more successfully with the competitive conditions under which they exist. In comparison with their less favored brethren, they have a better chance of surviving in the struggle for existence, and consequently of leaving offspring. He completes his argument by assuming also a principle of heredity by which the offspring tends to resemble their parents more than other members of the species.

Parents possessing a favorable variation tend to transmit that variation to their offspring, to some in a greater and to others in a less degree. Those possessing them in a greater degree will again have a better chance of survival and will transmit the favorable variation in an even greater degree to some of their offspring.

Thus a competitive struggle for existence, working in combination with certain principles of variation and heredity, results in a slow but continuous transformation of the species through an operation which Darwin termed "*Natural Selection*."

The coherence and simplicity of this theory electrified the world and was so enthusiastically accepted that it diverted attention from the way in which species originate and, consequently, checked further knowledge of hybridization. That is why Mendel's experiments which he gave to the world in 1865, six years after Darwin announced his theory were not given the attention that they deserved. Therefore, it was not until the year 1900 that they were rediscovered, as it were, and their great value and significance brought to light. Mendel after eight years of experiment with the common pea, discovered that he could with certainty determine the character of the gametes and the zygotes.

Now Mendel found that the gametes could carry a character both dominant and recessive, but that the individual gamete could only carry one of any alternative pair of characters so that by breeding from the gamete of one character with another gamete of the same character, one could perpetuate that character in the zygote. Also, that in breeding from a gamete of one character with a gamete of another character, one could get both dominant and recessive characters, but in

the second and succeeding generations, certain of these characters would separate into the original pure character in a regular ratio.

Shortly after Mendel's discovery, a need was felt for terms of a general nature to express the constitution of individuals in respect of inherited characters, and the words proposed were homozygote and heterozygote.

An individual is said to be homozygous for a given character when it is formed by two gametes each bearing that character, and all the gametes of a homozygote bear that character in respect of which it is homozygous.

When, however, the zygote is formed by two gametes of which one bears the given character, while the other does not, it is said to be heterozygous for the character in question and only half the gametes produced by such a heterozygote bear the character. By this an individual may be homozygous for one or more characters, and at the same time may be heterozygous for others.

Though a heterozygous individual may be indistinguishable in appearance from the homozygous one, they can be readily separated by the breeding test. For instance, suppose that one of you has a chestnut mare and wishes to get a bay foal from her. We know that bay is dominant to chestnut and that if a homozygous bay stallion is used a bay colt will result, so in your choice of a sire you must look up the previous record of the stallion and select one that has never given anything but bays even when put to either bay or chestnut mares.

In this way you assure yourself of a bay colt from a chestnut mare, whereas, if the record shows that he has had chestnut foals then he is heterozygous and the chances of his getting a bay or a chestnut foal are equal.

Thus we are fairly certain of getting the color that we want, but of the other and finer attributes that the breeder may seek to perpetuate in variations of species, these are dependent upon the earlier life conditions of the individual and not upon the constitutions of the gametes by which it was formed. The science of heredity does not help us in these variations as yet.

Also we know that grays and chestnuts mated only to their own color produce either grays or chestnuts, and black with black about eight per cent. chestnuts (often dark), the rest always blacks. When parents are brown their foals may be of any color, but the majority will be brown.

Parents of lighter colors transmit them more frequently than the darker ones.

Chestnuts and blacks produce most often browns, chestnuts less frequently and least seldom of all, blacks.

Brown and black produce more browns than blacks.

Chestnuts and dark browns produce more chestnuts. Chestnuts and light browns produce more brown. Chestnut color is the most suitable to get rid of the gray color; some of the foals will be brown. The chestnut color in half breeds is exceedingly sure of transmission.

In thoroughbreds the bay color is predominating. Having decided upon our color, we will proceed to take up the art of mating.

Now, the most important thing in practical breeding, is to favor the brood mares more than the mating stallion, *i. e.*, with which stallion the mare would have the best chance of producing the type of horse that is required.

One must endeavor to equalize the faults of the brood mares by corresponding merits of the mating stallions.

These faults may consist of mis-placed forelegs, weak hocks, too long middlepiece, high leggedness, narrowness, straight shoulders, etc.; defects of constitution, as hard and soft; of temperament, as hasty, idle, goodnatured, malignant, courageous and cowardly; of performance, as speed alone, or staying qualities, and action of walk, trot, gallop; of feeding, as gluttony or finickiness, and last of all, in lack of quality, beauty and vigor.

Experience seems to recommend the pairing of old stallions and young mares, and *vice versa*.

If possible it is wise to go back of the parents to the ancestors as reversions to them are frequent, and these atavistic surprises often confound a breeder who does not consider them.

With thoroughbreds the type desired can be achieved by much closer inbreeding than with the halfbred.

With halfbreds the object must not be too far removed from the type which the mare herself possesses, *i. e.*, a small wiry mare should not be bred to a coarse large boned stallion, and *vice versa*, if one wishes to breed further than the *first result*.

The breeding of thoroughbreds with draft stock has been tried almost everywhere, and while favorable results in the *first generation* have been attained, the *progeny* of these coarse cross breeds have been as a rule failures, because it is just the coarseness and weakness of the drafter and the light build of the thoroughbred that are transmitted. To breed good strong horses we have to improve the build and substance of the brood mares, a very difficult and lengthy proceeding and one that is really unpleasant, because in strengthening or enlarging a breed one has to bring in so many bad and ugly traits at first. But one must recollect that after the ugly result is attained it is much easier to *beautify* it, especially in halfbreds.

Therefore, we must look for a large *handsome mare*, with plenty of good hard bone, and breed her to a large *handsome horse* with *plenty* of bone. The thoroughbred, except in very isolated cases, cannot produce the substance required for hunters and chargers. So we must look for it in the halfbreds, both mares and stallions.

But it is doubtful even if the halfbreds of the first generation from the thoroughbred can produce the required substance; it would take two generations, supplemented with proper mating, good feeding, care and exercise to obtain the required breed.

This breed would probably be ugly but strong; coarse, but distinctive in outline; lack quality, harmony and action; but if persisted in would give the substance which we are seeking for, and once the substance is obtained, then the objectionable qualities can be bred out by ennobling blood.

The Irish are famed for their *hunters*, had this large, coarser bred stock in their mares, and luckily have managed to keep some of them, though they have injudiciously tried to introduce the still coarser draft breeds with lamentable results.

This, then, is the problem that confronts us in America today: Where can we get the proper stallions and mares with substance enough to carry weight and go fast without effort.

We have numerous breeds in America, some of them quite new, as the trotter and the saddle horse, but unfortunately we have no hunter breed. It does seem a pity that men of money and influence do not try to produce this breed, for it can be done. Ireland is doing it and England has had it, but foolishly let it die out. Still we can see the pictures of their old hunter stock, the sight of which makes one almost weep to think that such grand animals were allowed to dwindle to a few scattered inferior ones.

I can not urge too much the great importance of the value of this hunter breed, and beg that whenever the occasion arises you will strongly insist on and help towards encouraging the breeding of this *magnificent type of horse*. The time has come when we should form a Hunter's Association, just the same as The Thoroughbred, The Trotter, The Saddler, The Percheron, The Shire, and all the other breed associations, and give our hunters their proper pedigrees to which they are surely entitled. The young men of this generation would then leave to the next generation a very glorious inheritance, one perhaps that in time of war might be the means of saving their country for them, as many other countries have been saved before by the horse.

In the brood mare a large body or trunk is to be sought, even if it is out of proportion. They carry their foals better. It is not necessary to have a too large framed mare, the smaller and more wiry mares seem to produce the better progeny.

But in the stallion we must look for a distinctively sharp build, with free movements, a courageous eye, robust health, and with a thin mane and well carried tail. These are the signs of a good mating stallion.

Also, a short neck is better than one too long, long pasterns are preferable to short upright ones, and even too long pasterns are preferable to short upright ones, and straight hind legs are superior to crooked ones, and a bucked more desirable than a calf knee.

The best height for a mare is about 15—1 to 15—3, and for the stallion, 15—3 to 16—1.

Greater heights bred are as a rule at the cost of capabilities, and this fact needs bearing in mind, as the trend of foolish

people is for exaggerated height and breeders are forced to cater to the public taste.

Stallions should not be used to cover mares before they are four years old. Though we have cases of good foals from stallions in their second year, notably the trotter, Hambletonian 10, who as a two-year-old produced Abdallah, who was a very noted sire himself.

But age is an indifferent factor as long as the stallion keeps his health and vigor; in fact, many breeders contend that old stallions produce stayers.

Therefore, the health of stallions is a very important matter and feed and exercise contribute more than anything to this health. 'Exercise your stallions enough to keep them hard and strong; also, do not shut them up where they can not see anything but four walls; this seclusion tends to make them vicious. The quantity of food must be regulated to suit each individual case.

Stallions which cover too many mares in a season are inclined to have light boned stock and they themselves will become more infertile. Mares can be covered at three years old, but should not before that age. It is better to breed mares at three and four than later on in life. If bred young, the births are easier, the mares are more fertile, and have more milk, and the foals are bigger and stronger.

The most prominent products of mares are generally produced between their eighth and thirteenth years. Half-bred mares are more fertile in their earlier years than in their later years, say from fourteen to twenty.

It is necessary that brood mares outside the grazing time should have gentle exercise of some description up to the day of foaling, and for a couple of weeks after the event.

The feed must suit the individual, and vary according to the soil on which it grows; also, it must have good bone producing qualities.

In pasture the mare should get a certain amount of grain, as the grass is not sufficient to produce that hardness and stamina that we want in the foal. Breed your mare so that she will drop her foal as the fresh grazing comes in. The foal then gets the benefit of the green grass and a more abundant

supply of milk, from its mother; it aids in the growth and stature of the early born animal. The longer the pasturing lasts the better for the foal.

The time of pregnancy in a mare is on an average almost exactly eleven months, or 334 days.

Male foals as a rule are carried a few days longer than female foals. A well fed mare in good health will foal a few days shorter than one ill fed, etc.

A better foal is produced if carried several days under the eleven months than one which is carried several days over that time. This is evidently caused by immediate conception at the first heat and the prompt commencement of a healthy foetal development at the first covering.

When the foal is born its nervous system is in a very highly developed state, so that in a very few hours it can walk, run and skip. Also, it is in full possession of all its senses, such as sight, touch, hearing, smell and taste, and with an almost equal amount of intelligence as its parents. Obedience to man is practically all that it has to learn.

Most foals when two or three days old seem to be very long legged and badly out of shape, but in the course of a few months they generally grow out of all their structural faults, such as too long, soft pasterns, long hind legs standing out behind; bent knees either way; long, upright pastern, all sideways leanings; bending of hind pasterns, called knuckling, is quite common and is nearly always straighten.

But a short neck, long back, large head, drooping hind-quarters, high or low withers, and all trunk faults, do not alter.

Most of these crooked faults can be surely straightened if the hoofs are kept perfectly level and true. This is very important and I cannot impress on you too much the fact that a horse's foot must be kept level all his life. This is one of the greatest principles of horsemanship, and will be taken up again later on.

The foal being born, one must see that its bowels work properly, and here nature helps by providing that the first milk of the mare is of a peculiar composition, remarkable for the amount of protein it contains, as much as fifteen per cent., while ordinary milk only contains four or five per cent. It

also contains large granular corpuscles containing fat. The use of this milk is to act as a natural purge in order to clear out the intestinal canal of the newly born foal.

However, it is principally by the proper dieting of the dam that the foal keeps in good health, and green grass plays the most important part as it tends to keep both the dam's and her foal's bowels in proper condition. If no grass is to be had, then vegetables, bran and steamed hay, or linseed meal, should be given.

Halter the foal as early as possible, and handle it all over, so that when it is a month old one can trim its feet.

It can be taken for granted that a foal can eat as many pounds of oats as it is months old, so that a four months old foal will eat four or five pounds of oats per day. At that time it will eat that amount of hay also.

Between five and six months is the proper time to wean the foal. If they suck longer than that they make poor use of the oats and hay and are inclined to get fat, which makes them harder to train afterwards.

Weaning must be done as quietly and gently as possible, with much care and consideration to be shown the foal so as not to interfere with its steady development.

The oats can be increased to ten or twelve pounds a day in the case of thoroughbred foals intended for racing, but six pounds will be enough for the halfbreeds, with good pasture.

In good pasture grass, rich in potash, like alfalfa, plenty of salt is required; therefore, it is necessary to have salt constantly in the mangers.

In winter proper exercise must be given daily. If possible, graze the year round, as this is the par excellence of all exercise for foals. By the time a foal is a year old and has to be exercised it may be necessary to shoe it. This must be very carefully done, and any faults, such as intoeing, outtoeing, club feet, upright feet, sloping feet, narrow heels, flat feet, etc., must be corrected by special shoeing to counteract these abnormalities.

During the yearling and two year old periods we increase the grain and hay and exercise according to the individual requirements of the animals and the nature of the food; for

instance, in damp weather the hay is generally of poor quality, so we increase the grain allowance, and in dry years of good hay we use more of it at the expense of the oat ration.

This brings our horse up to three years, where we commence his education as a carrier of man, and where we will leave him for the present.



CAVALRY ORGANIZATION.

BY CAPTAIN S. D. ROCKENBACK, ELEVENTH CAVALRY.

ORGANIZATION and the strength of fighting units should be determined from military history, particularly our own military history, with special regard to the probable employment, terrain and the psychology of the American soldier. There is one object in organizing a military force—success in battle, maximum loss to the enemy in the least possible time and with a minimum loss to ourselves. We have been bickering for three years over cavalry organization. In this there appears very little seriousness and but a proposal of a partial foreign organization which in its incompleteness does not improve the cavalry either in peace or for war.

In our Civil War we developed a cavalry force and organization psychologically suited to the American soldier and our own terrain, and great versatile cavalry leaders who surpassed all others in their diversified employment of cavalry. The thoughts of these leaders were recorded and are accessible to us all. Their operations are studied by all foreign cavalry organizers and leaders. The useful cavalry in the present Great War has been forced to adopt the methods for the employment of cavalry used by Stuart and Sheridan.

Decide upon the fighting unit, a unit of fixed strength at all times, requiring an organization and provisions to keep the unit at its combat strength. Read the correspondence of McClellan, Lee, and Stuart from Antietam to Fredericksburg and it becomes clear that cavalry regiments due to faulty organizations had to fight with a deplorable and not a desirable strength. The great lesson of our Civil War and of the Spanish-American War was that we need a reserve for the Regular Army, but first of all we need a reserve in the Regular Army. The Regular Army went to Cuba 50% recruits, only

50% efficient. It was gone in a month for further offensive action, due to no depot battalions to replenish it. The British Regular Army was gone by the first of last November.

In time of peace the German cavalry division (Guard Cav. Div.) has four brigades of two to three regiments of five squadrons of five platoons. In time of war (for combat) the cavalry division has three brigades of two regiments of four squadrons. Excess of peace organizations over combat organizations: one brigade of three regiments of five squadrons of five platoons—or three regiments of fifteen squadrons. In time of war the trained excess regiments are organized into new divisions or used as divisional regiments and the fifth squadrons become the depot squadrons and remain at the regimental stations, replacing losses in the combat regiment with trained men and horses. Thus and thus only can the strength and efficiency of the fighting regiment be maintained; our Civil War demonstrates it, and foreign cavalry applies it.

An illustration:

Troop N, Xth U. S. Cavalry has on the 24th of May:

Aggregate.....	81
Present and Absent.....	78
Training remounts.....	13
Charge of stables.....	2
In quarters—1 mess sgt., 2 cooks, 2 room orderlies.....	5
D. S., absent sick and furlough.....	6
Recruits.....	1
Sick.....	3
S. D., veterinary hospital and exchange.....	2
Machine gun troop.....	2
Headquarter troop.....	1
Total absent from drill (combat).....	37
Total present for drill combat.....	41

This is an existing condition and must be faced.

Let us assume the following combat troop:

Troop commander.....	1
Platoon leaders.....	4
First sergeant.....	1
File closer sergeants.....	4
Trumpeters and messengers.....	2
Platoons, 4.....	96
Total combat strength of troop.....	108

To keep the troop at this fighting strength the following are necessary:

Platoon leader.....	1
Mess sgt., cooks and assistants.....	5
Q. M. and Stable sgts.....	2
Farriers, horseshoers, saddlers and wagoner.....	7
Substitutes for sick and absent.....	11
Total.....	26
Aggregate for troop.....	134

Squadron:

Squadron commander.....	1
Squadron Staff Officers.....	1
Squadron N. C. S. O.....	2
Trumpeters and messengers.....	2
Orderlies.....	2
Troops, 3.....	402
Aggregate for squadron.....	410
Strength of combat squadron.....	332

Regiment:

Commander and staff,
Headquarter troop including band,
Machine gun troop,

(In order to perform its functions) Pioneer detachment with steel pontoon boats and explosives, Sanitary detachment (including two veterinary surgeons with 12 assistants); and motor cycle detachment, telephone detachment:

3 squadrons.....	1,230
1 depot squadron.....	410
Combat strength of regiment.....	1,000

This organization is not given for criticism or discussion but to illustrate that organization must have for its object the maintenance of a certain combat strength and in order to do this, the aggregate strength of the regiment must be sixty per cent. stronger than its combat strength. If this is not considered and adopted we will continue to ossify expensive officers by not giving them sufficient employment in time of peace. Consider the troop cited above, 41 men, never the same 41. If three officers occupied themselves mentally and physically even eight

hours per day in training these 41, they would be overtrained to a frazzle. The actual case is even worse, the Captain has been a commissioned officer nearly twenty-four years; he is assisted (?) in training his army of 41 by a major, a lieutenant colonel, a colonel, and frequently a kindly (??) word of advice from the adjutant and chaplain. Face it, it exists. What are we going to do about it? My testimony after nearly twenty-four years of commissioned service is that under the organization and system we have, it is impossible to make a troop efficient for war. It is the overhead cost that counts, why can't we get the men to work with. Suppose we got the 41 ready for combat without stunting their mental and physical growth, what would be left of them in a week's, a month's campaign, without a depot squadron to send up trained men and horses? We delude ourselves with the idea that we have a great excess of regular officers in time of peace, we must, but we must have something to train them with. I would have learnt more in two years with a full troop in a full squadron, in a full regiment, in a full brigade, in a full division, than I have in ten times that length of time under the existing conditions. Yet, the American public expects the regular officer to be super-trained in the art and science of war practically. The facts are he has never had the opportunity to learn the first essential—to handle men in large combinations—to reduce friction.

There is but one object for us—efficiency for war. The country counts on the Regular Army being efficient. It does not know that we have not a single well balanced fighting team—a field army. We know that the elements cannot be maintained efficient beyond the briefest campaign, that the regular cavalry is riding to a certain quick fall on the war course.

Decide quickly the necessary combat strength of the Regular Army organized as a fighting team, its peace strength with depot battalions must be sixty per cent. greater. We are organized on the reverse of this; we have of the unit we possess only available forty per cent. of a proper combat strength.

We do not admit that the Regular Army is inefficient, but when we say it is efficient the American public should understand our mental reservations. It is efficient not considering

any possible or probable use against modern troops, only up to fifty per cent. of its total strength, and it would not last a brief campaign against a modern army, even could we find one so small as to take us seriously and fight us.

It is commonly said the Regular Army has worked steadfastly for a well balanced, well organized force and gotten the best possible under our legislators. In the light of the present raging conflict which is rending and tearing Europe and putting to question our civilization, there is no room for sham. We know the object and need of an army in the United States and its size and organization. There should be no compromise, either a proper army or none at all, and once for all remove the delusion from the minds of the public as to their protection. When a ship not designed for battle with the tornado sinks, it is the captain who is blamed, not the directors of the company.

As there is considerable ignorance and doubt as to German organization the following published organization may not be uninteresting. The regiment one encounters in peace or war may seem entirely different from anything published, this is hard to grasp when it is realized that the Germans go from peace to war without change. They don't change, the organization is designed to give a certain combat strength. Everything necessary to maintain that combat strength is added, but none of the units or detachments changed.

1914 PEACE ORGANIZATION OF THE GERMAN ARMY.

Eight army inspection districts; or 25 army corps; or 50 divisions; or 106 infantry, 55 cavalry, and 50 field artillery brigades; or 217 infantry, 110 cavalry, 101 field artillery and 23 foot artillery regiments; or 651 infantry and 18 Jäger battalions, 550 cavalry squadrons, 642 field artillery batteries (2,700 guns with reserve to make 4,968 guns in war), 25 army service corps, 50 foot artillery (199 batteries), 35 pioneer, and 33 railway and telegraph (traffic) battalions.

COMBAT STRENGTH.

	Infantry.	Cavalry.	Artillery.	Pioneers.	A. S. C.	Total.*
Peace Strength..	428,700	85,300	129,200	24,000	11,600	791,000
Per cent. of whole..	54.2	10.8	16.3	3.0	1.4
Per cent. of inf.....	100.0	20.0	30.0	6.-	2.7
War Strength..	8,600,000	100,000	300,000	100,000	200,000	5,000,000
Per cent. of whole..	72.0	2.0	6.0	2.0	4.0
Per cent. of inf.....	100.0	2.7	8.1	2.7	5.4

*Includes sanitary and special troops.

WAR ORGANIZATION OF THE GERMAN CAVALRY.

Cavalry corps are organized during operations according to need.

Cavalry Division.—Except the Guard Cavalry Division existing in time of peace (4 brigades), cavalry divisions are only formed in case of war.

(a) Staff of division commander: 1 general staff officer, 2 aides, 1 division quartermaster with subordinate division supply officials, 1 division surgeon, 1 judge advocate, staff guard, field postmaster. Containing about 100 men, 75 horses, 12 wagons.

(b) Troops: 3 cavalry brigades of two regiments of 4 squadrons (in time of peace 2 to 3 regiments of 5 squadrons each); 1 machine gun battalion (6 guns, reserve guns with ammunition column); 1 battalion of horse artillery of 3 batteries of 4 guns; 1 light ammunition column; 1 cavalry pioneer detachment; 1 bicycle detachment (may have 140 bicycles).

Total strength: 24 squadrons, 3 batteries, about 5,000 men, 5,300 horses, 200 vehicles.

Details of Organization:—

Unit.	Men.	Horses.	Vehicles.	Combat Train.	Heavy Baggage.
Squadron.....	180	180	3	12 led horses	1 2-horse sqdrn. wagon. 1 2-horse csy. wagon. 1 4-horse forage wagon.
Regiment (4 squadrons)..	749	753	19	58 led horses 2 riding horses of the pack leaders. 2 sanitary pack horses. 1 2-horse cav. sanitary wagon. 1 2-horse tele. wagon. 2 6-horse cav. pontoon wagons. (carrying 2 steel boats, capacity 8 men with saddles and equipment.)	1 4-horse staff wagon. 4 2-horse sqd. wagons. 5 2-horse csy. wagons inc. market wagon. 5 4-horse forage wagons.

NOTE.—1. In the two cavalry bridge wagons are carried 32 dynamite cartridges in 8 dynamite cartridge pockets, which when necessary can be packed on a horse, and tools for the destruction of telegraph lines.

2. Sanitary equipment: 1 regimental surgeon, 2 asst. surgeons, 6 men assistants, 2 mounted men with pack horses, 2 pair sanitary pack pockets, 8 bearers, 1 2-horse sanitary wagon.

3. Telephone equipment: Two telephone groups; 1 officer, 4 non commissioned officers, 6 men, 4 km. wire, material for connecting with existing lines, 350 m. cable for stream crossings.

4. Four bicycles to each regiment of cavalry.

Unit.	Men.	Horses.	Vehicles.	Combat Train.	Heavy Baggage.
Brigade (8 squadrons).....	1508	1516	39		
Machine gun battalion (abteilung).....	130	90	14	4 off. horses. 6 spare horses. 1 4-horse spare wagon. <i>Battery:</i> 6 4-horse guns. 3 4-horse amm. wagons.	1 2-horse wagon. 1 2-horse csy. wagon. 1 2-horse forage wagon.
Battery horse artillery.....	150	200	14	5 led horses. 8 spare horses. 1 6-horse store wagon.	2 6-horse supply wagons. 1 4-horse csy. wagons. 1 4-horse forage wagon.
Light ammuni- tion column.....	150	200	25	4 off. horses.	1 6-horse supply wagon. 1 2-horse csy. wagon. 1 4-horse forage wagon.
Pioneer detach- ment.....	34	6	1		

Bicycle detachment: May be up to 140 wheels.

NOTES ON THE EUROPEAN WAR.

BY AN OFFICER ABROAD.

AS an introduction, I believe that the most important thing to remember in listening to accounts of observations is that every account is colored by the viewpoint of the observer, his prejudices, what lessons he wishes to draw from what he sees and above all by local conditions. For example: I had had first hand information about the wonderful success obtained by the wireless method of signalling observations of artillery fire from aeroplanes back to the batteries, and had been telling people around the Embassy that this was the *only* method; Captain ——— came back from another part of the line where they had been using a method of signalling, by different maneuvers of the aeroplane in the air, he of course told everybody that this method was the whole thing; again a young officer from the Staff of an English Corps visited the Embassy one day and in conversation with Captain ———, he said that the German shell fire was having very little effect, material or moral, due to the fact that the shells were bursting in the soft ground and did nothing but throw up a great mass of dirt. During my visit to the army with ———, I heard quite a different story; that the shell fire was having a great deal of effect, material and moral. It is a point to notice that when I was on the visit mentioned the ground was frozen hard, while it was not so at the time the other remarks were made.

We are still quite primitive and the "big noise" as they speak of it at the school of fire, referring to the sound of the guns, is liable to affect a man's reasoning, and this is the case with many other things we will encounter at such times. Continuing this thought I often asked as to the comparative losses from artillery and rifle fire. None of those questioned gave me a figure for artillery fire of less than fifty per cent. of the total losses, and one estimate ran as high as seventy-five per cent.

These figures are undoubtedly absurd but it goes to show how our minds are impressed by what may be called primitive reasoning. This may sound like an attempt at an essay, but I am only trying to dwell on what I consider vital, and that is that we must fight, and fight hard, in order to avoid drawing erroneous lessons from the present conflict while at the same time we are struggling to draw from it the great truths of modern fighting.

As the officers of this post are all of the cavalry or field artillery, and the time is limited, I have tried to pick out a few points in my notes which bear on these two branches.

Among the things which stand out in my mind to a very marked degree, the first three are: *First*, the importance of artillery; *second*, the value of our cavalry; and *third*, the importance of aeroplanes. The latter is so intimately connected with artillery and reconnaissance work that I mention it. Of course, as is always the case, the men on foot with the rifle have the main and hardest part of the work and how heroically they have done it can be attested by their terrific losses.

Taking up first the cavalry; Major ———, a cavalry officer of the English army, stated to ——— as we were walking away from a battery: "This isn't much of a war for cavalry." General ——— stated to ——— that aeroplanes had practically supplanted cavalry in reconnaissance," and ended the remark by saying "And you know that I am a cavalryman." If there is one thing that I came back with and absolutely sure of, it is the fact that the worth of cavalry like ours has been brought out in this war and very decidedly so.

I do not wish to stick my oar in on a question which belongs only to the cavalry but would like to offer as the opinion of a layman that our successful cavalry leaders in the Civil War, on both sides, knew the game pretty well. I overheard the following remark by Major ———, one of General ———'s Aids: "Why did you come over here to study cavalry? You can learn more about it from your own cavalry, your use of it

in the Civil War and a little from our South African War. Those are the sources from which our cavalry has learned."

Again, "Why didn't you teach them to get off their horses?"

The opinion seems to be general that the English cavalry has made good. They have made some brilliant charges where it was necessary but they have made good by getting off their horses and shooting. I quote from a note of October the 12th: "Talked with a Major of the English army this afternoon for a few minutes at the Embassy * * *. The British are very much disappointed with the French cavalry. The English cavalry has been backing up the infantry splendidly. He spoke of one case which he said was typical. The Germans succeeded in breaking through the line at a point. A regiment or brigade of cavalry, I do not remember which, came to their support, dismounted and drove the enemy back by fire action. He said 'The French don't understand that work, you can't get them off their horses.' He agreed that the English had learned a lot in the South African War."

With respect to mounted action, from note of September 8th: "Talked with a Lieutenant of the 9th Lancers near the Gare Montparnasse on this evening. Asked him * * *. He also stated that the Germans had approached the English lines with the leading elements dressed in French uniforms; they opened a murderous fire at close range, killing many of the lancers; none of this party escaped, the 9th Lancers driving them into a village and leaving none alive." My recollection is that this was what he called a pig-sticking contest, that is the execution was carried out with the lances, but I am not certain of this point.

I had occasion to notice English cavalry several times. Their horses seemed to be in splendid shape. On October 4th, in company with ———, we ran into the trains of the 5th cavalry brigade, English army. There were groups of troopers scattered along with the column; some of these men belonged to the 12th Lancers who covered themselves with glory at Mons in protecting the retreat of the English army. Looking at the horses, it is hard to realize what these troops had been through; the mounts were all in the finest condition and looked

well groomed. Quite noticeable was the fact that practically all of the men were walking and leading their horses. This look of being well cared for showed up distinctly among the horses in the ——— Corps, in November near ———. We saw the horses of one squadron being exercised, two horses to each man; the other men were serving in the trenches. The men take turn about in the trenches, those behind the line keeping the animals in shape. The horses mentioned above pertained to English troops, not natives. The Native cavalry was mounted on small Asiatic horses. Major ——— stated that they had stood the work well. Those we saw were not in very good flesh, but wiry looking and with the ever present well cared for look.

I firmly believe that two of our normal cavalry brigades with its proper proportion of artillery, available on the Allies' left about September 6th, would have meant disaster for von Kluck, and who knows what that would have meant. Why there was no cavalry there I cannot say, in fact I cannot say there was none, but this much is certain, that the French cavalry had not been profitably handled. To tell the truth, it had been worse than wasted, for it had accomplished nothing and the horses were practically worn out by this date. This was admitted quite frankly by several French cavalry officers with whom ——— talked. The principle trouble was that they killed their mounts trying to pick a mounted fight with an enemy who had too much intelligence to take a chance on being stuck with a lance or a sword, when he could sit down in a hedge and pick them off with his rifle. The poor, chivalrous, charge-loving Frenchmen ran down his adversary terribly for this, stating that the Germans were afraid to meet them on horse back. By the time they had learned their lesson, their big chance to act as cavalry was gone. They did manage to get together some of their cavalry to oppose the German screen during the first part of the extension of the lines to the North about October first; but here again the idea of mounted action ran into a very serious snag. The country is flat, full of canals, wet ditches along the roads, wire fences, and about every obstacle one can imagine, in a highly cultured district; a friend of ———, Lieutenant ——— of the ——— Dragoons, was

seriously wounded during this fighting. In the hospital in Paris he described the fighting to ———, and his description of the terrain coincided exactly with ours that we obtained later when we passed over it. Many detachments, both French and German, were exterminated, that is exactly the word I want, by getting bottled up in villages, which in this locality consist of a long continuous line of houses and connecting walls and following the road for sometimes several kilometers. ——— asked him a question, the gist of which was whether he was mounted or dismounted when wounded. His reply shows very well the ruling idea of the French cavalry: he drew himself up and said, "On my horse, of course." They are now in the trenches, for the most part unburdened with horses. According to a Major of the ——— Dragoons I talked with, this is a good thing, as the horses are only a bother under such conditions. The English cavalry are now armed with the bayonet, and I understood that at least some of the French cavalry were also. The French dragoons and cuirassiers wear their steel casques in the field covered with khaki colored cotton. I understood before the war that the cuirassiers would wear their cuirasses into campaign but I do not know whether they did or not. While ——— was taking the picture of the group of German dead that he referred to as being quite near to Paris, we were waiting for him in the car on the road. We saw several cars coming from the direction of Paris at a good fast rate. As they approached I was rather nervous to see a Hussar standing up in the leading car with his carbine in a very disagreeably handy position. He calmed down only on getting right up to us. Our car, a Mercedes, of well known German make, evidently aroused his suspicions as some one in the party suggested. This was not surprising as there were Germans scattered all through that part of the country for quite a while after the retreat to the Aisne. He asked us where we had come from and what was ahead of him on the road to Soissons. He seemed glad that the French were at Soissons and after thanking us hurried on. He was followed by two other cars with Hussars, in each. I mention this to show that the action had been so rapid during the preceding days that even with their

wonderful system, everybody didn't know just where everybody else was.

To my knowledge, gained for the most part indirectly, the French are using the 75 mm., 105 mm. and 155 mm. Rimailho howitzer, all rapid fire and the 155 mm. and 120 mm. heavy rifles, slow fire. The English had their 18 pdr. and 4.7 inch rapid fire rifles; and on November 22d they had one 9.2 inch heavy siege howitzer or mortar, with more of the latter type being hurried to completion.

The 75 mm. at the beginning of the war had shrapnel and shell. I do not know about the other types of French guns. The 75 mm. now has nothing but shell. In the English army, at least in the Indian corps, the artillery on November 22d had nothing but shrapnel, and they were hoping and praying for shell, which they expected soon. The 9.2 inch had shell, and I believe shell alone. Among those I questioned the opinion seemed quite general that the German shrapnel fire had not been very effective, or rather as they expressed it, it had proven quite worthless. This was ascribed to the fact that the German shrapnel nearly always burst too high. The volleys of shrapnel that we observed at Soissons were very regular in their action, both French and German. The French bursts gave one the impression that a right line could be drawn through the four bursts. With one exception, the statements that I heard tended to show that the German shell fire was very effective materially, and terribly effective morally. We have heard much about the effect of the French 75 mm. shell, so I will pass over that.

The French and English use the breast collar which seems to have given satisfaction. The French 155's and 120's are drawn by tractors, whether to the exclusion of horse power or not I cannot say. The English use a tractor for their new 9.2-inch which is transported on three carriages like the big Krupp guns.

I rather imagine that the observation of fire at the beginning of the war was carried on according to preconceived ideas

on the subject, that is, by observation somewhere near the battery firing. In the lines as they stand at present, this has entirely been done away with. The fire is observed from aeroplanes or by officers well up near the target. Of three batteries that I was in, one had an observer at 800 yards from German trenches, the others at 600 and 800 yards respectively. In these three cases telephone lines connected the observer with the battery. The first a French battery near Bethancourt, on October 4th, was using the telephone. The other two, English batteries, on November 22d, were using the buzzer. I heard nothing but buzzer, buzzer, buzzer, from the English Artillery officers. You must use the buzzer, and get your lines off the ground using every means at your disposal. Their communications were working splendidly, while those of the French battery mentioned were only good enough to scrape along with. I will speak of the aeroplanes later if there is time.

As Captain ——— told us, the ranges have proven much greater than was expected. The average of the 75 mm. has been about 5,000 meters and the same officer who told me this stated that this gun has fired with success up to 7,000 meters.

As to position of limbers during action, the battery at Bethancourt has their limbers about 200 yards in rear of the right of the battery, in column, flank toward the enemy, but well protected by a wood. The horses were in harness and had been so ever since they had been in the position, four days. At Soissons, the limbers of the battery that ——— mentioned, which we saw silenced, were slightly to the left and rear of the battery; from where we were it looked as if they were protected by the hill and a clump of trees. In the ——— Corps the horses were back in farms in the vicinity; they would not be harnessed and brought up unless matters should become very serious looking.

With respect to supply of ammunition, I know nothing except that their system worked perfectly as far as I could gather. We will be able to get this from officers who have done their service with the French artillery.

The distance covered by the artillery in daily marches at the beginning of the war was very great, especially on the whip

end of the immense wheeling retreat. Captain —— of the French artillery stated that the batteries in his part of the line made on an average of between 60 and 70 kilometers, with two hours of rest, per day. The French artillery also made some very long forced marches in moving up to the north around the left flank.

I saw the horses of the battery at Bethancourt being watered. This was done one team at a time in a small stream about 600 yards in rear of the battery. The horses were ridden into the stream. On the retreat a great many horses were lost from exhaustion, which came on more quickly due to the fact that there were poor facilities for watering, and no time to stop for water as a rule.

The study of shelter during the progress of the war is very interesting. The battle fields to the North of Meaux, those of the battle of the Marne nearest Paris, are literally covered with German pits, beautifully constructed. They started making their cover as soon as they got into position, this was shown in two positions. In one taken up right in the macadam pike on the edge toward the enemy, and where I counted between 140 and 150 rounds per gun, the shelter had not been completed, and showed how hastily it had been thrown up. Everything available had been used, including empty ammunition baskets, sticks, limbs of trees, etc. The road was sunken about two and one-half feet and they had used this protection to its fullest advantage. In another position where we found abandoned guns and caissons, the earth protection had just been started, a little bit being thrown up to fill the gap between shield and ground with evidence of intention to elaborate this. As far as I can find out the French at this time used no artificial cover for their guns but took positions far in rear of the covering crests whenever possible. Captain —— stated that this accounted for the fact that the German artillery seldom reached the French artillery with their fire at this part of the campaign, as they ranged on the covering crests and immediately searched. The activity of the aeroplanes with the artillery was very limited at this time, if they were used at all. At Bethancourt, where the semi-siege work had been going on for some time, the battery was very well protected not from hostile fire but from

observation from aeroplanes; with this to be noted, that they had a position right at the side of each gun for use in firing at planes which might discover them, pits for trails. Over a month later the English batteries were even better protected from being discovered by planes, and each gun crew had an excellent bomb proof with entrance about eight feet from the trail. I noticed that in neither the French nor the English batteries was there any attempt at cover for the crews while they might be serving the pieces. The reason is simple, there was absolutely no intention of staying at the guns if they should be taken under fire. The instructions of the English batteries as to the procedure in case they might be discovered by a German plane, are interesting in this connection. If a German aeroplane should be sighted in the vicinity by the man constantly on the lookout, a whistle signal would be given; at this all the personnel was to remain perfectly motionless; if the airman should drop a ranging bomb, the personnel was to leave the guns and clear out, waiting for the storm to pass. According to every body the storm always came along quite promptly after the bomb, and the vicinity of the battery would always be decidedly unhealthy. I noticed that there was no intention here in wasting time in getting out by firing at the aeroplanes. The bomb proofs were for emergencies, like being taken unawares. This is an assumption of mine, I do not recollect any statement of this kind.



ORGANIZATION OF A VOLUNTEER CAVALRY REGIMENT—A PROBLEM.*

BY CAPTAIN W. S. GRANT, THIRD CAVALRY.

PROBLEM.

Situation:

THE United States has become involved in war with a foreign power. The U. S. Regular Army and National Guard, whose organizations have been completed by recruitment, and state volunteers, have been concentrated on the western coast and are now engaged with a hostile invading army.

The magnitude of the war has necessitated the use of volunteers, and, upon authorization from Congress, the President has issued a proclamation calling for volunteers from the Nation at large. The quotas of the State of Kansas and Missouri are to form the Fourth Cavalry Division, which is to organize equip, etc., at Jefferson Barracks, Mo., and Forts Riley and Leavenworth, Kan. The Second Brigade of this division is to organize at the latter point.

You have been appointed colonel of the 25th U. S. Vol Cav., 2d Brigade, 4th Cavalry Division, and upon your arrival at Fort Leavenworth (at 10 A. M., April 1, 1915) you receive the following instructions from your brigade commander, who is also post commander:

"The 25th regiment will organize at this post. The cavalry, engineer and artillery barracks and stables in the post and Otis, Root and Schofield Halls are assigned the regiment for quarters, messing, etc. The other two regiments of the brigade will be camped south of Merritt Lake.

"Three cavalry captains of the Regular Army have been appointed the lieutenant colonel and two majors of the regi-

*Solution of a problem at the Army Staff College—1914-15.

ment. The other major is a lawyer of Kansas City, Mo., who served as a captain in the Spanish American War. All these officers are now in the post. All other officers have been appointed by the President from the State of Kansas and will reach here tomorrow or the next day.

"The War Department has wired me that it can furnish your regiment only 800 men and 800 horses and that they will arrive here in two lots of 400 each on the 14th and 15th of this month. You will secure the necessary men and horses for the rest of your regiment in that part of Kansas east of Wichita, Salina and Belleville, all inclusive.

"The full equipment, except horses, records, enlistment papers, etc., for your regiment can be secured from the proper post staff officers. The post hospital is in operation and can be used for men needing hospital treatment.

"The parade grounds in the post and the territory from Atchison Pike (inclusive) to the north to Plum Creek and to the west to Kennedy's ridge is assigned your regiment for instruction purposes. You can have use of the post target range on the last ten days of each month.

"The Division Commander has directed that the brigade be ready for field service by August 15th. Regimental commanders will have until July 31st for the instruction of their regiments. You will submit to me, as soon as practicable, your program of instruction. Show the subjects to be covered by each day's instruction to include July 31st.

"A hundred prisoners from the U. S. Disciplinary Barracks will be at your disposal for any preliminary work."

Required:

1. A discussion of the steps taken and the methods adopted by you for the recruitment, organization, equipment, quartering, messing and instruction of the regiment.

2. The program of instruction you will submit to the brigade commander.

NOTE.—Assume the following:

The full quota of officers for the regiment report for duty by the evening of April 3, 1915. The only military experience they have had is such as could be gained in military schools

and by spasmodic connection with state militia regiments. One half of the officers are fairly well trained horsemen. The medical officers and the hospital corps non-commissioned officers have had no military training. They are competent as far as the medical profession is concerned.

By regimental recruiting, etc., the regiment is filled up to war strength (men and animals) by April 17, 1915. Among the enlisted personnel are found some fifty ex-soldiers and national guardsmen. The others come from all classes and professions appertaining to the district in which recruited.

SOLUTION.

Upon receiving my instructions from the Brigade Commander I at once go to the quarters which I select in Root Hall, and before ordering the lieutenant colonel and the three majors to report to me, I carefully go over the notes which I have made of the Brigade Commander's instructions, and read those papers pertaining to the men, animals, and equipment of my regiment, which have been referred to me. The following points become apparent:

1. That of the entire regiment there are present on this date, April 1st, only the lieutenant colonel and three majors.
2. That by the night of April 3d all regimental officers will have reported for duty.
3. That since the Government can furnish only 800 men and 800 horses, I must arrange for the recruiting of 456 men, and the purchase of 514 horses. (See T. of O., p. 14, Organization of a Cavalry Regiment.)
4. That the men and horses furnished by the government will not arrive before the 14th, on which date half will arrive, and half on the 15th.
5. That consequently if the recruiting officers, and the officers sent out to purchase horses, are directed not to forward any men or horses until about the 12th, the colonel can get a period of a week or over for instruction of officers, absolutely unhindered by the confusion of the arrival of men and animals.
6. That recruiting officers be sent out at first opportunity.

7. That an officer, accompanied by a veterinarian, be sent out without unnecessary delay to purchase horses.

8. That the barracks and stables accommodations assigned the regiment, must be divided up among the various organizations.

9. That the most pressing duty is to find out the exact number of quarters available, assign them as field officers' sets, captains' sets, lieutenants' sets, etc., and arrange for the messing of the officers so that immediately upon arrival they can move into their rooms, and find a mess already established.

10. That the commissioned personnel must be assigned to staff positions and organizations.

11. That steps be taken to put the drill ground assigned in proper shape.

12. That it is highly desirable that all the D. and A. cards of the enlisted personnel should arrive before the men themselves, in order that men may be arranged in classes from these cards with reference to their previous occupations, and the states from which they come, so that to each organization could be assigned its proportionate share of old soldiers, foremen, clerks, horseshoers, farriers, cooks, etc., from which the non-commissioned officers and enlisted specialists could be drawn and so that no one organization would have too great a proportion of men from one state or locality.

13. That each organization must be built around the cook—in other words the first thing the men will need is food, and that consequently it is highly desirable that cooks be obtained and installed in the organization kitchens before the men arrive, so that, when the latter come, the mess of each organization will be running. Since the men furnished by the War Department will not arrive in time, it therefore seems desirable to have the recruiting officers make especial efforts at once to enlist a sufficient number of cooks.

14. That it is also desirable to have the first sergeants, mess sergeants, quartermaster sergeants and troop clerks on hand at once, but this is manifestly out of the question as all these men could not be picked from the Kansas recruits to the exclusion of those men furnished by the War Department.

15. That before the bulk of the men and horses arrive it would be a good thing to have some well broken horses on hand for officers' instruction in riding, and enough men who know something about horses to care for them.

16. That it is to be remembered that the troops are to be prepared for field service, and that the barracks and quarters are merely to facilitate matters. It is not necessary, nor is it wise, to fit them up as we would for permanent or even semi-permanent occupation. Everything must be calculated on field service lines, plus such comforts as will not interfere with efficiency or ability to quickly move out.

17. That since the colonel has his officers for some time before the men arrive, and since the lieutenant colonel and two majors are cavalry captains of the Regular Army, the colonel can start in training the officers along exactly the same lines that the men are to be trained; and, by continuing the officers' drill and classes after the men arrive, he can keep the officers always a few days ahead of the men, so that no drill of enlisted men will occur before the officers themselves have had exactly the instruction in that drill which they are to give their men. This will insure uniformity in instruction, economy of time, and will add to the prestige of the officer among his men.

18. That he must telegraph for the necessary manuals, blanks, etc.

The above problems are quite sufficient to be solved before others are undertaken.

The Colonel then calls up Major A and informs him that Otis, Root, and Schofield Halls will be used as officers' quarters and direct him to secure plans of the buildings, assign the rooms into sets of quarters to accommodate all officers so that the latter as they arrive can select quarters suitable to their grades. After consultation with the field officers he also informs Major A that four officers' messes will be established—headquarters mess, and three squadron messes, and to take such steps as will cause these messes to be in operation not later than noon on the 2d of April—such prisoners from U. S. Disciplinary Barracks as he may need in getting the equipment together being available on telephone call.

With regard to the purchase of horses, the lieutenant colonel being a captain of cavalry, and not entirely essential at this time to the work in hand is directed under competent orders to proceed to Salina, Wichita, and Belleville, to purchase 514 horses for the regiment. He is informed that a veterinarian will be sent to aid him not later than April 4th, but as it will take a few days to spread his information, and for the horses to commence to come in, he had better start at once. He is especially directed by the Colonel to secure without delay about sixty well broken, gentle horses, and ship them to Fort Leavenworth at the earliest possible date for the use of the officers' riding class.

With reference to the recruiting, the Colonel wants all his captains at Fort Leavenworth to take advantage of the officers' drills. Consequently he determines to send out three lieutenants as recruiting officers, one to Wichita, one to Salina, and one to Belleville. Who these lieutenants will be he cannot tell until the 2d at the earliest, when he can get a chance to look over the new arriving officers. He intends to give the recruiting officers special instructions to endeavor to obtain sufficient cooks for all organizations, and also to get some men accustomed to horses, all to be forwarded to Fort Leavenworth as soon as possible.

The problem of assignment of barracks and stables, while not of pressing necessity, the colonel desires to have solved while he is unhampered by a swarm of officers. So he examines the cavalry, artillery, and engineer barracks and stables, and divides them up among the prospective organization marking on a map the divisions thus made. He finds a certain amount of carpentry work to be done in order to equalize space, and is able to secure the services of some quartermaster carpenters, who, aided by prisoners from the Disciplinary Barracks are able to make the necessary arrangements before the arrival of any troops.

With the aid of the three majors, the colonel draws up the following schedule for drill and instruction of officers, pending the arrival of the enlisted men.

Schedule of Drills and Instruction for Officers, April 4, 1911.

Senior Instructor: Major B; Assistant Instructors: Majors A and C.

Sunday, April 4th:

9:00-9:45 A. M. A talk to the officers by the colonel outlining the scheme of instruction he has in mind, touching on the necessity of team work, on the disciplinary methods to be observed, and on the objects to be attained.

10:00-11:30 A. M. A conference on organization and equipment. Sheets should have been prepared showing the organization of a cavalry regiment, and all the articles of equipment that are needed. In other words, everything that effects organization and equipment should be compiled from the various general orders circulars, manuals, etc., into a few sheets so that the officer will have the data in compact form. Each of them will be furnished with a set of these sheets, and each orderly room as well. These sheets will be explained to the officers and the methods of obtaining the necessary equipment will be outlined.

2:30-4:30 P. M. A conference on paper work, including the most essential books, records, reports, etc., needed in an organization, and the object of each one. (Volunteers are very prone to ask: Why is such a thing this way?)

5:00-6:00 P. M. With aid of prison wagons and prisoners obtaining a complete set of equipment for enlisted man from from ordnance officer and quartermaster, for each officer.

Monday, April 5th:

7:30-8:00 A. M. Setting-up drill, particular attention being paid to the absolutely correct positions to be assumed, the absolutely correct methods of performing the movements, etc., all as contained in Cavalry Service Regulations, pp. 31-34.

8:30-9:30 A. M. To form the squad, to dismiss the squad, position of the trooper dismounted, or attention, the rests, eyes right or left, facing, salute with the hand, to march in quick time and to halt. (C. S. R., pp. 29-31, 36, 37.)

10:00-10:30 A. M. Conference on the Uniform Regulations.

11:00-12:00 A. M. Swimming test: those who qualify to be excused from further instruction.

1:30-3:00 P. M. Nomenclature and care of rifle. Sighting Drills. (S. A. F. M., Chap. 1.)

3:30-4:30 P. M. Conference on Manual of Interior Guard Duty.

Lessons in Manuals assigned for April 6th. (The evening is supposed to be devoted to these manuals, the lessons assigned being gone over carefully, in order to see in print the lessons learned at drill that day, to look over the subject matter of the drills for the following day, and to prepare the officer's mind for more advanced training.)

Tuesday, April 6th:

7:30-8:00 A. M. Setting-up drill.

8:30-9:30 A. M. To form the squad; to dismiss the squad; position of the trooper, dismounted, or attention; the rest; eyes right or left; facing; salute with the hand; to march in quick time and to halt; to mark time; side step; back step; to march by the flank; to march to the rear; change step.

10:00-10:30 A. M. Conference on the uniform and military courtesies and etiquette.

11:00-12:00 M. Swimming lessons for those not qualified; the others will be allowed leisure in which to attend to personal duties, such as providing themselves with uniform, studying the manuals, etc.

1:00-3:00 P. M. Nomenclature and care of rifle, sighting drills; (review) positions and aiming drills. (S. A. F. M. Chap. II.)

3:30-4:30 P. M. Conference on Manual of Interior Guard Duty.

Lessons in Manuals assigned for April 7th.

C. S. R., Steps and Marching, pp. 35-37.

Individual Instruction with Arms, pp. 38-42.

Manual of Interior Guard Duty, pp. 12-20.

S. A. F. M., pp. 35-47.

(It will be noticed that the drills each day start out with what has been learned the day before, and take up several new movements. The same way with the lessons assigned.)

Wednesday, April 7th:

- 7:30-8:00 A. M. Setting-up drill.
 8:30-9:30 A. M. Steps and marching; manual of the rifle. (C. S. R., pp. 38-43.)
 10:00-10:30 A. M. Conference on the uniform and military courtesy and etiquette.
 11:00-12:00 M. Swimming lesson for those not qualified.
 1:00-3:00 P. M. Position and aiming drills; deflection and elevation correction drills. (S. A. F. M., Chap. III.)
 3:30-4:30 P. M. Conference on Manual of Interior Guard Duty.

Lessons in Manuals assigned for April 8th:

- C. S. R. Individual instruction with arms—pp. 38-42, 43-50.
 S. A. F. M., pp. 40-51.
 M. I. G., pp. 14-31.

Thursday, April 8th:

- 7:30-8:00 A. M. Setting-up drill.
 8:30-9:30 A. M. Manual of the rifle and marching under arms.
 10:00-10:30 A. M. Conference on troop papers, record, reports and returns.
 11:00-12:00 M. Swimming lessons for those not qualified.
 1:00-3:00 P. M. Deflection and elevation correction drills.
 3:30-4:30 P. M. Conference on Manual of Interior Guard Duty.

Lessons in Manuals assigned for April 9th:

- C. S. R. pp. 43-50. Care of horses, pp. 114-123.
 S. A. F. M., pp. 47-57.
 M. I. G. D., pp. 21-42.

Friday, April 9th:

- 7:30-8:00 A. M. Setting-up drill.
 8:30-9:30 A. M. Manual of the rifle and marching under arms.

10:00-11:30 A. M. Exhibition of enlisted man's equipment, assembling of same, how worn, methods of adjustment, where articles are carried, etc.

1:00-3:30 P. M. Gallery practice.

4:00-5:00 P. M. Conference on Manual of Interior Guard Duty.

Lessons in Manuals assigned for April 10th:

C. S. R. Care of Horses, pp. 114-123; p. 124 to shoeing; Care of Saddlery, pp. 127-129.

S. A. F. M., pp. 47-57.

M. I. G. D., pp. 34-52. Stable Guards, pp. 65-69.

The colonel thinks it best to carry the schedule no farther for the present, as he hopes to have horses by the 10th for the use of the officers.

The above schedule is finished on the night of the 1st. So on the morning of the 2d of April, the following arrangements have been made:

1. Lieutenant colonel has left to purchase horses.
2. Barracks and stables have been assigned.
3. Officers' quarters are ready for choice and occupancy; and officers' messes are ready to receive officers at lunch.
4. Schedule of officers' drills and instruction has been drawn up.

On the 2d and 3d of April the officers keep constantly arriving. They are allowed to choose quarters according to their rank as they arrive, there being little choice in the quarters assigned each grade.

As each officer reports he is handed a blank to be filled out and turned in immediately, in which he is to state his previous occupation, any previous military experience, profession, etc., so that the colonel may be able by a scrutiny of the blanks thus filled in to determine tentatively on his staff officers, and to intelligently make the assignments of officers to organizations and squadron staff positions, and to pick out his recruiting officers.

Three first lieutenants are picked out as recruiting officers and are sent respectively to Wichita, Salina and Belleville

which they are to make their headquarters. They are assigned recruiting districts as follows: First District: Wichita, Winfield, Oswego; Second District: Salina, Marion, Emporia; Third District: Belleville, Marysville, Holton.

The colonel also gives them instructions to this effect: "You will each enlist 152 men. I want each of you to make endeavors to enlist nine cooks at once, preferably men with previous experience as army cooks, or men who have cooked for ranches, field hands, farm laborers, etc. You will also endeavor to enlist at once about twenty-three men each who have had experience in the care and handling of horses. You will arrange to forward these men here not later than the 11th if possible. You will hold the other recruits at your stations, sending them forward so as to reach here in two equal batches, on the 12th and 13th, except in certain cases where you may receive instructions from me to send forward individual men. You will forward to my office the D. and A. cards of the men you enlist promptly, so that I may tabulate these men under previous occupations before their arrival."

One of the veterinarians is selected who is ordered to report to the Lieutenant Colonel at Wichita.

On the night of the 3d the officers are assigned to organizations, and the staff officers are appointed. All these assignments are subject to later change, but only in case of absolute necessity in the interest of the efficiency of the regiment.

So on the night of the 3d the officers have been assigned to quarters and messes, they know the organization to which they are to belong, the recruiting officers have left, and the purchasing of horses is under way.

On the morning of the 4th the schedule of drills and instruction for officers goes into effect.

As days go on I receive information from the recruiting officers that they have been able to obtain the necessary number of cooks, some good, some indifferent, and also about sixty men who are accustomed to the care of horses. So I have these men forwarded at once to Fort Leavenworth, which they reach on the 9th. I have them divided up among the organizations so that each of the fourteen organizations have two cooks, and four or five other men.

About the same time I receive information from the Lieutenant Colonel that he has been able to procure the sixty horses desired, so I have those shipped, reaching Fort Leavenworth on the 10th. These I have sent to one of the troop stables, and arrange for their care by the men already on hand.

In the meantime the D. and A. cards of the men to be sent by the War Department have arrived, as well as some from the recruiting officers. The Colonel starts a classification of these men by nature of previous occupation and State from which they come. By the time the men arrived he has practically all the men tabulated in this way, and based on this tabulation has assigned them by name to organizations. He has taken care to divide up the men among the organizations so that each will have its proportionate share of old soldiers, foremen, clerks, drivers, saddlers, wagoners, laborers, farmhands, machinists, etc., so that the troop commander in organizing his troop will have material for non-commissioned officers and other troop specialists required.

When the men arrive in the different batches, representatives of each organization is present, each man is informed of the organization to which he belongs, and the representative marches off the different squads to their barracks.

It will be remembered that the Colonel's schedule went through the 9th only. On the 9th he learns that the sixty horses will arrive the next day, so on the night of the 9th he publishes the schedule for the 10th, as follows:

Saturday, April 10th:

7:30-8:00 A. M. Setting up-drill.

8:30-9:30 A. M. Marching under arms, and manual of saber in so far as it affects the officer in his daily handling of that arm, and omitting combat training.

10:00 to 11:30 A. M. Conference on mess management, components of ration, how rations are obtained, field cooking equipment, etc.

1:00-3:30 P. M. Gallery practice.

4:00-6:00 P. M. The officers will be formed as a troop, marched to the stables, and will be required to groom, feed, water and bed down the horses for the night. The method

of keeping equipment at the stables, and in general, all the rules for stable management will be carefully explained to them.

8:00-10:00 P. M. Conference in which will be discussed all points that have come up during the week that may need clearing up. The sheets furnished the officers, showing the organization of a regiment, squadron, troop, etc., the equipment required, etc., will all be gone over carefully, as well as the question of mess management again.

By the morning of Sunday, the 11th, therefore, the officers will have had careful and minute instruction in all that pertains to organizing, equipping, and feeding their men, and will have received careful instruction in the basic dismounted drills. The week's course, full as it has been with new ideas following each other rapidly, will of course not have been thoroughly assimilated by each officer, and much more time is really needed, but it furnishes the best groundwork that can be given in so limited a time. The week commencing on the 11th and ending on the 17th will have to be devoted principally to shaking down the organization, receiving and caring for men and horses, etc. As recruits and horses will come in at various times, it will be impossible to get up any kind of complete schedule for this period that can be adhered to. However, the instruction of the officers must continue, and the Colonel determines to have some drills for them continue throughout the week. Outside of this, squadron commanders are informed that they will exercise such supervision over their squadrons during the week as will result in their thorough equipment, in everything prescribed, before the night of the 17th.

His schedule of instruction for the officers during the period April 12th to 17th, follows: It is understood that exigencies may demand that a few officers possibly one to each organization, or only one to a squadron, may have to be excused from these drills at times.

Monday, April 12th.

7:00-7:45 A. M. Manual of the pistol, dismounted. (C. S. R., pp. 50-52.)

2:30-4:30 P. M. Horses will be brought up with halters on only, and each officer will saddle and bridle his own horse;

horses will then be inspected, mistakes corrected, and the officers will be given mounted instruction in the preparatory exercises. C. S. R., p. 58.

Tuesday, April 13th:

Same as for Monday, including in the Manual of the Pistol, Pars. 135 to 142, S. A. F. M.

Wednesday, April 14th:

Same as on Tuesday.

Thursday, April 15th:

Same as on Wednesday including work on the snaffle, p. 69. C. S. R.

Friday, April 16th:

Same as for Thursday.

On the night of Saturday, the 17th, all men and animals are present, the organization is complete, the equipment is practically all on hand and the entire regiment is ready to begin training. There will probably be some equipment still to be obtained, but it will have to be gotten during periods when no work is assigned.

Before continuing with the scheme of instruction it might be well to take up the question of equipment, and discuss the methods employed to fit the regiment out in the least practicable time.

The mess furniture, etc., drawn for the officers' messes will not be taken along. The first equipment needed, aside from materials for the regimental headquarters office will be the sets of enlisted men's personnel and horse equipment, issued to officers for instruction purposes. This equipment will ultimately be absorbed in the troop equipment. The next equipment drawn, as noted above, is the kitchen utensils and necessary mess furniture for the organization messes. For this messing should field ranges be issued only? The Colonel prefers the cooks to use the ranges installed in the barracks. It is simpler; the cooks do not have so much to learn

at one time. The regiment is to be taken into the field for from two to three weeks before the 31st of July, and they can get accustomed to the field cooking equipment there. Mess furniture used in barracks will therefore not be taken into the field; except of course the meat cans, knives, forks, etc., which the soldier will use in the post.

When the cooks and men who take care of the horses arrive, they should be at once supplied with uniforms. The furnishing of the men with uniforms is the item which will take up the most time. Every effort should be made to cut down on the time. Whenever practicable, each batch of recruits should be taken the day they come in, their sizes taken, and each man fitted out with at least two O. D. shirts, one breeches, one leggins, and one campaign hat. As the captains have to spend so much time at drill, it might be well if they should direct one of their lieutenants to study up minutely the subject of getting men's measurements, method of trying on, method of obtaining clothing, and the amount of clothing each man should be provided with at the start.

The majors have from the 11th to the 17th, inclusive, in which their organizations must thoroughly be equipped. Let us look at a list of what this equipment consists of in general for one organization:

Arms and equipment of enlisted man (personal and horse).
Field kit.

Surplus kit, and surplus kit bags.

Six wire cutting pliers.

Signal outfit.

Farrier's supplies: 1. Medicine and dressing; 2. Farrier's kit.

Horseshoer's supplies: 1. Field forge; 2. Tools; 3. Branding irons; 4. Horseshoes; 5. B. S. coal; 6. Horseshoe nails.

Saddler's supplies: 1. Tools, leather, etc.; 2. Stitching horse.

Orderly Room Supplies: 1. D. L., orders, blank forms, etc.; 2. Field desk.

Extra ordnance, consisting of extra articles of enlisted man's equipment, spare parts, gallery rifles, etc.

Cleaning material.

Lanterns.

Engineer equipment: Tools, topographical instruments, etc.

Axes.

Field ranges, complete with utensils.

Field picket line, with pins, sledges, shears, etc.

Tentage.

Ammunition.

Wagons, mules, and harness.

War Department Manuals, Ordnance publications, etc.

Extra Q. M. Property, such as shelter-tent halves, etc.

In addition the bands needs instruments and music, the headquarters troop needs transportation, the machine gun troop needs mules, etc.

The problem of obtaining this equipment is chiefly one of method on the part of the supply departments involved, since the proper staff officers at the post have sufficient supplies (except horses, records, and enlistment papers) to supply all organizations. Take for example the horse and personal equipments of the enlisted man. These can be put up by prison labor in separate bundles, a bundle to a man, and each organization can draw them as soon as it has the transportation without trouble. A little system will economize time and make the matter one which will interfere little with instruction. There is one point to be observed however. The organizations should not be compelled to bow to the decision of the staff departments as to when they should draw the different things but the staff departments should arrange for the drawing of articles after due notice from the organization or regimental commander. The object should be not to fill the barracks and storerooms with an enormous mass of supplies that no one in the organization knows the purpose of in the beginning. They should be drawn at intervals, the men becoming acquainted with the uses of, and method of care of, a few articles, before drawing more. In this way a gradual acquisition of all the supplies needed will be made.

Let us now return to the subject of the instruction of the regiment. The Colonel can resort to one of two methods.

He can get up a schedule showing exactly what shall be taught in each drill hour each day, or he can divide the remaining three months and a half into periods, and state what he desires the organizations to be proficient in at the end of each period. He of course can get the majors to confer and get up schedules for their squadrons in their turn for each period he designates. For example, he can say, "Period April 18-30. Organizations will be proficient at end of this period in individual instruction, dismounted, with arms." The majors can in turn say: "Period April 18-30, sub-period, April 18-22, assigned to individual dismounted instruction without arms. Sub-period, April 23-30, assigned to individual dismounted instruction with arms." But in this case it rests with the captains as to how they will bring their organizations up to the proficiency required in each particular thing at the end of each sub-period. The question arises, "Are the captains competent, and have they had enough experience to warrant such an experiment being tried when every minute is valuable?"

In any case drill hours would be prescribed by the colonel. Nor can he let the captains have entire initiative during these drill hours, restricted only by knowing that proficiency would be required in such and such a thing at the end of each sub-period?

We must remember that the initiative of the officer should be trained, that he should be allowed to be supreme in his own sphere. We must also remember that he will daily be under the observation of the colonel and the field officers, and at least the experiment should be tried of giving him as much independence as possible—a balance must be struck between the amount of supervision by the field officers, and the amount of freedom allowed him in carrying out the schedule.

For the officers the colonel will himself prescribe the subjects of each day's drill, for the officers correspond to an organization of which he is the captain. He therefore draws up his order dividing the time available for training into periods, gets the majors to divide up the periods into sub-periods, arranges his own schedule for the training of the officers in such a way that they will receive instruction in the subjects assigned the sub-periods before those sub-periods open, and

prescribes hours for drill, all of which are contained in the following orders.

The discrepancies, conflicting duties of administration, and readjustments of the schedule will have to be made from day to day, dependent on progress made.

(Heading of order omitted.)

(Many calls are omitted because they have nothing to do with instruction.)

1. The following list of calls will go into effect at midnight of April 17-18.

Reveille	5:30 A. M.
Setting-up drills for 15 minutes after reveille.	
Breakfast	6:00 A. M.
1st Call—drill	6:35 A. M.
Assembly	6:45 A. M.
Recall	7:45 A. M.
First Call—officers' drill	8:15 A. M.
Assembly	8:20 A. M.
Recall	9:05 A. M.
First Call—second drill	10:00 A. M.
Assembly	10:05 A. M.
Recall	11:05 A. M.
First Call—officers' conference	11:20 A. M.
Assembly	11:25 A. M.
Recall	11:55 A. M.
First Call—third drill	1:25 P. M.
Assembly	1:30 P. M.
Recall—fourth drill and stables	3:55 P. M.
Assembly	4:00 P. M.

No recall from this last drill but stables will be over by 5:45 P. M., officers' school, Mondays, Wednesdays, and Fridays 7:30-8:30 P. M.

2. During the last ten days of April, May and June the entire afternoon from 12:30 to 4:30 P. M. will be devoted to target practice on the range, and such drills as conflict with this instruction will be suspended.

3. Non-commissioned officers' school will be held daily, Sundays excepted, at such hour as organization commanders may designate, and will last one-half hour. The instruction will in general follow the lines already established, and contained in this order, for officers, omitting such advanced instruction as in the opinion of majors, may be dispensed with.

4. Majors are assigned to the supervision of troops as follows: Troops A, B, C and D—Major A; Troops E, F, G, and H—Major B; Troops I, K, L, and M—Major C; Machine gun troop, Lieut. Col. C.

5. The following scheme of progressive instruction will be carried out:

First Period: April 18 to June 15.

During this period captains will have their troops for instruction. At the end of this period troops must be proficient in the following:

School of the trooper dismounted.

School of trooper mounted, including preparatory exercises: work on the snaffle; work on the bit; use of saber, mounted; mounted inspections; movements in platoon, mounted and dismounted. On account of lack of time certain items will be omitted in this instruction which will be observed by consulting the schedule for sub-periods, following.

Packing the saddle.

Pitching tents, shelter, pyramidal, wall and common.

Target practice, including course in S. A. F. M. through gallery practice, and firing at 200 yards, slow and rapid.

Manual of interior guard duty.

Stable management and care of horses.

Pistol and revolver practice, including preliminary drills and position and aiming drills.

In order to concentrate on a few things at a time, this instruction will be carried out according to the assignment of sub-periods following: at the end of each sub-period a rigid inspection will be made of each organization to ascertain whether it comes up to the standard of proficiency required in the subjects in which instruction has been given in that sub-period.

1st Sub-period.—April 17-24:

1st Drill.—School of the Soldier, dismounted, without arms.

2d Drill.—Nonmeclature and care of rifle, sighting drills, position and aiming drills, deflection and elevations correction drills, gallery practice.

3d Drill.—School of the Soldier, dismounted, without arms.

4th Drill.—Gentleing horses, stable management, care of horses, stables.

From the 20th to 24th inclusive, those men who show the greatest aptitude in gallery practice will be given instruction on the range.

2d Sub-period.—April 25-30:

1st Drill.—School of the Soldier, dismounted, with arms.

2d Drill.—Nomenclature and care of rifle, sighting drills, position and aiming drills, deflection and correction of elevation drills, gallery practice.

3d Drill.—School of Soldier dismounted, with arms.

4th Drill.—Gentleing horses, work on the longe, care of horses, stables.

During this period more of the more apt men at gallery practice will be given instruction on the range.

3d Sub-period.—May 1-15:

1st Drill.—Movements of troops dismounted, with arms, that may occur after an organization has dismounted to fight on foot.

2d Drill.—Position and aiming drills, gallery practice.

3d Drill.—Instruction in use and care of equipment, folding saddle blanket, assembling of saddles, packing saddles, shelter tent pitching, pyramidal, and other tent pitching.

4th Drill.—Gentleing horses, longeing, preparatory exercises in school of the soldier, mounted, stables, care of equipment.

4th Sub-period.—May 16-30:

1st Drill.—Mounted drill, the platoon, (C. S. R.)

2d Drill.—Gallery practice, preliminary drills and position and aiming drills with pistol.

3d Drill.—Mounted drill, preparatory exercises in School of the Trooper, mounted; work on the snaffle.

4th Drill.—Longeing, instruction in saddling with full pack. Stables.

During the period May 22-31 the range practice for all men at 200 yards will be completed.

5th Sub-period.—June 1-15:

1st Drill.—Mounted drill, the platoon, and dismounted movements therefrom.

2d Drill.—Revolver and saber drill.

3d and 4th Drills may be combined.

All work under packed saddle; mounted drill, the platoon, mounted saber drill, etc., care of equipment.

2d Period.—June 15th to July 8th:

During this period the troops will be combined in squadrons as contemplated in Cavalry Service Regulations, and the senior troop commander will have charge of the drills in each squadron. Target Practice for all men back to and including 600 yards, slow and rapid fire, will be completed. Revolver range practice will be completed. (Of course time does not permit of the men firing the entire course—that is the prescribed number of scores. Instruction in scouting, marching, etc., will be given, as well as going into shelter tent camp.)

3d Period.—July 9th to July 31st:

It is contemplated during this time to move the entire regiment to the drill ground and go into camp, taking all field equipment. There problems in minor tactics will be undertaken, marches will be made, individual cooking will be taught, and during the latter part of July field firing on the Leavenworth range will be indulged in.

NOTE: The foregoing article was not written for publication but was turned as a solution to a problem and secured from the Instructor. It is published at this time as so much is being said about the practicability of raising volunteers for war. It will be seen that, although nearly four months has been allotted in this much congested schedule, the regiment is even then only partially prepared for field service in war. In fact double this time would hardly suffice to put a volunteer cavalry regiment in proper shape for going to the front.—*Editor.*

Reprints and Translations.

COLOR AND MARKINGS OF HORSES.*

In some Cases They Affect an Animal's Usefulness.

BY ALFRED STODDART.

THE time-worn maxim, "A good horse cannot be of a bad color," must be qualified in war times. There has always been a prejudice against the use of white or light-colored horses for military purposes, always excepting some special regiments such as the famous Scots Greys, for instance. Now we hear that in the European armies they are painting white horses khaki color in order to render them less conspicuous to the enemy.

Naturally the question suggests itself: Why should not dun-colored horses be in demand for cavalry use? The color blends admirably with the shade of khaki employed by the English and United States armies. The dun-colored horse has never been highly esteemed and, other things being equal, his color is apt to bring his price down at least ten per cent. Why is it, therefore, that a determined effort has not been made to pick up dun-colored mounts for army use? Perhaps this is the answer: Dun-colored specimens rarely occur in well bred horses—that is in thoroughbreds or even in halfbreds, which latter classification includes any horse with thoroughbred blood in his veins. It is a color that is almost never found in the Arab or barb. Then, too, dun horses are apt to be undersized and it would be difficult to secure any number of them of the size prescribed by military regulations.

*From *The Country Gentleman* of March 27, 1915.

This color is quite common among our Western ranch-bred ponies. A few years ago, before the introduction of thoroughbred and trotting blood on the ranches, the dun-colored ponies were probably as numerous as those of all other colors added together. Duns are frequent in all breeds of ponies, especially those that are semi-wild, such as the Exmoor and the Welsh. Norwegian ponies are almost invariably dun-colored. Darwin's theory that dun was the original color of the horse does not seem unreasonable in the light of the above facts. No doubt nature intended him to possess the inconspicuous khaki-colored coat that is now being bestowed upon him by art, for we find her taking similar precautions with all her wild things. It is a curious fact that wild animals of all kinds are almost invariably of one standard hue, while the same animals domesticated develop many colors.

The mule stripe down the back, so often found in the dun, with its branches from the withers forming what is sometimes called the "sign of the cross" on the back of an ass, together with the zebra-like rings not infrequently seen on the legs of dun horses, simply adds to the evidence in support of the Darwinian theory and attests to the kinship of horses with the quagga and other wild species.

In spite of the fact that good horses come in all colors, even experienced horsemen have certain well-defined prejudices in regard to color. The dealer knows that the most marketable shade is the bay. It is the conservative color. Many people will not use a horse of any other hue. It is the standard color in many army and police specifications, and a horse of this color can be most readily matched. But apart from these considerations there are many others bearing upon color.

Dun-colored horses are considered hardier than others, possibly because they are likely to be of some semi-wild strain. The horseman's personal experiences are apt to influence his prejudices. I have seldom met with a roan that did not possess the qualities that entitled it to be called "good," and many persons share this opinion—or superstition—regarding roans.

Horses' coats are divided into three classifications by veterinary authorities—primitive coats, derived coats and

conjugate coats. The primitive coats are those of the foals at birth. Derived coats are those that are formed later by the mixture of white with the original coats. Conjugate coats are those formed by the mixture of two different coats. These divisions are subject to numerous sub-classifications, to enumerate which would be tedious. It is said, however, that all the varied colors of the horse's coat are formed from two kinds of pigment only, and that the different hues are produced by varying degrees of density in the cells that contain the pigment. It is interesting to note that if a few hairs are plucked from a bay horse, a chestnut, and even a dun, and they are thrown together, it will be found almost, if not absolutely, impossible to sort them properly.

The colors are differently designated in some localities. Thus there are districts where they will stare at you when you speak of a chestnut horse and ask you whether you do not mean a sorrel. Sometimes the distinction between sorrel and chestnut is a matter of shade, the first term being employed to describe the darker coloring and the second when speaking of a light-colored horse. Then, too, some persons use the term chestnut to describe a dark-brown horse, and, as a matter of fact, veterinarians recognize the chestnut bay as a variation of the bay color. As its name implies, it is the color of a ripe chestnut.

The subject of white feet has given superstition and prejudice something to work upon for many generations. Our grandfathers used to quote a little rhyme: "One white foot buy him, two white feet try him," and so on, which expressed, if it did not go far to create, the prejudice that still exists against a horse with more than one white foot.

The prejudice is so old and so deeply rooted that very few horses marked in this manner now come into the market, or, more properly speaking, very few are bred. But if they were there is absolutely no reason why they should not be as good as other horses. No doubt the theory was warmly supported by grooms and others whose duty it was to look after the horses, for a white foot must be kept clean.

The color of a horse is by no means a guide to his breeding, but there are certain radical characteristics in the various

breeds of horses that manifest themselves in the color of the animal. Thus the Arab is almost invariably solid colored, or what passes for solid color, either chestnut, bay or gray. So is his descendant, the throughbred. Percherons are almost invariably gray or black, and the Clydesdale is as uniformly bay. The Suffolk Punch is curiously and consistently chestnut and Shetland ponies, contrary to the very general idea that they are often parti-colored, are almost invariably of solid colors, with black or dark points. In all of these cases specimens of colors are likely to be regarded with suspicion as to the purity of their breeding.

CAVALRY AT THE FRONT.*

BY LIEUTENANT COLONEL FREIHERR VON WELK, GERMAN ARMY,
RETIRED.

THE first six months of the Nations War, which more and more approaches a world's war, indicated that the measure had been given for a manifold new war teaching and a new art of war, that the strategy and tactics which till now had formed the foundation of the art of war and which Frederick the Great, Napoleon, Clausewitz, as well as Moltke had taught us, could no longer lay claim to full authority. It is not easy for a man, who had experience in the wars of 1866 and 1870-71 and learnt the art of war of that time, to correctly locate himself in the art of war of to-day. We will not go back a hundred years to the Napoleonic wars, but will devote our attention to the wars of the middle and close of the prior hundred years, in order to reach the conclusion and knowledge that the present war, almost in all departments and from every point of view, presents absolute originality. This comes at once into view when one considers the size of the opposing armies. In the place of tens of thousands there are hundreds of thousands and instead

*Translated from the *Jahrbücher für die deutsche Armee und Marine* of February, 1915.

of hundreds of thousands there are millions. The direction of this massive army commands, on account of its size, originality and because it is more or less surrounded by a veil of secrecy. On the outbreak of the war of 1870-71 one knew after the first days the formation of both armies, the combination of army corps into armies and their leaders; the combination of cavalry divisions; all operations of the two armies were made known by timely dispatches from the army in formation, and from the press; no one was in doubt as to where this or that organization was or as to which troops had taken part in the different battles and campaigns. The art of war consisted, as it had before, in marches and combinations, more or less sharply separated from one another and limited by time and space. When on the 18th of August 1870 a severe battle, for that time comparatively, had taken place, one knew a few days later at home that the battle of St. Privat had been fought. The means of fighting were in the main the three principal arms: infantry, cavalry and artillery. There could be no surprise in their relation on either side, for one knew exactly the weapons of the opponents and its qualities before the war began, so that the superiority of the German artillery and the superiority of the French infantry—considering the armament—offered nothing unexpected. The French army was supplied throughout with a new weapon, the mitrailleuse, but it was without great result and could not have in any case influence upon the art of war. Also the strategical principles and the method of fighting of the opponents were known. The entire war, and also in the years following, consisted in combining at the determined moment. The armies rushed upon one another, there was a battle, the enemy was defeated, he must retreat and be pursued or be captured (Sedan). At first when new troops were at call, new undertakings took place; there was modern fighting or battle, and so continued the entire war in combinations and sieges, whose result decided finally the entire campaign. New phenomena and measures in the domain of tactics made themselves current for the first time during the Russo-Japanese war but only up to certain limits—spade work and employment of heavier artillery or field artillery—and in the Balkan war, where in addition aeroplanes were employed

in very limited numbers. The teachings of these two wars were intelligently followed by the general staffs of the great powers of Europe and perhaps were considered and developed by the directors of the present great war. This is made manifest in the main in the employment of the motor car, of telephones, of high angle fire artillery, of search lights, of air ships and flying machines, and especially the enormous use of the spade by infantry and artillery.

Here the question presses upon us: What influence have the new tactics and the completely changed manner of the conduct of war exercised, especially upon the cavalry? Has a change in the employment of cavalry generally taken place, and have the first six months of this war brought forth the proof that the time of the cavalry is past; that it has no longer a value as a fighting arm opposed to the operations of the powerful long range fire arm of the artillery and infantry, and that the important duty of reconnaissance has completely gone over to the airship and aeroplanes? That was the opinion expressed on many sides, in the press and at public meetings and also in military circles. It would be going too far were we to touch on such opinions and decisions. We will only recall the discussions of the German Reichstag in the year 1913, where on the subject of the present value of cavalry much was said on the occasion of the proposal of the Government to provide the cost of the raising of six new cavalry regiments for the protection of the eastern boundary. It was there, especially Representative Noske, who spoke very decidedly against it and who ended a long speech with a collection of evidence to show that it was entirely incontestible, that in all great wars of recent years the cavalry has exercised a trifling or no influence upon the result of the campaign. Also another opinion—that the request for six regiments of cavalry indicated an overestimate of the value of cavalry. War Minister von Heeringen spoke warmly as to the value of the cavalry, and likewise for the requested increase. "We need," he said, "not only the reconnaissance work of the cavalry, but also its help to carry on the fight. It is completely incorrect, if it is ever said again that the rôle of the cavalry in future wars is played out. No, directly the opposite is my understanding of the case." He

continued this at length and touched in closing upon the indispensability of the cavalry for pursuit. The fruit of the attack, which one must gather after sustaining great loss, lies in the pursuit. There is the cavalry in its place. It stamps half results with completion and under circumstances thousands and more thousands of new victims are spared. The ready, well led, numerous cavalry can not only decide a campaign, but above all things, end it. That future which was referred to here by both sides in coming to a decision as to the necessity or no need of cavalry has come, the question lies before you: Who was right? Now, the value that our cavalry performed in the first three months of the great war, and what the lack of performance of the French, Belgian and also the English cavalry cost, lies clearly before all eyes. We refer in this connection to our review in the October and December number of this periodical.

In the second three months the relationship of all things greatly changed, because the campaign had taken another course. In the Western theater of operations the armies stand, after contact had been won by the great main bodies, opposite one another on a long front, waiting for the moment that will favor an offensive advance, as two fighters who opposed stand on guard and await an opening which the opponent may give. The activity of the two cavalries is employed in seeking to go round our right flank and the French left flank and in supplying suitable protective measures. Most frequently the opposing cavalry withdrew, especially the French, at every serious contact and left us unhindered in front and flank to press forward. We find our cavalry in the first days of October advancing on Antwerp, whose siege was thought unnecessary, and in the 3d of October they pressed over Dursel to Linth (on the R. R. Mechlan-Antwerp, west of Lierre).

In the north of France our mounted troops could advance still farther, and a French dispatch of the 6th of October says that they have been informed that upon the left (French) flank the front is still more extended and that large and important German cavalry masses are in the vicinity of Lille. There west of Lille and of Lens our knights threw themselves upon the enemy's cavalry and drove them back. Two days later

we are already in the vicinity of Armentieres, where we had another conflict with the French cavalry. The French flank attempts and also the designed advance on Arras, were, according to French reports failures, in the main due to the persistence of the German mounted troops, who waited north of Lille the continuance of the great turning fight. Here on the 10th of October it came to a real serious encounter between the two cavalries, in which the French had a full cavalry division, and at Hazebrook—also still farther West of Armentieres—another division was defeated with heavy loss. This was corroborated by the French official report of the 12th of October.

At the same time as these fights, October 10th, the 9th Strassburg Hussar regiment in conjunction with a cavalry division had a hand to hand struggle rich in results. The regiment while reconnoitering as a flank detachment surprised 200 young Frenchmen in march to their clothing depot. They were taken prisoners. Some three kilometers further a convoyed wagon column in march was discovered. The first squadron of the Hussars attacked it, they received a strong rifle fire; but as the three other squadrons hastened to its assistance, the French threw up their hands and surrendered. They were taken prisoners 5 officers and 250 infantrymen, and as booty 36 horses and 23 wagons. The mounted men, accompanying the column, about twenty, took to flight and the three accompanying flank curiassier squadrons, who should have thrown themselves against the Hussars, vanished as the regimental call of the Hussars sounded. It is to be mentioned that among the captured wagons was found a beautiful coupe, in which an elegant Frenchwoman sat, smoking a cigarette. The Hussars lost three men and six horses, while two officers and some Hussars were wounded.

In these days an English journal stated, that the German cavalry is already near Dixmude (22km. south of Ostende) and the war correspondent of another English newspaper, the *Daily Chronicle*, relates that he and a French correspondent had a narrow escape from being taken prisoners by a German Uhlan patrol at a railway station of north France, and appends the remark that this episode shows in what a bluff manner the German Uhlans arise everywhere and then vanish. "Num-

erous (strong) German cavalry" he continues, "has arrived from the Belgian border—fugitives relate that the enemy's mounted patrols reconnoiter between Armentieres, Bethune and the forest of Dieppe. They ride in small detachments calmly through the villages of this district, demanding information and food from the few people who have remained and pressing further forward. Distant from the main army's main body, they explore the positions of the Allies. These patrols are disquieting by their sudden appearance from the lonely farm yards near the important railways. Their quick advance on various places, as Hazebrook, put the occupants of more distant districts west of Lille and south of Bethune in anxiety, so that all roads are black with fugitives, who are cut off from using the railway."

We may here well comment, that in all the reports of our opponents concerning the keen advance of small cavalry detachments in the enemy's land never therein is mention made of the least impropriety against the inhabitants. In contrast with this is the conduct of the Russian cavalry in East Prussia.

But more and more the activity of the cavalry was restricted by the appearance of mentioned circumstances, by the terrain and atmospheric conditions as well as by the methods of conducting war by both sides. Contact was won and the attempts to go around or break through lead to no special result. So there developed a position war which took on the character of siege warfare. The pioneers pushed into the first line and the spade many times displaced the hand weapon. By the end of October it was reported that our dismounted cavalry work with the spade and fight with the carbine by the side of the infantry in the firing trenches. A newspaper of the 25th of October under—"The Campaign in Flanders" states: "Also the cavalry which can only move with great difficulty on the overflowed and saturated terrain dismounted, dig firing trenches and fight with the carbine." In an English report it is said: "On the northern district which is very flat and some what rolling, the communications are bad, there one stands fixed upon a morass, cut by numerous dikes and canals. The enemy is composed mainly of cavalry, supported by Jäger

(rifles) on foot with many machine guns." In a war letter of the 2nd of November one writes: "Dismounted with the carbine we have fought and with it have earned laurel leaves." One can well say that the cavalry was at the front and under the stated conditions and by the demands made upon it did everything well in the fire trenches with spade and carbine. Ever hence will this employment of cavalry be considered by us as an emergency aid, and when it is possible, they will again mount in the saddle and fight with the saber and lance. There took place in this time, here and there small contacts with the English cavalry. In an English report an attack of the English cavalry upon the heights of Godewaerswalde and Bailleul is spoken of, by which the German power had been broken. Also during the battle of Ypern, in the first days of November, according to a report of the *New York Herald*, the English cavalry came up but suffered terrible loss.

The French cavalry departs more and more from the ranks of cavalry fighting troops. Not alone the difficulty of the terrain, which had also a great influence upon the employment of our cavalry, caused the change, but the French cavalry suffered under the insufficient training of men and horses, the result, among many other things, of a two year training period. From the reports of French newspapers of the end of October, one can see that in France itself the cavalry is considered of inferior value. The opinion is expressed that they may only be considered and employed as mounted infantry and that they completely refused the cavalry task of opposing the German cavalry. The want of trained reserves of men and horses makes itself particularly felt. In a field letter of a German officer fighting near Lille he said: "A cavalry division succeeded in capturing a train of 700 French horsemen, ununiformed children and old men—a pathetic picture." The military critic of the *Corriere della Sera* expressed the view that the French army in general is much shattered, and says in regard to the cavalry, that the greater part, due to the great mortality of horses, only fights on foot. It appears to be similar with the artillery, but not to the same extent as with the cavalry. When we, as said above, employ our cavalry in the firing trenches as infantry with spade and carbine, it happens from

tactical reasons, that is to say, under the given conditions they can be so much more useful to us, but not from lack of trained men and horses. That our brave cavalry in the given cases can be employed as pioneers and infantry with excellent results, has gained for them the greatest praise. Could we think of a more beautiful testimonial for our mounted arm than the speech of his Majesty the Kaiser on the 1st of November, to the troops standing before him on parade in a little Belgian town, in which he considered especially the cavalry. With joy has he heard, said his Majesty, that the cavalry had fought faultlessly. To the cavalry in this war had fallen a task, such as he had believed would never come to it. With carbine and spade they have fought, and I have said to General von Marbitz, that the infantry cheerfully and with pride have fought and charged with the cavalry. But he hoped, continued his Majesty, that the cavalry would yet be given the opportunity to make use of the lance. These acknowledgements from the mouth of the highest War Lord are by the cavalry everywhere received with pride and satisfaction and spur it to new efforts. Even these acknowledgements are made more valuable, by the publication, almost at the same time, of the comments of the Crown Prince of Bavaria on the German cavalry, in which he said: "The cavalry has demonstrated that with its carbine in battle it will not hesitate before the enemies' fortified positions, and has by its character rendered the highest service in distant fights."

The knightly spirit that moves in our troops and in their leaders, will take care of us so that we will learn to esteem the carbine higher, equal to lance and saber. However, these must remain for us the chief weapons, and we can only feel well and in our element, when we are in the saddle. One must never be able to say of us as of the French cavalry, that we have become mounted infantry and are only usable as such. This view of the French cavalry is expressed not only by the press, but also from more authoritative places, one can perceive it from the known assignment of the present reported recruit contingents for 1915 and the back reports for 1913 and 1914. The entire number called for reached, according to French reports, 220,000 men, of whom 210,340 were assigned to the

infantry. The remainder went to the artillery, engineers and airship troops, while the cavalry got none. Of the greatest influence was this neglect of the cavalry, connected with the mentioned want of horses. France was already put to the necessity of importing cavalry horses, but now one reads that the mobilization of the cavalry and the reserve was accompanied by a great loss in horses in an incomprehensible way; that the entire breeding material, the brood mares were put into the service, and thereby the entire domestic horsebreeding destroyed. In the first weeks of the war hundreds of brood mares must have been finished. The loss sustained thereby will reach hundreds of millions. An indication of the little value apparently placed upon cavalry now in France, is the transferring of manifold cavalry officers to the infantry.

From the last days of the year we learn through an English newspaper, the *Daily Mail*, that, for the first time in this World's War of 1914, a great cavalry attack in mass had taken place, the French cuirassiers and dragoons had ridden against the German position at Nieuport. We are not able, up to the present, to find any German report concerning this attack and we must therefore refrain from a discussion. Had this mass attack really taken place, then were it a proof that the French cavalry has not become so useless as one must accept from the occurrences of the last weeks and the information of French sheets. In any case our cavalry would be much pleased, if the opportunity were offered it to cross lance and saber with the enemy, instead of working with the spade. The English paper says it was the first great cavalry attack in this war. This is incorrect, for on the 24th a great cavalry fight took place with the English cavalry at Thalin in Belgium, in which they were completely defeated. Further, there was a great cavalry fight on the 10th of October at Hazebrook, in which a complete French cavalry division was twice badly defeated. On the Russian border there have been repeatedly great encounters; at Koswinek, at Kolo and other places.

While in the preceding we have pointed out that the French cavalry is lacking in enterprise and especially of little value as mounted troops, the same cannot be said of the Russian cavalry in general. It was far more enterprising than the French and

we met it many times at the front. They constantly made and renewed the attempt to break through the German and Austro-Hungarian lines, and especially to go around the left flank in East Prussia.

In the great battles which took place in the last days of August between Allenstein and Neidenburg, next to the Masurischen lake, General von Hindenburg defeated and in a great measure destroyed the Wilnaer army, to which belonged five cavalry divisions. During September we heard little of the Russian cavalry. First on the 29th of September, after the union of the German and Austro-Hungarian military forces had taken place, it was reported officially from Vienna that the returning movements of the enemy along the Vitsula were in progress and that several of the enemy's cavalry divisions had been pushed before the united armies.

On the 20th of October the Austrian General staff reported that the united German and Austro-Hungarian cavalry had defeated a strong cavalry corps of the enemy west of Warsaw. Further operations of the Russian cavalry in great masses were encountered in the beginning of November at Koho, west of Kutno in Poland, where they had crossed the Warta. They were defeated and driven back across the river. They had in any case the task of covering the advance of the army against the German boundary. Their strength was mentioned as fully 10,000 horses, certainly a considerable superiority over our cavalry. Further conflicts which were known, took place at this time at Konin on the Warta (on the 10th of November), where our cavalry surprised a Russian battalion, took 500 prisoners and 8 machine guns, and at Koswinek, east of Kalisch (on the 11th of November) our cavalry drove back a Russian cavalry corps. The official Austrian report mentioned it explicitly as a cavalry fight. Unfortunately at this time informations fails us. In Galicia the Russian attempted to push forward with great masses of cavalry, but were likewise driven back. Special value seemed to have been laid by the Russian army direction upon the turning of our left flank in East Prussia, for a few days after the just related cavalry fight, on the 16th and 17th of the same month, strong Russian cavalry detachments, which had pushed into East Prussia in the

direction of Insterburg, were defeated and driven back upon Pilkallen. In these sections the Russian squadrons continued with great persistency to attempt to put through their design of a grasp and a hold in the heart of East Prussia. On the 18th of December, Great Headquarters made known that on the East Prussian border a Russian cavalry attack west of Pilkallen had been defeated and on the 30th of December it said again that the Russian army cavalry at Pilkallen had been pressed back. What troops on our side were engaged in these repeated defences, whether they were by cavalry or other troops, is not known to us.

Although the Russian cavalry gained no decisive and lasting tactical result, yet they were in comparison with their French allies active, enterprising and many times at the front. On that account we cannot agree with the judgment of a well-known German war correspondent, without reservations. Among other things, he wrote in the middle of October, in speaking of the end of the Russian offensive: "It is a matter of fact, that the Russian cavalry, also army cavalry, has in some way broken down, to an extent not thought possible." And some days later in his observations concerning the Russian army, he said further that the cavalry from the beginning had failed; especially in reconnaissance work had they been extraordinarily bad. The Cossacks are denied every military value and at this time the Russian cavalry are hardly to be seen anywhere at the front. General von Hindenburg stated, in the beginning of November, that the Russian cavalry "are not used for anything." Later they must have improved, for we have seen that they came often upon front and flank and offered the opportunity for conflicts with our cavalry. That these conflicts were without exception victorious for us, in spite of the numerical superiority of the Russian cavalry, and that in every case the enemy was frustrated in his attempt to break through and to outflank, we attribute to our known factors of good leading, good training, superior material in men and horses and to our heroic bravery.

Since these factors are common with all our troops so must and will final victory come to us.

WHAT HAS THE WORLD'S WAR TAUGHT US UP TO THE PRESENT TIME THAT IS NEW IN A MILITARY WAY.*

BY AN OFFICER OF HIGH RANK—BERLIN, GERMANY, FEBRUARY, 1915.

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II.

OUR CAVALRY.

WHEN aviation first came to life some ten years ago and the perfection of the flying machine advanced more and more, there arose a great whisper in lay and professional circles that the last hours of the cavalry had struck. As first understood, the aviator was suited to reconnaissance service in war to a comprehensive degree.

Generally there were at that time many prophets who pronounced the death sentence of the mounted arm and denied it any but a small, special place as an assistant in battle. In spite of them, our responsible men sufficiently understood the question to urge with special energy, at the various army increases, for a further increase of the cavalry. Although at first our worthy public representatives did not appear very willing to favor this dear and expensive arm, it was kept before them that during a war good new infantry masses could be comparatively easily trained, armed, and sent to the front, but that we could not have in time of peace enough cavalry and artillery, because the completion of these organizations by newly recruited bodies remained always a makeshift. He who has only learnt to sit tolerably well upon a horse will not ride far. If man and horse have not become the proverbial inseparable

*An article of eight chapters of which only the one relating to cavalry is here reproduced. The others, with an introduction and a conclusion as to political considerations, cover the several questions of: Large caliber field howitzers; Our aviators; Our Zeppelins; Our special troops; The position war; The field kitchen; and Our submarines.—Editor.

whole, then such emergency trained cavalry remains an assistance of the second class.

As a result of this we have formed new regiments and need not complain that we lost an opportunity. In spite of that, we will learn a wholesome lesson from the battles fought up to the present time, by giving to our cavalry, in the coming years of peace, more consideration than formerly. Relative to the enterprise of our mounted troops things have taken a new turn, as we divined and foresaw. As to what occurred relative to reconnaissance (we will comment upon the valuable service of our aviators in another chapter) it can be said, in spite of the performance of our self-sacrificing aviator officers, that the cavalry has more than formerly indicated its indispensability. We believe that it can be accepted that our cavalry look back with pride and satisfaction upon their path up to the present. Any one who ventures to assert that the glorious time of the cavalry lies at Hohenfriedberg, Liebertwolkwitz and Mars La Tour, would be derided.

No, the glorious days for the cavalry have again become young and we have lived to see mounted combats in which powerful masses of the enemy's and our own cavalry struggled, where the saber and the lance accomplished bloody work, where thousands of panting horses pressed shoulder to shoulder contesting every foot of the wide earth, and expedited the end to the fight by putting the enemy in aimless flight. Immediately following such a victory they gathered the fruit. The enemy's reconnaissance was prevented, the position of our army screened and a long time was required before the enemy could reform his shattered squadrons for renewed operations.

Throughout, the cases have been rare where cavalry charged infantry. They were limited to the moments when a force had expended its ammunition, or was demoralized and in flight, or where a weak, unsuitable artillery escort was struck by a superior force of cavalry.

We saw cavalry fight against cavalry and the success, which was generally upon our side, will later, when the history of this war can be written, be estimated at its full value.

The results of special patrols, which in the main were conducted with special ability, enable one to perceive that the cavalry was well suited to its task from every viewpoint. Be-

fore the great position war in the West began, it was preceded by keen riding. Thence the dismounted cavalry was employed with good results in the firing trenches, where they adapted themselves to the circumstances and proved very useful.

Their tactical superiority showed itself conspicuously when opposed to the Cossacks, who still lived upon their old fame as military centaurs. This was completely destroyed when they had to accomplish anything in close attack. With mounted infantry there is nothing to be attained. That is the second wholesome lesson of the war of 1914. We believe that when in the future a minister of war again goes before the Reichstag and urges an increase of our cavalry, in order to be able to protect the East Prussian fields from a Russian invasion, there will only be needed the illustration of the conspicuous energy of the cavalry in the last World's War to bring the gentlemen who stand on the extreme left to vociferous friendship and pride for our brave mounted troops.

The cavalry has not only not become an antiquated arm, but it has by meeting all conditions of war in such an apt way dovetailed into the frame of this newest of all wars. Its *raison d'être* is more than only proved.

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THE TURKISH CAVALRY DURING THE TURCO-BULGARIAN WAR.*

BY LIEUTENANT DJEMIL MUNIR BEY, TURKISH ARMY.

PREFACE.

DURING the recent war in the Balkans the only Turkish division of cavalry operated in Thrace. The account of its actions by Lieutenant Djemil Munir Bey, son of Salih Munir Pacha, former Turkish Ambassador to France, is the subject of the following pages.

*Translated from "*La Cavalerie Turque Pendant la Guerre Turco-Bulgare*" by Lieutenant Henry J. Adair, Tenth Cavalry (first four pages), and Colonel C. H. Hunter, U. S. A., for the War College Division, General Staff.

After taking the course at the French school at St. Cyr, Lieutenant Djemil Munir Bey served a period with the 27th Dragoons at Versailles, then another with the Prussian Hussars at Dantzig. After returning to his country the lieutenant was put in the General Staff.

General Salih Pacha got him from the General Staff at the beginning of the war, to use him for the chief of staff of the cavalry division which General Salih Pacha commanded. During the campaign Djemil Munir Bey had such a brilliant career that he was recommended at the time to be promoted to the grade of captain and for the Military Gold Medal for Merit.

The very distinguished war correspondent, M. George Raymond, of "*The Illustration*," with the Turkish army, had occasion to know Djemil Munir Bey during the campaign in Thrace. The following is the picture that he draws of him in the letter of November 17, 1912: "Djemil Bey is a most agreeable companion. He has been raised in France, has passed through St. Cyr, Saumur, and has been a dragoon at Versailles. He has the manners, gaiety and gestures of the French, and also the bearing of one of our cavalry officers."

The operations of the Turkish cavalry in Thrace have been very successful, and as they are the actual testing of the principles of the French cavalry, they do honor to the young Turkish officer of French military training, who in them has filled positions far above his grade.

General Bonnal.

OPERATIONS OF THE INDEPENDENT CAVALRY DIVISION OF THE ARMY OF THE EAST.

At mobilization the Independent cavalry division consisted of six regiments, (three brigades), of two batteries of horse artillery, of three machine-gun troops, of a detachment of engineers, and of a telegraph section.

The First, Second, and Fifth Brigade were composed of the following regiments, viz.:

First Brigade (Col. Zia Bey), Constantinople:

First Lancers (Lt. Col. Hassan Bey), Constantinople.
Second Line (Major Halil Effendi), Constantinople.

Second Brigade (Col. Mustapha Bey), Constantinople:

Third Line (Lt. Col. Yussuf Bey), Constantinople.
Fourth Line (Lt. Col. Irfan Bey), Constantinople.

Fifth Brigade (Gen. Selim Pacha), Adrianople:

Ninth Line (Col. Osman Bey), Dimotica.
Eleventh Line (Lt. Col. Sohit Effendi), Adrianople.

The regiments whose peace footing was five squadrons entered the campaign with four squadrons. The fifth squadron which remained at the depot, completed the effective strength of those who should go. Several days before the beginning of hostilities, the light brigade from Adrianople was attached to the division. This brigade at mobilization had been ordered to cover the ground between the Maritza and the Toundja. The first and second light regiment formed this brigade. The brigade was commanded by Col. Iotahim Bey, Captain and Adjutant Ali Riza Bey was chief of staff. The brigade consisted of about 1,200 sabers, and had in addition a battery of horse artillery, a machine-gun company, and a detachment of engineers.

The division contained about 3,600 sabers with its four brigades.

The cavalry regiments were armed with a saber and a Mauser carbine (range 1,800 meters, load five cartridges, German "S" sharp pointed bullet.) Only the First Lancers were in addition armed with the lance which weapon can never be too highly recommended for use in the cavalry.

Their regimental trains and others were composed of wagons drawn by horses and bullocks, requisitioned by the regiments in their garrisons, and in general lacked strength.

The convoy guard was obtained from the men the regiments were unable to mount on account of lack of horses.

Of the eight regiments of which the division was composed, the 1st, 2d, 9th, 11th and 1st and 2d light were mounted on imported horses (Hungarian), while the two others, 3d and 4th,

had native horses (pure blood Arabs, or very nearly pure blood). The quietness, endurance and sure-footedness of the latter is above praise.

Each brigade had at its disposition one machine gun company bearing the brigade number. Each company had four guns, Maxim model.

The battalion of horse artillery was composed of two four-gun batteries (Krupp rapid fire cannon, caliber 75 mm.). The strength of the group in men and horses was very much below what it should have been. The battery of the light brigade was also composed of four Krupp guns, rapid fire, 75 mm.

The two engineer detachments of two sections each under the command of a second lieutenant, have not been of very much use during the course of the campaign. As the men had to follow on foot, they constituted rather an embarrassment. The division used them later as train guards.

As for the wireless telegraphy, it might have been very useful to us, if the equipment placed at our disposition had not been too old, and particularly, if the officers and operators had been familiar with their work.

The cavalry division was commanded by Brigadier General Salih Pacha, chief aid-de-camp of H. M. I., the Sultan. It is not for me to praise my chief. I may only say that Salih Pacha, who completed his military training in Germany, showed proof during the whole campaign of much bravery, good sense, and energy, the whole allied to a spirit essentially knightly.

The division staff was composed of:

One chief of staff (Lieut. Col. Youssouf Izzet Bey).

Two assistants to the chief of staff (Majors Hamdi and Irfan Bey).

Three aids (Captain Ferhad Effendi; Captain Nazim Bey; Lieut. Djemil Munir Bey).

One captain attached to the staff (Capt. Kadri Effendi).

One captain clerk (Captain Assaf Bey).

One lieutenant commanding the headquarters guard of the division.

Two lieutenants commanding the detachments of escort orderlies and division train.

At the mobilization of the end of September which began in October, 1912, the division had received orders to assemble at Soulu-Oglou—Tchiftlik, to the west of Kirk-Klisse, (see sketch No. 1.) The 1st, 2d, 3d, and 4th regiments, and the group of artillery, which was also in garrison in Constantinople, as well as division headquarters, were transported by rail as far as Baba-Eski. The 9th and 11th regiments, which were in garrison at Dimotica and Adrianople, had, the same day, received orders to proceed at once to the frontier, and to cover the terrain between the Toundja and the line Kirk-Klisse—Kofdjighaz-Alatli.

On the 9th of October the division was united at the place of assembly.

As soon as the division was assembled at Soulu-Oglou, the general ordered a reconnaissance of the terrain. Reconnoitering squadrons had been sent forward to prepare against any eventuality on the frontier from east of the Toundja as far as Devletli-Agatch.

One regiment, the 11th, which was at Hadji-Danishmend, had sent forward a reconnoitering squadron to Waysal; the First Lancers had one at Eumer-Abbas, with fixed posts (platoons), at Develetli-Agatch and Malkotchlar.

In spite of the precaution taken by the Bulgarians on the frontier, (militia organizations in the villages, reinforcements of frontier guards, etc.), our emissaries were able to get into Bulgaria, and inform us upon their movements of the troops. But as these spies were almost all recruited among the peasants, the information that they brought us had to be taken with caution, as far as numbers were concerned. We knew, for example, that the main bodies of the enemy were assembling toward Kutchuk and Buyuk-Boyalik, Ambarli and Arabli; that a mass of cavalry was in the direction of Gaibler; that there was artillery near Derekeuy and that the population of the villages, women, old men, and children, were at work digging trenches along the frontier, a fact that our reconnaissances and patrols were able to report as having seen themselves

and that the frontier, guarded by militiamen, was very difficult of access for all.

The plan of the Turkish commander-in-chief, Abdoullah Pacha, was to take the offensive with the whole army, composed of the 1st, 2d, 3d and 4th army corps. In this operation the right wing of the army, constituted by the third corps (Mahmoud Mouktar Pacha), was to develop an enveloping movement, while the rest of the army, 2d, 1st, and 4th corps, would pivot around Adrianople. Under these conditions, it would seem preferable to have the bulk of the cavalry on the right wing. This was, moreover, the point of view of the division commander, who would have gone there on his own initiative, had the state of the terrain not prevented.

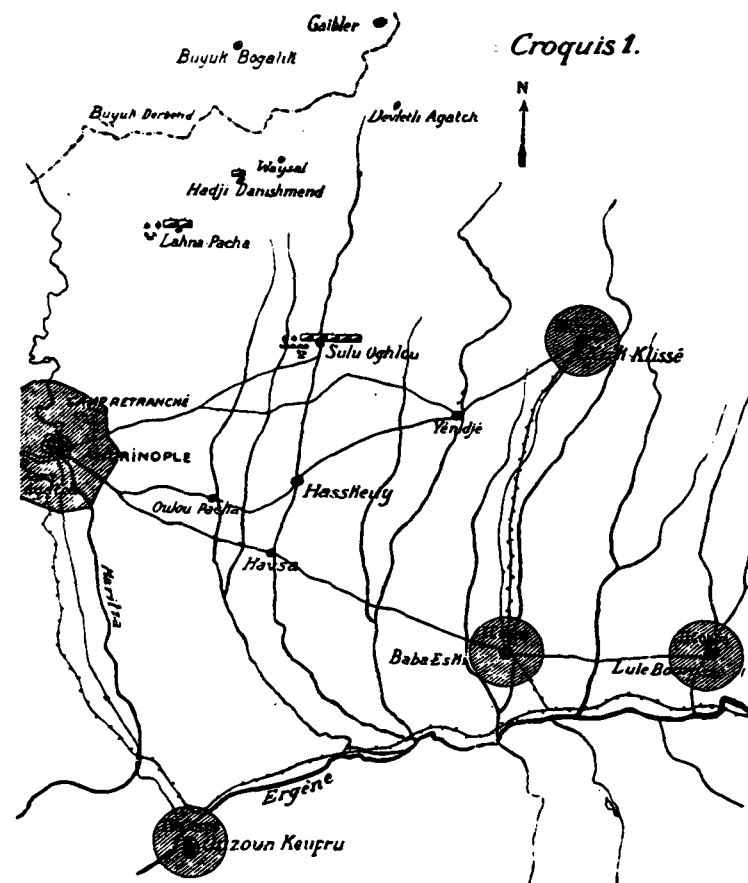
In fact, the reports of the officers sent to reconnoiter the terrain, as well as the emissaries that had been able to get in from the other side of the frontier, corroborated what was shown by a simple reading of the map. There were no roads; the terrain, very broken and heavily wooded, was not suited to a rapid march in dense formation, and it was almost impossible for artillery. This partly explains the absolute lack of pursuit on the part of the Bulgarian cavalry after the battle of Kirk Klisse, the hostile cavalry being unable to overcome the difficulties of the terrain in time to be of use.

There, as everywhere else, the Bulgarian cavalry showed its absolute lack of teeth and claws. It is very sure that the appearance of one or two hostile squadrons would have had a most disastrous effect upon the unfortunate troops of the III Corps when in retreat. And the Bulgarians certainly had these two squadrons at their disposal; what was lacking, was the punch.

In the case that the commander-in-chief should have preferred to attack the enemy on the Adrianople—Kirk-Klisse line, which would have been certainly wiser and more reasonable, the place of the cavalry would have been on the right wing, anyhow.

The main body of the division was at Sulu-Oghlou, and communications with the rear, and particularly with the commander in chief, were already even before the declaration of war, extremely difficult. At Sulu-Oghlou there was not even

a telegraph office; we had to go to Kirk-Klisse, Adrianople, or Baba-Eski, to find a reliable one. It is true that wireless stations had been installed at Sulu-Oghlou and Baba-Eski.



Echelle approximative: $\frac{1}{2,000,000}$

SKETCH No. 1.

But the installation was old style Marconi of short range, and as it was poorly served; it never did work.

There was also a combined telegraph and telephone line, parallel to the frontier, passing by Kirk-Klisse—Devletli-

Agatch—Waysal—Hadji-Danishmend, and ending by way of Lahna-Pacha at Adrianople. These lines were of a certain amount of use to us before the beginning of hostilities, but were useless after the Bulgarians had entered Ottoman territory, as the Bulgarians destroyed them at once. Our communications with the rear were so uncertain that we could not warn the independent cavalry division in time for it to act, on the declaration of war, and this division should have been the first to be warned.

As for the supply service, the center was at Baba-Eski. As long as there was no rain, this service worked pretty well, in spite of the very great distance (about sixty kilometers). But when it rained it was impossible for the make-shift teams that we had at our disposal to drag themselves through the deep and sticky terrain, and we had to requisition rations and forage on the spot.

Two days before the commencement of hostilities, Wednesday, October 16th, the division having received from the commander-in-chief the news that the war was imminent, Salih Pacha decided to approach the frontier. To do this the first brigade was sent to Waysal, the fifth to Hadji-Danishmend, and second in reserve to Sari-Talishman. (See sketch No. 2.) The group of artillery followed the fifth brigade, while the machine gun companies remained with their respective brigades.

As for the Adrianople light brigade, which had just come under Salih Pacha's orders, it was at Lahna-Pacha.

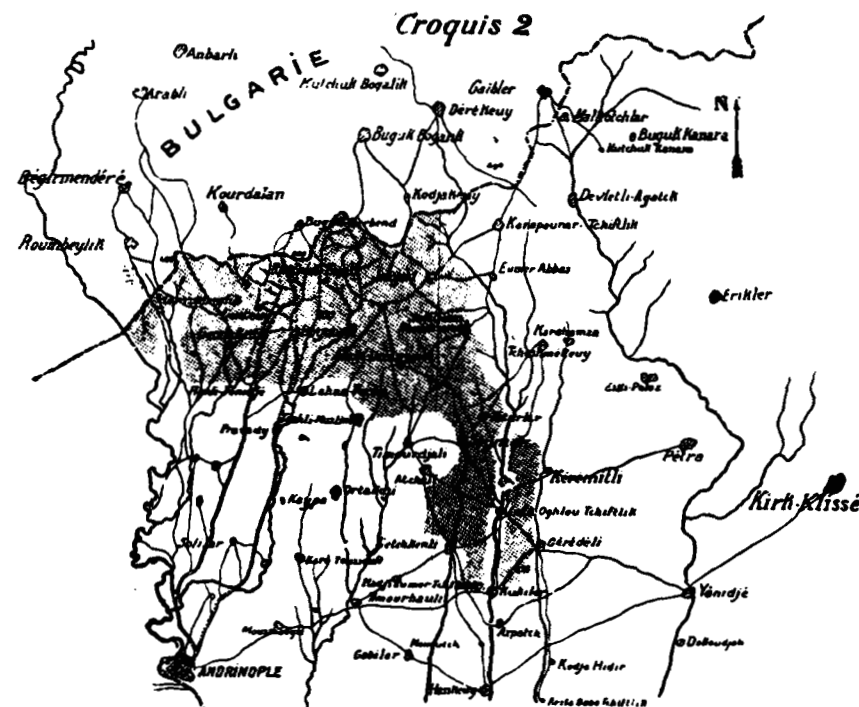
The division had sent forward reconnoitering squadrons to Devletli-Agatch, Eumer-Abbas, Kutchkuk-Eunli, and Demirkeuy, these squadrons sending forward on the principal roads fixed reconnoitering patrols.

The division knew that the enemy's troops were assembling in large numbers near Gaibler, Derkeuy, Buyuk-Boyalik, and Buyuk-Derbend, villages situated a few kilometers from the frontier. (See sketch No. 1.) Now, the reconnoitering squadrons were placed at points through which led the principal roads leading into the interior. At the first signal they were to push forward their reconnaissances into Bulgaria.

To guard against all mishap, the troops had received orders to secure themselves carefully on the march, as well as in camp,

and to double their watchfulness at night, as a surprise was always possible.

During this time, the main body of the army, composed of the first corps (Constantinople), the second (Rodosto), the third (Kirk-Klisse), and fourth (Adrianople), were assembling south of the line Adrianople—Kirk-Klisse.



Echelle approximative : $\frac{1}{1,000,000}$

SKETCH No. 2.

The third corps, at Kirk-Klisse of which the Turkish "Ney," General Mahmoud Mouktar Pacha, had just taken command, was in advance near Kirk-Klisse, and its personnel was complete. This army corps, the strongest of all of them, had about 40,000 men.

Farther south, in the direction of Lule-Burgas, was the Second Corps (Chevket-Tourgout-Pacha), about 20,000 men.

Toward Baba-Eski was the First Corps (Eumer Yaver Pacha) about 25,000 men.

The Fourth Corps (Ahmed About Pacha), which was formed of one active and one reserve division, had to leave one division at Adrianople to help in the defense of the place. It was hardly 15,000 men strong, and was in front of Ouzun-Keupru.

Army headquarters, Abdoullah Pacha commanding-in-chief, was at Lule-Burgas.

OPENING OF HOSTILITIES.

On Wednesday morning, October 18th, the division commander, ignorant of what was happening, was setting out, accompanied by his staff and aids, in order to reconnoiter the terrain before Hadji-Danishmend, when he heard rifle-firing. (See sketch No. 2.) At the same time a courier brought him a report saying that: "The enemy, about two battalions strong, had crossed the frontier, had captured the blockhouse on hill 518, and was marching on the villages of Hadjlar and Kutchuk-Eunli, which would probably be occupied by him by the time he had reached the general." The inhabitants of the villages very near the frontier had evacuated them a few days before at the order of the civil government.

As I have said above, Salih Pacha not having been warned of the declaration of war, considered the reports of his advance guard exaggerated, as far as the strength of the enemy was concerned, and believed that he had in his front irregular bands of "comitadjis." Indeed it was usual to see Bulgarian bands more or less regular passing the frontier, coming to attack our blockhouses, and to pillage the Mussalman villages near the frontier.

The general not doubting that at the first attack by the troops that he had at Hadji-Danishmend, these bands would disperse, ordered the main bodies of his advance posts to pursue the enemy as far as the frontier, but not to cross it in order to avoid provoking a *casus belli*.

This order had just been sent when Colonel Zia Bey, who was at Waysal with his brigade (the 1st), reported that hostile troops, apparently the advance guard of a strong column, had marched, at about nine o'clock in the morning, upon the villages of Malkotchlar, Buyuk-Kanara, Kutchuk-Kanara, had captured the blockhouse of Malkotchlar, had set it on fire, as well as the aforesaid villages, and had retired toward Kizildjikli-Bayir. At the same time that he reported this aggression, Zia Bey sent word that a hostile battalion having just captured the Turkish blockhouse of Bakadjik, north of Waysal, the brigade, dismounted, supported by the machine gun companies, had been sent against this battalion.

In fact, Colonel Zia Bey, at the head of four dismounted squadrons, had succeeded in recapturing the Bakadjik blockhouse from the battalion, and while pursuing it vigorously had entered with it into the Bulgarian blockhouse, situated 3,000 meters farther on, where he had been stopped by two Bulgarian battalions supported by cannon, and solidly entrenched.

Having sustained until five o'clock in the evening the enemy's fire, Colonel Zia Bey received orders to retire, and retreated in good order bringing away his wounded and without being pursued, upon Waysal and from there upon Hadji-Danishmend, keeping contact with the enemy by means of his reconnaissance and detachments. From the uniforms of the killed and wounded, the 1st brigade had been in contact with troops belonging to the 1st Bulgarian army.

After the retreat of the 1st brigade of the Turkish cavalry, the enemy had moved forward and occupied the heights north of Waysal, the village where the Turkish reconnoitering squadron of the 11th regiment had passed the preceding night. Later, the Bulgarians had set fire to the village. It must be noted that the Bulgarians systematically burned all Mussalman villages from the frontier to Lule-Burgas. There is no exaggeration in this; it is unfortunately but too easy to prove.

As for the hostile advanced guard that proceeded by Hadjilar upon Hadji-Danishmend, one dismounted squadron sufficed to hold it until evening; the main body of the 5th

brigade, and the divisional artillery that was at Danishmend did not have to intervene.

The light brigade received the order to watch the zone comprised between the Toundja and hill 350, west of Hadji-Danishmend. As soon as it should be notified of the declaration of war, it was to cross the frontier, and reconnoiter the zone between the villages of Kourdalan, Arabli, and the Toundja. Upon receipt of the order from the division, the light brigade had sent forward a reconnaissance squadron upon Demirkeuy. This squadron having been stopped at the outlet of the village, word was sent back to the brigade, which hurried forward to break through. The brigade which had brushed aside the weak detachments that had come as far forward as Demirkeuy was definitely stopped at Hamzabeyli by superior forces. Its reconnaissances having reported that the division was engaged in a battle in the direction of Hadjilar, the brigade retired upon Boyonli.

After receiving the information from the 1st brigade and reports from the light brigade, neither of which made mention of hostile cavalry, Salih Pacha rightly estimated that the latter must be, as the scouts were telling him, opposite the right wing of our army. In fact, the cavalry was on this flank as is stated by M. de Penennrun in his interesting book "The Balkan War." But my French comrade has been led into an error by the Bulgarian staff which informed him about the skirmishes of the first day, the Waysal and Sari Talishman fights in particular, (pages 94 and 95 of M. Penennrun's work). There was at Waysal only the solitary brigade of cavalry (the 1st) that I have just spoken of, no artillery and no infantry, the nearest infantry elements being about twenty kilometers away at the time the combat took place. In my opinion there is no more flattering compliment for cavalry fighting on foot than to be taken for infantry, and this after several hours of fighting.

Fearing to see the Bulgarian cavalry interposing between himself and his reserve brigade, and dreading particularly a night attack by the infantry elements of the enemy's advance guard, Salih Pacha decided to unite the division, the light brigade excepted, at Sari-Talishman.

In consequence, the 1st and 5th brigades, leaving one squadron before Waysal and another at Hadji-Danishmend, marched at nine o'clock in the evening to go into bivouac at Sari-Talishman.

Information received during the night of October 18-19th at division headquarters had confirmed the information of the evening of the 18th, and the reconnoitering detachments had been the objects of no attack on the part of the enemy. In the morning the light brigade reported that hostile troops of the strength of about a division were moving upon Hanli-Yenidje. Also, the Hadji-Danishmend and Waysal squadrons informed the general that long columns of hostile troops of all arms were marching upon these points. Indeed, reconnaissances from Eumer-Abbas and Devletli-Agatch were made that reported that three hostile columns estimated at a division each were advancing in these directions.

The rôle of the cavalry division being to retard and annoy the march of the enemy's columns, Salih Pacha decided to send forward the whole division to make a frontal attack with his three brigades upon the enemy advancing from Hadjilar and Waysal upon Hadji-Danishmend, while the light brigade should take him in flank.

The mixed detachment (three battalions, two batteries, one squadron) of the Adrianople fortress were on hand to reconnoiter the enemy's column advancing upon Hanli-Yenidje, and force it to deploy.

As the Bulgarian column marching upon Hadji-Danishmend was descending the Hadjilar hill, we could see and count the regiments of which these troops (one division of about 20,000 men) were composed.

The three artillery batteries of our division were in position; they waited to open fire until the enemy should have reached the bottom of the valley. The distance was from 6,000 to 6,500 meters. About two o'clock in the afternoon the artillery had succeeded in stopping the enemy, and thanks to its very accurate fire had caused him sensible losses. On its side five regiments of dismounted cavalry was engaged with the enemy. Three regiments, mounted, constituted the division reserve, two between Sari-Talishman and Suleiman-

Danishmend, and one near hill 350, west of Hadji-Danishmend.

The fight had begun very favorably for us. Indeed the very rough terrain was hindering the Bulgarians from getting their batteries in position rapidly, and our fire was greatly annoying the Bulgarian battalions that were trying to deploy against us. At this moment the approach of a brigade of hostile cavalry, coming from Waysal, was signalled, and Salih Pacha gave an order to the regiment in reserve near hill 350 to march upon the right flank of the enemy, and then set out himself at the head of his reserve brigade to attack the Bulgarian cavalry.

The terrain was almost level, and made an admirable ground for a cavalry fight, but the enemy did not wait for the shock, but turned about, and went at full speed back in the direction of Waysal.

This is the first and the last time in all the campaign that we had a chance to see—but alas! without being able to charge it—a large body of Bulgarian cavalry.

The dismounted fight lasted until about four o'clock in the afternoon. At this moment the Bulgarian infantry was deployed and his artillery had gone into action. As the mission and strength of the division did not contemplate a serious battle against an enemy very superior in number, General Salih Pacha gave orders to the division to withdraw, and to go into bivouac, the 1st, 2d, and 5th brigades at Sulu-Oghlou, the light brigade at Ach tali.

The reconnoitering squadrons that had been sent or left at Keremitli, Sari-Talishman and Tashli-Muslin maintained contact with the enemy.

At five o'clock in the afternoon, Salih Pacha reported to the commander in chief in the fortress of Adrianople, as well as to the commanders of the First, Second and Third Corps that two hostile divisions accompanied by two regiments of cavalry, had advanced from Buyuk-Derbend upon Hadjilar and Hadji-Danishmend and that they had occupied the heights south of Hadji-Danishmend. The general reported also that another division was marching upon Demirkuey, while three others were moving in the direction of Devetli-Agatch.

During the night of October 19-20th, the commandant of the fortress of Adrianople informed General Salih Pacha that Lahna's Pacha's mixed detachment, whose guns we had heard all day, had retired upon Adrianople, while maintaining contact.

On the morning of the 20th, Salih Pacha received an order to detach a regiment to the Third Corps. The Second was sent to it.

As the reports sent in by the squadrons and the reconnoitering parties foreshadowed an advance by the enemy along his whole line, Salih Pacha resolved to move with his whole division, less one brigade, the light, which was to protect the left flank, to the heights of Geredeli in order to take up on them a temporary position.

The Third Corps was on our right and abreast of us; and the Bulgarian columns advancing upon Kirk-Klisse must have been already in contact with the divisional cavalry of Mahmoud Muktar Pacha. We, therefore, had nothing to do with them. The division had only to delay the enemy on the front of the First and Second Corps, in order to give the latter time to come abreast of the Third Corps.

The heights northwest of Geredeli, wooded and dominating the whole terrain in front, constituted an admirable defensive position with an extended and open field of fire.

The Bulgarians had resumed in the morning their prudent and slow march forward.

Before continuing the relation of events, I must speak briefly of the service of security on the march used, and I believe invented by the Bulgarians. At first there were few or no reconnoissance or patrols of cavalry on their front or flanks. The Bulgarians rely upon their peasants who hate the Turks for information about our movements, which was very conscientiously given. But when it was a question of numbers or strength, they could no longer count upon the peasants. These are just like all other peasants everywhere; they see a thousand men where there are only a hundred. This explains, in my humble opinion, why the Bulgarians, at first, advanced with such prudence. And truly this prudence after the battle of Lule-Burgas was quickly replaced by an excessive rashness which

was responsible for a part of the great losses that the Bulgarians experienced at Tchalaldja.

The enemy has always exaggerated our strength. Thus, in the fights known as the battle of Kirk-Klisse, they always saw 160,000 men, when there were in reality only from 65,000 to 70,000.

The Bulgarian service of security on the march was thus organized: In front there was a thin line of infantry sharpshooters or skirmishers (a platoon to a company occupying a front of about 1,000 meters), some 500 meters behind these skirmishers a cavalry point of from six to eight men, then a whole platoon. Afterward there came a battalion, and behind them, with proper intervals, the rest of the advance guard. As soon as this advanced guard was fired on, all the infantry lay down, while the cavalry disappeared not to reappear. This way of having the infantry precede the cavalry may truly appear extraordinary. I should not have dwelt upon it, if it had not been a matter of common report. I know many officers who, like myself, would be curious to know the why of this queer method.*

I return to my story. The Bulgarians advanced guard line having approached, the artillery had opened fire. The enemy, after having retired out of cannon range, did not dare to adventure farther all day, and finally retired upon Sari Talishman. The explanation of this extreme prudence of the enemy is that he believed, as M. de Penennrun said, in the presence of two Turkish battalions?

Some reconnaissances of the Bulgarian infantry were easily repulsed. We took a few prisoners that day, sixteen exactly. These men, who belonged to the 16th division, complained of hunger. At nightfall, the division left a reconnoitering squadron at Seymen and another to support this one at Sulu-Oghlou, and retired upon Arifi-Baba—Tchiftlik—Kodja-

*Note by General Bonnal: During the Spanish War (1808-1814) in mountainous and very rough countries the advance guards of light cavalry preceding the columns were, they say, preceded habitually by a detachment of light infantry; and the French Regulations of 1832, upon field service, recognized this method in certain cases.

Note by T. R. Mo.: Probably mounted scouts or mounted officers and orderlies.

Hidir, to pass the night there in bivouac. The light brigade had been assigned to Moussoutch.

In the night of the 20-21st, a hostile battalion marched against Seymen, and the squadron occupying that locality had to retire to the heights north of Sulu-Oghlou. On the other hand, the commander-in-chief of the army of the East, Abdoullah Pacha, informed the general commanding the cavalry division that a detachment composed of a regiment of infantry, the First Rifles, and of a battery, had received orders to proceed to Geredeli to support our division. He made known at the same time that the First Corps should have reached the evening of the following day the line Hasskeuy—Yenidje, and that the cavalry division was to retard until that time the enemy's march.

After reading this order, Salih Pacha decided to go back near Sulu-Oghlou and reoccupy the positions of the evening before.

All day the cavalry awaited the enemy, which according to information received was occupying with important forces the line Pravadi—Tashli—Muslim—Tartarlar. The march of three strong columns, which appeared to come from Tcheshmekeuy and to be moving, one upon Keremitli, the two others upon Erikler and Eski-Poloz, was recognized and reported to the commander-in-chief.

About five o'clock in the evening the infantry regiment and the battery mentioned arrived at Geredeli; after that the cavalry retired, still keeping up contact, and bivouacked in the positions of the evening before.

In the night of the 21-22d, the division received from the commander-in-chief the following dispatch:

"As the imperial army is tomorrow to take the offensive and attack the enemy's army, the independent cavalry division will cooperate in this movement and will proceed to the extreme left, between the first mixed division from the fortress of Adrianople, which is to make a sortie, and the left of the Fourth Army Corps."

(Signed) ABDOULLAH.

Consequently, Salih Pacha decided to proceed with all his troops on October 22d, as easily as possible, toward Hadji-Eumer.

BATTLE OF SULU-OGHLOU—GETCHKENLI.

(Battle of Kirk-Klisse.)

On October 22, 1912, during its march upon Hadji-Eumer, the cavalry division constituted for the Fourth Corps a sort of flank guard, as it followed the road leading to Hasskeuy and, from that point marching across country via Arpatch toward Hadji-Eumer. (See Sketch No. 3.)

To our right was marching the Ismid Division of the Fourth Corps, composed of reservists, men of from thirty to forty years old, well-made and well-trained, since they had been under arms for more than a year, having been mobilized at the time of the Turkish-Italian War and sent to the Dardanelles.

Just as the division arrived at the heights to the southwest of Kukiler, we saw a hostile squadron charged by a squadron of the advance guard, which retreated quickly upon Getchkenli, drawing our troops toward its own infantry.

Reconnoitering parties sent toward Seymen, Atchali, and Ortakdji reported that they could not get through, as the enemy was occupying an entrenched line passing to the north of Sulu-Oghlou, and ending to the north of Hadji-Eumer.

Moreover it was known that a large body of the enemy, with an advance guard of three battalions, two batteries, and two squadrons, had bivouacked the evening before at Ortakdji.

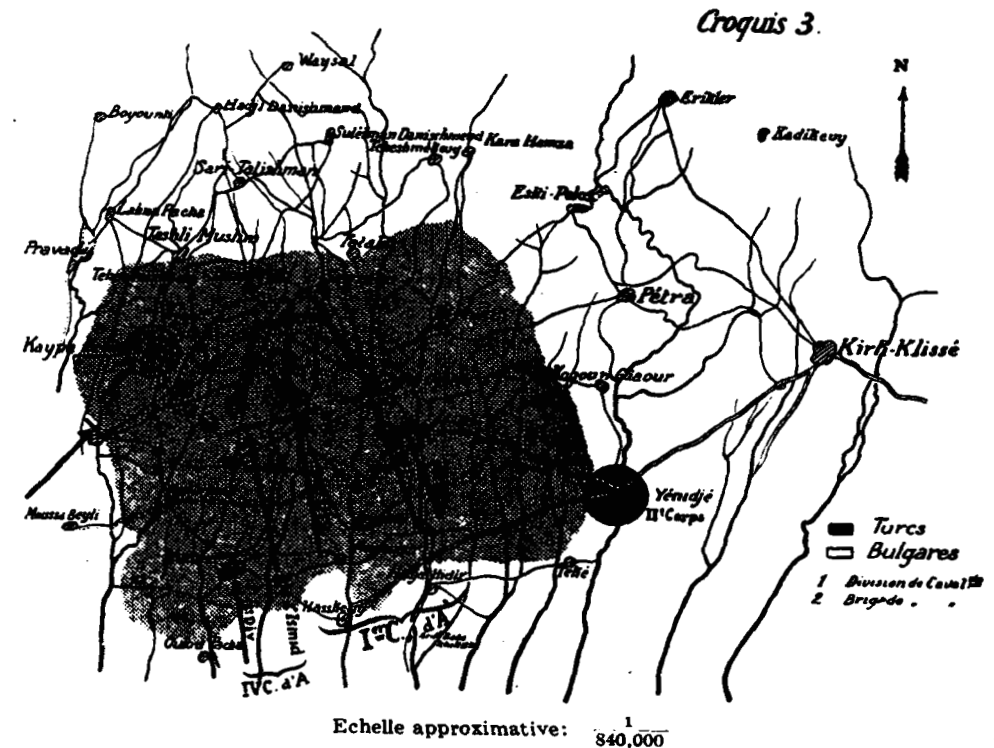
The plan of the commander-in-chief of the Turkish Army of the East was to take the offensive along the whole line, while the Third Corps would turn the enemy's flank, and throw him back upon the Toundja.

The Army Corps were to be on the line Kirk-Klisse—Adrianople, the third in front of Kirk-Klisse, the second between Petra and Keremitli, the first between Keremitli and Getchkenli, the fourth between Getchkenli and Kara-Ypussouf, the cavalry on the extreme left.

In fact, the offensive of the army degenerated into a real series of casual encounters, the divisional cavalry not having been, so they said, on to its job. In this connection it must

be remarked that it is the usual thing to unload all mistakes upon the cavalry. So at maneuvers the side that has been beaten always begins by saying that its cavalry has not brought in the proper information.

The Third Corps moved forward, and was attacked by the army of General Dimitrieff (who, by the way, executed an excessively dangerous but lucky maneuver), while the Second



SKETCH No. 3.

Corps, which should have come up abreast of it halted some kilometers away at the time when the battle was fully joined.

The Third Corps had succeeded in keeping the enemy in awe, and would almost surely have succeeded in driving him back, had the Second Corps pushed forward and drawn upon itself a part of the hostile force.

The First Corps had two divisions in line and kept another at Geredeli, and was able to reach the battle field, but in a state of complete exhaustion. In spite of this, this corps victoriously resisted hostile attacks until the evening.

The Fourth Corps had only two divisions. It was able to put only the reserve division in line, and that without artillery, because its other division, the Twelfth, had halted quite near the battlefield, at Gabiler, its chief refusing to go farther on the pretext that his troops were fatigued.

About two o'clock in the afternoon the battle was joined along the whole front. The Second division (First Corps) was repulsing successfully the hostile attacks. As to the Third division (First Corps), which was worn out with fatigue, when it arrived on the field of battle, it had had to stand particularly violent attacks, it had had a moment of disorder, and had even lost some guns. But the Ismid division (Fourth Corps) at its left, though having no artillery, had made impetuous attacks and had detached two battalions to help its neighbor. Thanks to these reinforcements, the third division had succeeded in recapturing the guns that had temporarily fallen into the enemy's power.

The cavalry was to the northwest of Hadji-Eumer and was enfilading the whole line opposite to the Ismid division. In order to contain the hostile troops at Ortakdji, which did not appear, for the moment at least, disposed to advance, Salih Pacha had designated the light brigade. The latter had placed its battery in position, and had deployed some squadrons dismounted. If the enemy at Ortakdji had moved forward during the action, the position of the cavalry and that of the Fourth Corps would have been very critical, and moreover it would have forced the immediate retreat of the whole left wing taken in reverse. The First Corps was in the center of the line, and would have been obliged to retreat under deplorable conditions, attacked as it would have been on the front and the flank. For reasons that escape me, the enemy attempted nothing from this direction, the detachment at Ortakdji being perhaps the flank guard of the Bulgarian column engaged near Kara-Youssouf against the mixed divisions from the fortress of Adrianople. However it was, the position of

our cavalry division was excellent. In effect, it was engaged, with its artillery, with the enemy's reserves that were fighting the Ismid division, and at the same time it was harrassing, in dismounted combat the extreme right of the line of Bulgarian skirmishers.

If the division of regular troops (the 12th), of the Fourth Corps, had taken part in the fight, it could have occupied the position of our cavalry division. What could not be hoped for from a well-trained infantry division of some 10,000 men, having with it a regiment of artillery, and occupying so advantageous a position?

Apropos of the Ortakdji detachment, permit me to digress and tell an affair of which I unfortunately was a witness: Obeying an order from Salih Pacha to obtain information in this direction, I went with a Turkish squadron that had approached too close to Ortakdji. A Bulgarian advanced post received it with a sharp fusillade that cost us some troopers killed or wounded. Among these was a non-commissioned officer, very seriously wounded, who begged me as I stopped to see what I could do for him not to leave him there. It was impossible to move him, and it was important above all to avoid further losses. When we returned some minutes later to the same point to carry off our wounded, they were dead or dying and all dreadfully mutilated, their noses, ears, and genitals cut off and their eyes dug out. The German lieutenant-colonel Veit, who had obtained permission to follow as an amateur our cavalry division, photographed, I believe, these unfortunates. This is not, moreover, the only time that I have had to see such a sight. It is possible that the Turk is not so refined as the European soldier. I have had the honor of serving in the two greatest armies of the world, and I have not noticed much difference between the Turkish soldier and the French and German soldier, except that the latter are better educated than ours. What is certain, and I affirm it on my word of honor as a soldier, is that our unfortunate troopers exhibited during the campaign great humanity. The few French war correspondents that have had a chance of seeing the Turkish soldier near to, have been the first to recognize this.

The battle continued, bloody and fierce, till night. The Ismid division, who had rushed upon the enemy with a "*furia*" worthy of all praise, had in a short time lost many of its men and almost all its officers. However, it kept its place, and even made some progress, thanks to the support of the cavalry, whose well-protected batteries did wonders against the Bulgarian reserves. At night fall our brave reserves, fixing bayonets, charged the enemy and put him to flight. During its charge, the infantry was supported by the Fifth Machine Gun Company, whose chief, Captain Salih Effendi, had moved by his own initiative upon the right of the Bulgarians. At this moment we were the conquerors, in spite of the absence on the battlefield of the Second Corps, of the Twelfth Division, and of all the artillery of the Fourth Corps.

Indeed, the Bulgarians, who had attacked in three columns, had already begun to retire before the front of the Ismid division and the third division of the First Corps. In the distance could be seen big fires, and a sort of large lanterns, that the Bulgarians had lighted, to indicate to their troops the direction of the retreat, already noticed at six o'clock in the evening, by our combat patrols.

At this moment, the situation on our side was as follows:

The second division, whose commander General Prince Aziz Pacha was wrongly accused of having occasioned the panic, was having difficulty in holding the position that it occupied in front of Geredeli.

The third had been in peril during the afternoon, but had pulled itself together, and had even succeeded in gaining a little terrain to the front.

As for the Ismid division, it had, as I have shown, gained the first line of the hostile intrenchments.

At nightfall the fire ceased on both sides, and the cavalry was sent to Galiler, to pass the night there. Light detachments maintained contact, and one regiment of cavalry was left at Hadji-Eumer, to support them or to rescue them.

But then the rain, implacable enemy of the Turks, and whose effect on poorly disciplined troops is greater than that of shrapnel, began to fall with the greatest violence.

The soldiers were harrassed with fatigue, and most of them had eaten nothing for forty-eight hours, and they were to get no bread that night. Moreover, it was the first time that they had been under fire, and the day had been a particularly warm one. The Ismid division had lost more than one-fourth of its strength, 2,000 killed or wounded. The third, about as much; the second had been very harshly tested. The cavalry division alone had had a pretty easy time.

The losses in officers had been very heavy. Battalions which, after the action, had only two officers were not rare.

The sanitary service did not exist; there were plenty of doctors, but no ambulances, no dressing stations. For the wounded, the instructions were, *to get out*.

Discipline, *which is the chief strength of armies*, already mediocre before the war, I shall tell why later, was much injured by this state of things, and the depressing cause I have just enumerated made of our incontestably brave troops an armed mob.

The enemy had retired, carrying off his wounded, while ours lay on the wet ground, and filled the darkness with their groans.

About half past eight while the rain was raging, heavy firing that lasted about thirty minutes broke out in front of the reserve division. To this fusillade, there succeeded a general rout.

The third division without knowing why, followed the movement, then the second, then the first, which has been in reserve all day, and had not been under fire.

The senseless flight of these men, whose features betrayed their terror, was a spectacle to break the heart of an officer or the least attached patriot. Should I live a hundred years, I shall never forget the moral suffering endured during that unhappy night.

The cause of the panic? One battalion of the Ismid division, seeing something moving in front of it, imagined that it was the enemy, and opened fire on it, and it turned out to be the leading battalion of its own division. On its side, believing that the Bulgarians were attacking it, it opened a vigorous fire. There were no officers at the heads of these battalions.

Such was the origin of the panic resulting from the lack of discipline and cohesion, which had as a consequence Kirk-Klisse, Lule-Burgas, and the loss of Roumelia.

To return to the battle, we have the right to believe that if the First and Fourth Corps had held the battle ground, the Second Corps and the 12th division would have come up the next day abreast of the others, and that the issue of the battle of Kirk-Klisse would have been entirely different.

Once informed of the disaster, the cavalry division hurried forward detachments to stop the fugitives, while remaining itself at Galiler. Next morning, October 23rd, the reconnaissances had lost contact. As there was no trace of the enemy on the battlefield of the evening before, the work of our division was limited to collecting and evacuating the wounded, and afterward to bringing back the cannon that the divisions of the Fourth Corps had abandoned in their panic flight.

During the whole of the 23rd of October cannon were heard and the bursts of shrapnel seen near Kirk-Klisse. But on the Hadji-Eumer front, south of Sulu-Oghlou, no important hostile troops were reported. Weak detachments alone occupied Sulu-Oghlou. Toward noon, contact was resumed. The enemy occupied solidly the line Ortakdji-Seymen. Some groups of Bulgarian cavalry that had ventured upon Hadji-Eumer had been driven back. Reconnaissances showed great movement of troops in the direction of Keremitli.

After having evacuated wounded and cannon upon Hass-keuy, the detachments retired upon Oulou-Pacha, and there passed the night of October 23rd-24th.

The excessively heavy terrain in which wagons sank to their hubs (Did I say that paved roads existed not even on paper), explains the terrible losses in artillery suffered by the army corps in retreat. The cavalry division had with it three batteries. During the march from Galiler to Oulou-Pacha a whole brigade was assigned to each one of these batteries. Officers and troopers, dismounted, harnessed themselves to the guns, and it was thus that the division succeeded in realizing this tour-de-force, and it really was one, of abandoning nothing to the enemy.

To conquer, it is essential, as this war has proved, that the troops should be perfectly disciplined, and the generals able to initiate. If the Turkish infantry had been as well disciplined as the cavalry, with generals having the same moral qualities as ours, we should not have been conquered.

Before the war we all used to think the cavalry the least efficient of the three arms. During the war, it has shown to the best advantage. Why? Because it has from the start more discipline, and was better under the control of its chiefs.

In 1908, a fraction of the army, opening the unhappy era of pronunciamientos, had required of Sultan Abdul Hamid the application of the constitution. This result obtained, instead of stopping there, and of going back to their work, our officers, who had enjoyed playing politics, continued to play it, and the commanding generals, who had succeeded through them, and had been helped by them, did nothing to remedy this capital defect. Under these conditions we could no longer count upon the army as a war tool, the only thing it was good for was to overturn governments.

An army that plays politics is a ruined army. That is what happened to us. History is there to show that when the Turks led by real officers, and not by politicians, they did not run away. Let us hope that our governing classes will very soon admit this truth, which has been forgotten by them for five years.

If the cavalry has done well, it is because it has been stationed for the most part outside the cities, where the officers had not such a chance to join in political clubs and cafés, as their infantry comrades. Besides, training and conditioning horses is for cavalymen a most absorbing occupation; so there were many reasons for the maintenance of discipline.

On October 24th, the cavalry continued to patrol the field of battle of the day before, and verified the fact of the inaction of the enemy upon the front Ortakdji-Sulu-Oghlou, while the battle was continuing toward Kirk-Klisse. The main body of the division stayed in bivouac at Oulou-Pacha, while one of its regiments occupied Hadji-Eumer, and another Hass-keuy.

Upon an order from the commander-in-chief directing the cavalry to retire at once upon Lule-Burgas, Salih Pacha decided to proceed next day by way of Hawsa, upon Koule.

During the daytime of the 25th, the early part of which had been devoted to rest, the regiment at Hasskeuy reported a hostile column marching on that locality, at the same time that reconnaissances announced the approach of a large body of cavalry, about three regiments strong. The division marched with three regiments toward Hasskeuy, for the purpose of assembling there its two other regiments, while the light brigade, forming the rear guard, remained at Oulou-Pacha, in order to let the division trains retreat toward Koule.

The enemy seeing us in force, did not approach, and the division continued its march upon Koule. Some minutes after the light brigade had left Oulou-Pacha, a hostile battalion whose approach had passed unperceived, occupied this village! Such an example shows, once for all, the necessity of allowing no relaxation even for a few minutes in the service of security.

The division arrived at Koule about midnight, and found that this important place had been burned by the Bulgarian *comitadjis*, and so had to pass the night again in the open air.

On the morning of October 26th, the march was resumed upon Baba-Eski, into which place the remnants of the fleeing infantry continued to flow.

With two platoons under my orders, I was directed by Salih Pacha to proceed to Baba-Eski, and maintain order there until the arrival of the division.

I arrived at the city about ten o'clock in the morning, and found there the traces of indescribable perturbation. Civil and military authorities, postal and telegraph employees, merchants and Mussulman inhabitants, everyone had fled. They had not even taken the time to destroy the telegraph apparatus and to burn the important documents which covered the office desks. And yet there was no hurry, since two days afterwards the Bulgarians had not arrived in the city. There remained in it only the Jewish, Greek and Bulgarian inhabitants, the dregs of the city, ready to receive and to entertain the enemies of Turkey.

After my arrival at Baba-Eski the inhabitants saw Turks coming instead of Bulgarians, and began to change their tune. The representatives of the different races hastened to me to denounce one another and to accuse one another of the gravest misdeeds and ill-usage, when a great rumor and a headlong flight of all this rabble informed me that something serious must be happening. I finally learned that a large body of hostile cavalry was advancing from the north upon the city. Immediately as you may guess, these people showed a hostile face to me and my handful of men.

Now the division on its march upon Baba-Eski had found it necessary to protect its left flank, as a large body of hostile cavalry had been seen in this direction. The light brigade had therefore been ordered to serve as flank guard, and to follow the route Koule—Koufaldja—Baba-Eski, and it was this brigade the Babieskotes had taken for the enemy, and which had occasioned their temporary panic.

In effect the reconnaissances of the light brigade which was in contact with the hostile cavalry, reported its march upon Baba-Eski. Our division remained at Baba-Eski from noon till five o'clock in the evening in order to give the trains and stragglers time to retreat upon Lule-Burgas, and served in a way as a general rear guard for the retreating army, leaving the city in perfect tranquility, without any disturbance on the part of the enemy?

For its march upon Lule-Burgas, the division took the Alapia—Sartchal—Lule-Burgas road, in order to profit if only for a few kilometers, by the paved road Baba-Eski—Alapia. After Alapia the track called a road was a veritable swamp, where it was exceedingly difficult, if the word impossible were French I should employ it, to extract guns, limbers, and caissons, which sank up to the hubs.

The division could not reach Lule-Burgas the same day, as the men were crushed from fatigue, obliged as they were, to dismount every instant to pull out the mired cannon. As the division was no farther than the outskirts of Sartchal at ten o'clock at night, it could move no farther, and formed its bivouacs at Sartchal and at Sarmoussakli.

The next day, Sunday, October 27th, the cavalry reached Lule-Burgas in the morning. The valley filled with troops without order or cohesion offered a spectacle impossible to describe. Regiments seeking their division, battalions their regiments, companies their battalion, men their companies, were in one chaotic mass. The impression prevailed that this time *it was the end*, that never an army could be made of this immense herd. In two days, however, the Turkish staff succeeded in uniting these isolated elements, who with empty bellies and without supplies fought heroically for six consecutive days.

The 27th and the 28th of October were devoted by the cavalry to rest, of which it had great need. The light brigade of Adrianople had been sent to the right wing, to Visa, where under the orders of Mahmoud Mouhtar Pacha, it was to function as independent cavalry. Mahmoud Mouhtar Pacha had just been appointed commander-in-chief of the group of armies of the right wing.

During these two days of rest, the division had sent forward reconnoitering squadrons to Tatar-Tchiftlik, Ayvali and Sartchal.

Reconnaissances reported that the enemy was occupying the line Kavakli—Kavakdere, with cavalry toward Baba-Eski. However, it was not possible to get information upon the strength of the hostile forces, especially upon those of the cavalry.

On the evening of the 26th a dispatch from General-in-Chief Nazim Pacha directed the division commander to send out three officers' reconnaissances in the direction Lule-Burgas—Uskub—Kirk-Kilisse, Lule-Burgas—Yenidje—Petra, and Lule-Burgas—Kara-Youssouf. These reconnaissances were to communicate directly with the commander-in-chief, whose headquarters were at Tcherkesskeuy.

These three reconnaissances were started that very evening; they were composed each of twenty men and an officer, each trooper carrying two days' rations.

The first and third* started about one o'clock at night, kilometers. The second* started about one o'clock at night,

*It is through modesty that Djemil-Munir Bey does not give the name of the officer who commanded this reconnaissance.—Note by General Bonnal.

passed the Turkish advanced posts established northwest of Lule-Burgas, and then took the road Ayvali—Kavakdere. Reaching the edge of the wood of Kavakdere, the reconnoitering party, seeing lights and hearing voices, hid in the woods and took a few hours rest, half of the troopers sleeping, the other half watching.

On the 27th, at break of day the reconnaissance moved forward and, continuing its march in the woods, was able to determine the apparent extent of the enemy. The commander of the reconnaissance estimated its strength, around Kavakdere and Tchiftlik-Mandra, at more than two divisions of infantry, and reported the fact at once.

After making an examination in the south, the reconnaissance, having discovered nothing in this direction, turned again to the north with the intention of passing to the east and north of Kavakdere, which could not be done as the country was too unsafe, as there were too many hostile infantry. Finally it passed the night quite near the road Kavakdere—Lule-Burgas, face to face with a Bulgarian bivouac, whose neighborhood, needless to say, was very disagreeable.

The rations carried by the troopers was consumed, as well as the barley for the horses, and it was impossible to get any on the spot or in the vicinity. Fatigue was making itself severely felt, and besides the mission of the reconnaissance, which was to indicate the position and strength of the main body of the enemy was accomplished, and it could retire. As to being relieved by another reconnaissance, it was not to be thought of.

The next day, October 28th, at dawn, as the reconnaissance was marching along the edge of the wood, on the Koumbarlar—Ayvali road, it met east of Koumbarlar a group of seven or eight hostile troopers. The lieutenant in command of the reconnaissance could not resist the temptation, and charged the enemy at a gallop. It was the only way he had of rewarding his troopers, who had performed their duty very well, and it was an error. However this may be, scarcely had the reconnaissance approached the group of Bulgarians troopers, when there was seen advancing behind them a hostile squadron. Turning about immediately, the lieutenant hurried

to take refuge in the woods of Kavakdere, with the intention of taking the road Kavakdere—Lule-Burgas. But at the moment when he thought himself out of reach, he fell upon an entire cavalry regiment of three squadrons marching in the direction of Lule-Burgas. The reconnaissance though pursued was able to retire upon the Turkish advanced posts, while observing the enemy's march, and lost only one trooper, who fell from his horse while jumping a wide ditch and had not the time to remount. This unfortunate man, probably made prisoner, must have been massacred.

The cavalry regiment which pursued the reconnaissance must have been the flank guard of a Bulgarian column on its way that day to Kara-Agatch.

BATTLE OF LULE-BURGAS.

Left wing and center of the army. See Sketch No. 4.

The Turkish troops that took part in the battle of Lule-Burgas were as follows from right to left: The Third Corps at Viza, of which Mahmoud Mouktar Pacha, on the 27th of October could rally but part, was about 10,000 strong.

Near Sarai, the Seventeenth Corps, Tchuruksoulou Mahmoud Pacha's, composed of two divisions of reserves, about 15,000 strong, was still on the march.

Likewise on the march toward the battlefield and behind the third and seventeenth, was the Eighteenth Corps, Hamdi Pacha's, also composed of two divisions of reserves, some 15,000 men.

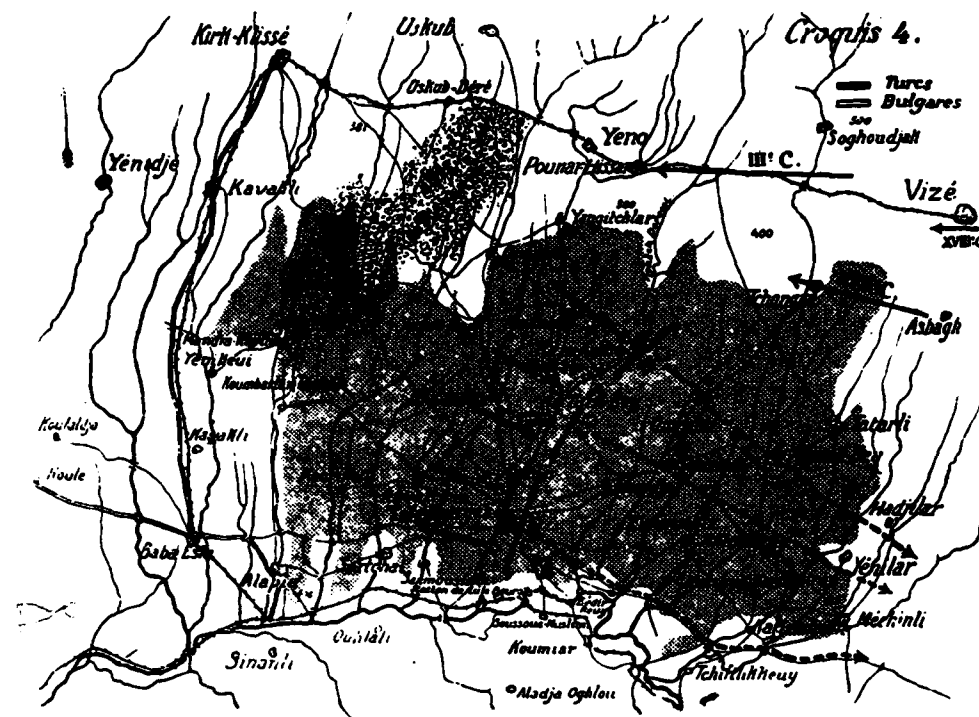
The independent brigade of cavalry, the light brigade of Adrianople, was already under the orders of Mahmoud Mouktar Pacha, who, as I have said, was the commander-in-chief of the army called the Army of the East.

The First, Second and Fourth Corps, Commander-in-Chief, Abdoullah Pacha, occupied a line parallel to the river of Kara-Agatch (Kara-Agatch Deressi), the Second Corps, between Kara-Agatch and Turk-Bey, the First Corps between Turk-Bey and Lule-Burgas, the Fourth Corps between Lule-

Burgas and Mouktar-Tchiftlik. The cavalry was on the extreme left.

The total forces of the Turkish army that took part in the battle may be reckoned at about 120,000 men.

That the enemy were marching from Kavakdere was reported the morning of October 28th to the Second Corps, and this latter which had parked its trains in the village of Kara-



Echelle approximative: $\frac{1}{900,000}$

SKETCH No. 4.

Agatch, resolved to send them farther to the rear, in order to protect them against surprise. For this purpose one regiment of infantry, the 10th I believe, was sent forward to protect the march of the train.

At the moment when this regiment was arriving at the edge of the woods before Kara-Agatch, it met Bulgarian

infantry superior in number. The engagement was so fierce on both sides that the commander of the Second Corps, Chevket Tourgout Pacha, seeing the danger that the regiment ran, sent to its help another regiment, accompanied by a battery. The latter was disabled by the hostile artillery before it could even get into position. The two infantry regiments killed many of the enemy, but had difficulty in withdrawing, about six o'clock in the evening, to their former positions. While these regiments were engaging, there commenced along the whole front of the Second Corps a violent artillery duel, which lasted until nightfall.

The next day, Tuesday, the enemy, about eight o'clock in the morning, attacked vigorously and along the whole line, the positions occupied by our troops.

The advanced post of the Fourth Corps, which had retired upon the heights west of Lule-Burgas, were reinforced by the cavalry division, fighting on foot. Until one o'clock in the afternoon, the troopers sustained the attack of a superior force of Bulgarian infantry, without being able to prevent its making progress. At this moment the position of the cavalry had become very critical. If it did not retire immediately, it would find itself obliged to retire up a part of the valley under the fire of hostile infantry and artillery occupying the heights west of Lule-Burgas, the Kara-Agatch river being fordable only at the entrance of the city, where moreover there was a bridge.

Besides, a hostile column had just been reported to the south of the railway. Salih Pacha therefore gave the order to cease firing and to remount and proceed toward the railway station. When it had arrived at this point, the division, which had been poorly informed by its combat patrols, was violently assailed by a group of hostile artillery, whose very accurate and rapid fire caused us sensible losses. Toward evening, the division which had been able to reform after this deadly cannonade, to the north of Bedirkeuy, was sent forward again. In the meanwhile a large body of hostile cavalry was reported in the direction of Aladja-Oghlou, and the Fifth Brigade had been sent that way. The divisional artillery, which had been lent for the time to the left division

of the Fourth Corps (the 12th), was then in action two kilometers north of Sousouz-Muslin.

The battle continued until nightfall with the same violence as at the start. The Bulgarian artillery, abundantly provided with ammunition, fired more than ours, and its batteries were provided with telemeters, while ours were not, and therefore had an advantage over ours upon opening fire.

The day had been propitious for us, although we had not advanced. The army had resisted the attacks of the Bulgarians, and had inflicted heavy losses upon them.

The troops slept upon their positions, while the cavalry went and bivouacked at the farm of Omourdja.

I had been sent in the evening by Salih Pacha to the headquarters of the commander-in-chief at Sakizkeuy, to hand him a report of the events of the day, and to complete it by word of mouth, if necessary, and to take his orders for the next day. There I learned that a retrograde movement of the enemy's whole line had been verified. It was known too that on our left wing, Mahmoud Moukhtar Pacha had repulsed the enemy, and was marching upon Pounar-Hissar, and that the Seventeenth Corps after fortunate actions near Tchongra, was coming up abreast of the Third Corps.

The general, therefore, prescribed a general offensive for the next day, October 30th.

For this purpose the Second Corps was to proceed toward Youvankeuy, the First toward Tatar-Tchiftlik, the Fourth toward Ayvali. The cavalry was to go to Sakiskeuy, where it would hold itself at the disposition of the general-in-chief, Abdoullah Pacha.

This general order, which had an excellent effect upon the morale of the troops, was distributed during the night of October 29th-30th.

Next morning the Bulgarians, whose retrograde movement of the day before had been more apparent than real, opposed a desperate resistance to Turkish attacks, but toward evening they showed evident signs of fatigue.

The fierce fight continued along the whole front with alternations of success for the First Corps and reverses for the Fourth, which began to give away. In the meanwhile a Bulgarian

train which appeared to come from Kirk-Klisse disembarked some troops, who soon pushed forward. The position of the Fourth Corps then became critical, its left being threatened by an enveloping movement. Abdoullah Pacha then ordered the cavalry to stop at any cost the forward movement of the enemy, even it itself should be entirely sacrificed.

The enemy, whose advanced guard was composed of one battalion, its main body not having yet disentrained, was advancing in the direction of Sousouz-Muslin. As is shown by Sketch No. 4, the terrain is flat. The cavalry division therefore had to march exposed to fire. It was supported by its artillery and two battalions of infantry placed at Bedirkeuy, which were to join and reinforce the center of the Fourth Corps. The cavalry division moved forward, its general at its head, and after a lively and short saber fight, obliged the enemy to retire precipitately, while its train which was unloading, had to go to the rear. From this moment until nightfall, no enemies were seen on this side. After this affair the cavalry retired in the direction of Bedrikeuy. Let those who hold that the cavalry no longer amount to anything on the field of battle consider this example! Evidently, there are sensible losses. But a charge vigorously carried through with the firm resolution to come hand to hand will always succeed.

Toward evening a brigade of the enemy's cavalry was seen in the direction of Buyuk-Karakarli and Salih Pacha sent a brigade against it, but the enemy did not wait for the shock, and retired in the direction of Sinanli.

In the evening, the position of the Bulgarian army on the Lule-Burgas—Kara-Agatch front was very critical. You could feel that the enemy was worn out; his attacks and counter attacks were becoming rarer and milder. With our field glasses we could see officers striking their men with sabers to make them go forward, but even so, the latter were retreating. While on this subject I must render homage to the bravery of the Bulgarian officers. Finally, a retreating movement was very noticeable. On the other hand, the artillery fire grew more and more violent. You would have said that the enemy was beginning a rear-guard fight, seeking

by artillery fire to stop pursuit by the enemy, in order to disengage his infantry.

On our side, ammunition especially that for artillery began to grow scarce. By evening, the guns had only a few rounds left. In order to supply them it was necessary to go to Tchorlou or to Seyidler, for it was to these points that the trains coming from Tchorlou were to bring ammunition.

As at Kirk-Klisse, Sulu-Oghlou, and Getchkenli, the rain, that implacable enemy to Turkey, had made its appearance with the same violence as in those battles.

The army occupied a front of about thirty kilometers, (I am speaking of the center and left wing of the army) and was connected with the commander-in-chief by no telegraph or telephone lines. Material was not lacking; the supply corps had at their disposal telephones, and 3,000 meters of wire per regiment. The installation of a telegraph line at a position where it has been decided to await the enemy does not take much time. Was it ignorance, heedlessness or carelessness, or all three at once? The fact is that the general-in-chief, Abdoullah Pacha had to wait more than two hours before receiving information coming from his left wing, for example.

Likewise, Mahmoud Moukhtar and Abdoullah Pachas could communicate with each other only by mounted orderlies.

During the night of October 30-31st, the cavalry division which was stationed at Evrensekiz, was awakened about four o'clock in the morning by a violent firing, the din of which was not echoed by any return fire.

The cause of the disturbance? A division of reserves which had acted badly the evening before, and which they had not had the time to relieve by active troops.

In the middle of the night the reserves had left their position and fled in inexpressible disorder, remaining deaf to the reproaches and threats of the officers, and throwing away their cartridges, which they really considered an useless burden.

After the flight of this division, the Bulgarians crowned the breach thus produced, the equilibrium of the entire Turkish line of battle was broken.

The general-in-chief, having at hand no fresh troops to oppose the enemy, was constrained to order a general retreat.

As to the famous bayonet attack executed at night, and thanks to which the Bulgarians were supposed to have pierced the Turkish line of battle, it had no existence except in the imagination of the enemy's staff. It is now time to destroy this legend, were it only in the interests of truth, and to replace it by the very honorable, but more modest story of the success obtained by the Bulgarians over more than mediocre soldiers.

At eight o'clock in the morning of October 31st, the Turkish army was in full retreat upon Ergene, where Abdoullah Pacha wished to reorganize his troops, and fight a new battle with the enemy.

OPERATIONS AFTER LULE-BURGAS.

See Sketch No. 5.

On October 31st, when the order for retreat had reached the troops, they retired in a stampede. The officers whose number had greatly diminished were no longer able to hold together or lead their men.

In retiring, the Second Corps was to follow the Tatartarli—Kara-Mehmed road; the First Corps, the Ahmed-Bey—Osmanli-Tchiftlik road; the Fourth Corps, the Karishdiran—Tchorlou road.

By evening, the troops were well up to Ergene, but in a state of disorder impossible to describe. Distribution had completely ceased. It was impossible to live on the country, almost all of whose inhabitants had fled. The commander-in-chief, Abdoullah Pacha, had been relieved of his command. In short, it was anarchy in all its horror.

In spite of this disorder, the troops in retiring had left nothing in the hands of the enemy.

During the night an order arrived from the general-in-chief, directing the troops to retire upon Tchataldja; the march was resumed upon this locality.

The Second Corps was to follow the road from Tcherkesskeuy; the First the Tchorlou—Silivri—Buyuk-Tchek-medje road; the Fourth, the Tchorlou—Tchanta—Tchataldja



SKETCH No. 5.

road. The cavalry had to proceed without delay toward Tcherkesskeuy.

At the moment when this order from the *gerenalissimo* was communicated to the troops, the Second Army of the East, Mahmoud Moukhtar Pacha, was continuing to repulse the enemy. There was no need to hurry to retreat. It would have been better to try and assemble as many troops as possible, and to hurl them upon the enemy. We should have had in this way a chance of success since the Second Army was making progress.

On the morning of the 31st, receiving the order for retreat, Salih Pacha, who was getting ready to march upon Tcherkesskeuy, received a report addressed by Mahmoud Pacha commanding the Seventeenth Corps, to Abdoullah Pacha. As the officer who carried the order spoke of gains upon the right wing and as Abdoullah Pacha had departed for an unknown destination, Salih Pacha took it upon himself to open the report.

Mahmoud Pacha reported that his army corps, sweeping back the Bulgarians, had advanced, that he had inflicted serious losses upon the enemy, made prisoners, taken machine-guns, and that the commander of the Third Corps, on his right, sent him word that he too was advancing.

After having considered this report, Salih Pacha came to the wise conclusion that there was no necessity for his marching upon Tcherkesskeuy, but that it was necessary to protect the retreat of the corps, and particularly of their trains, left as they were at the mercy of a surprise by hostile cavalry.

He therefore took the initiative of keeping touch with the enemy, and of retarding his march, in case he should move forward.

After the battle of Lule-Burgas the cavalry division was reduced to its most simple expression.

The night of October 30-31st, by the order of the commander-in-chief it had put one of its regiments (the 4th) at the disposition of the First Corps. What was left represented at most 600 sabers! The division was then not as strong as one regiment on a war footing.

The artillery horses still in service were literally dropping from fatigue, the greater part never to rise again. Salih Pacha,

thinking that one battery capable of following him everywhere was worth more than two incapable of advancing decided to assign the best horses to one battery, while the other should proceed to Tchorlou and rest its teams there until the arrival of the division at that point.

The morning of the 31st, the skeleton division marched on the Karishdiran—Lule-Burgas road to protect the army trains following this road to reach Tchorlou.

Reconnaissances sent toward Lule-Burgas had reported that the enemy was entrenching himself upon the heights east of the city. The most advanced Bulgarian element was a company occupying the farm of Omourdja, northeast of Lule-Burgas.

The division patrolled all day, without report anywhere of the enemy's cavalry.

After having left one squadron at Kutchuk-Karishdiran, and two platoons at Aktcekeuy, the division (I shall continue to call it so, since on paper it represented one) retired to Mac-hinkî to pass the night.

Since the morning of the day before the troops had had no bread. As for soup, the men had forgotten the taste of it.

The real family life lead by the cavalry, the aristocratic arm par excellence, contributed a great deal, in my humble opinion, to the maintenance of discipline, and even of good humor among our troopers, who saw their officers with the general at their head lodged just as badly as themselves.

One of the greatest privations was the lack of tobacco. the Turk, always a great smoker, smokes still more in war time. Everyone's supply of tobacco had been exhausted for a long time, and we had been able to procure none either at Baba-Eski or Lule-Burgas, as the infantry who had passed through before us had taken everything.

As the region through which we were passing was a center of tobacco production, the troopers used to pick the fresh leaves which they later dried at the fire and cut into strips. It was simply atrocious, but "*à la guerre comme la guerre*," and we had to be content with it.

It was also difficult to procure any half-way drinkable water, all the wells in the villages we passed through having

been filled up. As for the springs they were either dried up or polluted, and we had to go to their sources in order to drink without too much risk. Happily the weather was cool, and did not cause too much thirst.

At Mechinli where we were to pass the night of October 31st-November 1st, we were able to find good lodgings, the village being inhabited by Greeks, who had thought it best not to run away, and who had discounted the arrival of their "saviors," who were eager to pillage their houses and violate their wives and daughters, because they were Greek. It is remarkable that the Bulgarians hated the Greeks as much, if not more, than we did.

At Mechinli we had also found flour, thanks to which we had had a good supper, the troopers having made cakes, which appeared to us exquisite.

The next day, November 1st we started again on the road to Karishdiran, but this time with the fear of seeing appear the hostile cavalry, which up to this time we had joyfully sought the occasion of charging. Alas! What could we have done with our 600 sabers, of which we had only 500 together, the other 100 being on reconnaissance and detachment duty etc., while the enemy's cavalry, which had nowhere been seen in battle, must have had its strength if not complete, yet at least nearly so.

The division was a little south of Karishdiran, watching the march of the trains, which was nearly ended, when we saw about 6,000 meters away seven squadrons in close order preceded by one squadron as foragers, charging at a gallop upon the trains.

While its battery in position was opening fire, the division hurried forward at a gallop. The difference in strength between the two cavalries was not very great. The Bulgarians were hardly twice as numerous as ourselves. But the morale of our troopers was so high that there was no hesitating. This time again the enemy did not await the shock, but retired without having succeeded in reaching our trains, or even slackening their march.

This is what had caused the unexpected retreat of the Bulgarians.

One of the division aides who had been taking an order to the front, was returning quietly on the road the trains were taking.

At the moment when he saw the hostile cavalry coming toward the trains, he commanded "Halt," and took command of the wounded, marauders, or sick that were following the trains, and made them lie down under the wagons. As soon as the hostile squadron that was advancing as foragers approached, the lieutenant opened fire. The forty men or so collected by the lieutenant had been enough to repel this first attack, but the main body of the enemy was approaching. Things were beginning to look desperate for the trains and their guard, when the first shrapnels of our battery burst, and seeing this, the enemy retired. The reconnaissance that followed this cavalry reported that it was moving toward Seyidler.

Meanwhile the division had received orders to blow up the railway bridges between Seyidler and Tchirlou, in particular, that of Mouradli.

In consequence an expedition consisting of one squadron was sent to this place, and the destruction ordered was done in all tranquility, but as the squadron was retiring, a regiment of hostile cavalry pursued it.

This appearance of a very superior number of hostile cavalry, for the scouts reported at least five regiments, along the railway, could not fail to worry Salih Pacha, and he resolved to pass the night at Ouhlass-Tchiftlik, leaving reconnoitering parties at Mechinli and Sandikli.

During the night of November 1st-2d, contact with the enemy was again lost, and as some reconnaissances reported him near Karishdiran, our cavalry went forward to try and resume contact. Some mixed hostile detachments had been seen towards Kutchuk-Karishdiran, Aktchekeuy, Evrensekiz.

At Karishdiran it was our unfortunate privilege to confirm by our own eyesight the misdeeds of the Bulgarians. The fifty Turkish wounded who had taken refuge there after the battle had been massacred, and were lying on the slopes west of the village.

We retired for the night at Evlan-Bey-Tchiftlik (Osmanli-Tchiftlik), and had found stables and abundance of straw for the horses, and lodgings for the men, but nothing to eat.

The next day, November 3d, as we still had no news of the hostile cavalry, Salih Pacha moved forward. The enemy continued to remain inactive. Its cavalry had made a movement upon Karishdiran, and then retired. That was all that was known about it.

The division passed the night of the 3d-4th at Aktche-keuy. Hunger was making itself cruelly felt. At Yeniler, abandoned by its inhabitants, a quantity of barley, of which, men and horses, we made our food. It was the third day since we had eaten bread, and we were at the end of our resources. Salih Pacha had ordered one of his aides to go next day to Tchorlou and send by the division wagons that were there two rations of bread per man. The wagons were to wait there until they were searched for, on the heights overlooking the bridge of Ergene, between Kara-Hassan and Evlan-Bey-Tchiftlik.

All day November 4th, our cavalry moved about on the Karishdiran plain, showing itself more or less everywhere, in order to give, as on the stage, the illusion of a large force. In fact, this maneuver, as will be seen by the Tchorlou affair, succeeded perfectly.

We finally retired for the night to Kara-Hassan. The aide that had been sent to Tchorlou for bread, had at the same time brought back dispatches from army headquarters.

The generalissimo expressed his satisfaction to Salih Pacha that he had gone forward on his own initiative, instead of conforming to his orders, and directed him to blow up the great masonry bridge at Ergene, which is between the villages of Kara-Hassan and Evlan-Bey-Tchiftlik, on the Karishdiran-Tchorlou road. After having caused this destruction, the cavalry was to retire slowly upon Tchataldja, passing by Tchorlou.

The destruction of this bridge was to delay and obstruct the enemy's march, since the river was very high on account of rains, and was fordable nowhere. An officer of cavalry, thoroughly acquainted with the country, was drowned the

same day trying to cross the river at a point where the evening before the whole division, including the artillery, had passed.

The hostile cavalry had again made its appearance between Seyidler and Mouradli, and appeared to be trying to get to Tchorlou.

The day of November 6th was devoted to rest, of which our horses had great need. The battery detached at Tchorlou had been sent to Tchataldja to rest its teams there and these few days rest had done it more harm than good. At the same time the trains were sent to Buyuk-Tchekmedje.

After the last infantryman had left the city, we worked hard to send away, by the last trains to leave, the arms, ammunition and supplies that remained in the depots, and to destroy all that could not be carried away.

The commander-in-chief had left at Tchorlou a detachment composed of three battalions and one battery with directions to delay the enemy's march.

The next day, Thursday November 7th, they had reported the march of one and later of two battalions of the enemy, apparently coming from Karishdiran.

In the meantime, an emissary sent by the general commanding the Bulgarian troops on the march toward Tchorlou had presented himself to Salih Pacha to tell him that the Bulgarian general had planned not to burn the city, but to establish himself there, and to advise the Turks to retire, in order to avoid useless bloodshed.

At this last insult, Salih Pacha, who was already preparing to leave the city, decided to remain there, in order to teach the enemy a lesson.

Let me say that the decision taken by my chief not to leave the city, whose name I bear, without firing a few gunshots, caused me great joy.*

A certain Mr. Wagner, who called himself an Austrian officer and who was for some time in the rear of the Bulgarian lines as a war correspondent, making himself noticeable at the time by his fantastic reporting, had telegraphically announced a "great battle of Tchorlou," all of the details of

*Tchorlou was the patronymic of the Munir family.

which he gave. Doubtless it was by the inspiration of the Bulgarian general staff, and not due to his own imagination, that the reporter in question gave himself up to these fantasies. However, the last one was so extravagant that the Bulgarians found it advisable to disavow their noisy friend. All the same, as we are going to see, there was some truth in Mr. Wagner's lies.

At the moment when the two before-mentioned hostile battalions were reported, Salih Pacha with the aid of the detachment commander was busy placing his battery and that of the Tchorlou detachemnt on a little hill at the eastern exit of the village. From the position they occupied the batteries had a good field of fire and were out of sight of the enemy. Likewise the cavalry machine guns had been mounted in batteries on hills right and left of the city, on hills commanding the valley or ravine that the enemy had to cross to make an entrance into the city. One battalion had occupied the houses and gardens at the north-west entrance of Tchorlou. The two other battalions and the cavalry were held in reserve at the eastern exit.

Tchorlou by its position commands the terrain north of the railway, as well as the road passing there, that is the one followed by the enemy.

Unit commanders had been ordered to open fire only when the enemy should have penetrated well into the ravine.

About one o'clock in the afternoon, a hostile squadron which had moved forward at a gallop had occupied the barracks built in front of and to the west of the city, without however pushing even a reconnaissance toward Tchorlou. The railway station had been also visited by the enemy's cavalry. Shortly afterwards, the battalion that had followed this squadron deployed and moved upon the city in rather a compact formation. As soon as it entered the ravine, it was received with a very rapid fire, which caused it heavy losses. Some time later two other battalions after having deployed moved against the city, but in a formation more suited to the situation. Like the one that preceded them, these battalions were halted in the ravine. A movement toward the west executed by about a hundred infantrymen was checked by

machine gun fire. About three o'clock in the afternoon there arrived the main body of the Bulgarian division. After it had very methodically deployed in front of the city, and out of reach of our atillery fire, it delayed moving forward until its batteries were in position.

In the meanwhile, Salih Pacha considering resistance impossible, first sent off the two battalions that he held in reserve, then the battalion occupying the border of the city, which was replaced by dismounted cavalry. The battery of the detachment rejoined the column at a trot, after the last battalion had quitted Tchorlou.

Then while the Bulgarians were furiously bombarding the positions in which they thought we still were, the cavalry had retired quietly upon Ermicheli, where it passed the night.

Until five o'clock in the evening the skeleton division of cavalry about 500 horses strong held in awe a division of 20,000 men.

SKETCH NO. 5.

Battle of Tchorlou, November 7th, 1912.

The defense of Tchorlou had cost the division and the detachment together one man slightly wounded in the hand. As for the enemy's losses, we have a right to estimate them at a minimum of 300 killed and wounded.

The next day, November 8th, we had again lost contact. We knew only that the Bulgarians were not advancing. The exceedingly difficult terrain, the paths or roads shown on the map, that either existed no longer or had never existed, were not propitious for a cavalry action whose principal quality, speed, could be of no use. Only the roads of Tchanta—Silivri and of Kinekli—Silivri could be dangerous, and they were sharply watched.

Continuing its slow march upon Tchataldja, the cavalry passed the night at Djudje-Seyban.

The 9th of November just as the division was beginning its march, a despatch from the generalissimo addressed to Salih Pacha informed him that the division, forming a single regiment with what remained of it, was to be put under the

orders of Colonel Ibrahim Bey, commanding the Adrianople light brigade, with which they were to form one brigade of three regiments. The light brigade being at Akviran, the regiment division was to proceed there that same evening, while General Salih Pacha was asked to report at the headquarters of the army to the generalissimo, at Hadimkeuy.

The independent cavalry brigade thus constituted retired on November 12th behind the lines of Tchataldja, and had nothing more to do. The two opposing infantries were in contact, and the wings of the army rested upon two lakes close to the sea, and did not offer a passage sufficient to launch the cavalry upon the rear of the enemy.

PRINCIPAL CAUSES OF THE DEFEAT.

I am going to say a few words about the causes that have brought about the defeat of the Turkish army.

First, there was the numerical superiority of the enemy, of which no one has spoken. Indeed the allies, who had no frontier to guard, could put, and did put under arms, about 900,000 men under arms, while Turkey was able to mobilize only about 700,000 men, and this sometime after the allies had finished their mobilization.

Then, as I have stated in the body of this article, it is to the meddling of the officers in politics that I attribute first and foremost our defeat. All the rest comes from it.

So, at the moment when all the European armies are trying to find young officers for the subordinate grades, we have done all that is humanly possible to get old ones.

Under the pretext that certain officers who stood well at court had had, under the deposed Sultan Abdul-Hamid too rapid promotion, which is true, they made a law called the "Revision of Grades," a law based solely upon seniority. From one day to the next, the important generals of the army, such as Mahmoud Moukhtar, Hassan Riza, Pertew, Zia Pacha etc., who, although young, had already shown their capacity and did not owe their advancement to favor alone, were "promoted" colonels or lieutenant-colonels and therefore could not be utilized as they should have been. They were either provisionally retired from the army, or were employed in posi-

tions other than those in which they ought to have been used. Useless old men, who had been either forgotten in some bureaux, or had been removed from the army for notorious incapacity, took the places of these young energetic generals. As for the company, squadron, or battalion commanders, they were also replaced by "veterans."

In the East, where one grows old quickly, a man of forty is not as good as far as his physical qualities are concerned, as a man who was born and who has lived in the West. This is why units were found in the hands of elderly men whose professional instruction was not up to the exigencies of modern war. In fact, under the reign of the Sultan Abdul Hamid, field service exercises, maneuvers or others, did not exist even on paper. With a few rare exceptions, and they were the men rapidly promoted, the officers were not on to their jobs. Now the deposed Sultan having reigned about thirty-three years, the more seniority officers had, the less account they were.

At the time that this law, required by the politician officers for reasons easily surmised, was passed, a promotion law was promised, but the Ministry has not yet, five years after the revision law, presented it to the Chamber. Therefore officers have been promoted by seniority, which is not a very good way to encourage hard work. One example among a thousand: The commander of the Third Corps, who had just been made a division commander, saw himself, the very day his nomination was officially announced, relieved of his command and his place taken by a brigadier-general. This division commander did not receive during the whole campaign a command. He was then an incapable. But why did they have to reward him?

Besides, the army already was short of officers, and was deprived of many of its company officers, the same politicians having required the dismissal of the officers who were promoted from the ranks. The measure seemed logical, since many of these promotions scarcely knew how to read and write, but it was disastrous.

In the first place, these men, used to discipline, and knowing the soul of the soldier better than the newly made young second lieutenant from the military school, were playing, more

or less, in the companies and battalions the rôle of the French first sergeants and sergeants major.

In the second place, these officers could have been trained. I had some in the different squadrons that I commanded. All of them wanted to learn, provided there was some one to teach them, and they followed the courses of study that I laid out with close attention; their progress was astonishing.

The scarcity of officers with us was such that at mobilization battalions with but three officers were not rare. In the course of the campaign and thanks to Nazim Pacha the unfortunate generalissimo-minister assassinated in so cowardly a manner, they decided to resume the old method, and appoint as officers the non-commissioned officers that had distinguished themselves during the campaign, but it was unhappily too late.

Another cause of the lack of success was the organization of the army into army corps.

Until March, 1911, the military forces of Turkey were distributed among seven armies and two independent cavalry divisions. The headquarters of the armies were at Constantinople, Adrianople, Erzindjan, Damas, Bagdad, Yemen, and those of the independent cavalry divisions at Tripoli and Hidjaz.

In accordance with their importance, the armies were formed into two divisions or more. The divisions comprised four regiments, or two brigades, and the regiments had four battalions.

In 1912 at the declaration of war, the army comprised fourteen army corps and five brigades of independent cavalry. The army corps were in three divisions, the divisions in three regiments, the regiment in three battalions.

At the moment of mobilization the battalions were to be of about 600 men, while formerly they were to count about 1,000 men. Each division had as its disposal one regiment of artillery and one squadron of cavalry.

This organization which I shall neither praise nor criticise was scarcely completed at the moment when the war came. It is then not astonishing that the army lacked bread and supplies.

As to clothing, equipment and armament, every one is agreed they could not have been better. This justice must be rendered to Mahmoud Chevkets Pacha, the grand visier of yesterday, who as minister of war knew how to clothe the soldiers.

This was unfortunately not sufficient to conquer.

Another cause of our defeats was the sending home of soldiers that had completed their time just before the mobilization.

Under the pressing counsels of the minister of foreign affairs, who wished to prove to Europe that we wished for peace, and that we were not animated with warlike intentions, the minister of war, persuaded that the Balkan nations would not attack us, had let these men go. For this reason, the battalions with the colors lost their best elements.

Finally, Turkey was neither morally nor materially ready to make war.

One closing remark:

The Turkish soldier has been sharply criticised; he has been even accused of cowardice.

I protest against such an assertion with the greatest energy.

Unfortunately, there are cowards everywhere. But I affirm that the very great majority of our soldiers did not deserve such a name.

When one knows how to ask the Turk to get himself killed, he does it without making a fuss, and with the greatest gallantry. The Bulgarians know something about this, and are the first to recognize it. But like all soldiers in the world, the Turk needs to be commanded.

The troops with the colors have done well. This is shown by the heavy losses they had. As for the reserves, most of them did not know how to handle, load, and unload the guns they held in their hands. The others that were well drilled, like the Ismid division that has been the subject of this paper, conducted themselves admirably.

The officers have redeemed with their blood the errors of peace time. I do not know exactly the percentage of their losses, but it cannot be less than forty per cent. I need not

say how bravely the Turkish officers have fought; these figures have their eloquence.

Of the different soldiers, Armenians, Greeks and Jews, admitted by the constitution to the honor of serving, the Armenians alone fought bravely, very bravely. I prefer not to speak of the others, hoping for the honor and security of the Turkish army, that they have figured in our ranks for the first and last time.

The army that ran away at Kirk-Klisse, fought heroically for ten days at Lule-Burgas, less than a week later.

Established behind the famous Tchataldja lines, composed almost entirely of shelter trenches, this same army, attacked as it was by the cholera which carried away thousands of men a week, conquered, the 18th of November, sixteen days after the battle of Lule-Burgas, the Bulgarian army full of enthusiasm, which from the beginning of the campaign had known only victories.

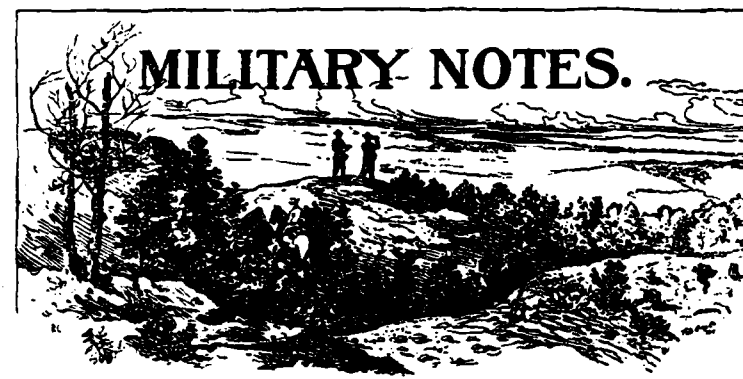
That is not the work of cowards.

We must seek other causes than cowardice to explain the defeats of the Turkish army. As may be seen by reading this article, written without affectation and with the greatest impartiality, the Turkish cavalry, in this unfortunate war, did its duty, and its whole duty.

If these lines fall under the eyes of my former French professors or commanding officers, I shall be grateful to them if they will send me their criticisms upon the operations of the division of Turkish cavalry. I shall joyfully translate and have published in the *Turkish Military Review* their ideas upon this subject.

Now, more than ever, Turkey and her army must work, as they have a revenge to take.

For this work of regeneration we cannot do better than to take example by France, tested as we were in 1870, and which possesses today, thanks to its patriotism and persevering labor, one of the finest armies in the world.



CHANGE IN HEADQUARTERS OF THE CAVALRY ASSOCIATION.

THERE are good grounds for the belief that the effort to remove the headquarters of the Cavalry Association and the CAVALRY JOURNAL from Fort Leavenworth to Fort Riley can be ascribed largely to that sentiment pervading the cavalry in recent years, which tends to scoff at the so-called "highbrows" and, at times, asserts that the course prescribed at the Mounted Service School offers the only instruction essential to the proper training of a cavalry officer.

No single influence has been stronger than that of the Mounted Service School in rejuvenating the cavalry. While often definite and perceptible in its effects, it has, also, in countless indirect ways, contributed to the efficiency of the arm. Horseshoeing, horsetraining, equitation, horseshows, polo, and greater knowledge of horseflesh, will have, each, its own important bearing upon the fitness and professional readiness of our officers and men, and upon the quality and training of our mounts, should we ever go to war.

Without depreciating the value of this work or restricting, in any respect, its field in the future, let us not forget that special knowledge and headwork on the part of cavalry officers will be required to plan and direct the operation of our cavalry organizations, and mayhap, contribute some necessary element to the making of their efficiency. It will not be the special knowledge acquired or the mental processes exercised only in the riding hall, the show ring or on the polo field, however much these realms may subscribe to physical fitness and mental alertness, but, on the contrary, it will be that indispensable equipment secured only from the diligent and continuous study of all that pertains to the science and art of war.

Special knowledge limited to the sphere of "*hands*" and "*haunches-in*," availeth little in war. It is for war that we are training.

Let the Cavalry Association remain where it is. Let us send more Leavenworth graduates to Riley and more Riley graduates to Leavenworth, to the end that the training of a cavalryman may be better balanced, and that, in the presence of the enemy, we may not be confounded.

GRADUATE, MOUNTED SERVICE SCHOOL.

ORDERLIES FOR MOUNTED OFFICERS.

DURING the last few years various orders, circulars, etc., have been issued by the War Department to encourage and require officers to own better mounts, but nothing has been done to make it practicable for them to keep such horses.

We all, especially the subalterns, not in command of organizations, are continually running against the difficulty of having our horses properly cared for.

A horse of the type described in the War Department circulars needs intelligent and constant care, yet it is often impossible for us to provide such horses owing to the lack of provision in our army for orderlies for mounted officers. Many of our superior officers, troop commanders or post commanders,

fail to see why a valuable thoroughbred, when he comes in heated from drill, cannot be turned loose in the corral to catch a cold or be kicked by the troop horses. Such a horse must be walked when heated, have his legs rubbed after hard work and should be well groomed and constantly looked after. He must be properly bedded and have a stall where he cannot injure himself or be injured by other horses.

At present the excusing of men from any duty to care for officers' horses is not allowed. Most of us cannot afford the high cost of a civilian groom. Our mounted pay does not nearly represent the cost of our horses, equipments, losses, etc., for unless one is a real horse trader, accidents will more than make up for the occasional profit on a horse deal.

While we sometimes serve under a troop or post commander who takes enough interest in horses to allow us to have ours properly cared for, they cannot excuse, under the regulations, an orderly from any duty, and in many instances they do not wish to so excuse them, even if they could, some troop commanders even going so far as to make it very difficult for their subalterns to have an orderly. Half the time he will be on guard, old guard fatigue or on some special duty. Meanwhile one of the stable police probably looks after our horses, with bad results as we have often found to our sorrow.

If a lieutenant does not belong to a troop he is usually still worse off. The headquarters' orderlies are taken by the higher ranking officers, or are on duty as telephone operators or at the Post Exchange. The headquarters' farriers and blacksmiths, who receive no extra pay, are such in name only and often even no stable is provided. As a Squadron Quartermaster, I have had to go begging from troop to troop for a place to keep my horses and for a man to look after them. I have had to pay for shoeing, etc., and constantly had to look after my horses myself to see that some stable sergeant, who did not want extra horses in his stable, did not allow something to happen to them.

If an officer is on duty at such a place as West Point, matters are even worse. There everything is regulated by Post Orders and otherwise to make it difficult for a mounted

officer to keep horses, and to do so costs him about three times his mounted pay.

An order from the War Department allowing mounted officers orderlies to care for their horses would do much to encourage the owning of better horses. The following is a brief statement of the points that such an order might cover:

Every mounted officer who provides himself with a suitable mount, at his own expense, may have an orderly detailed to care for them and for his horse equipments. These orderlies should be carried as such on the morning reports. In order that they may properly care for the horses in their charge, they shall be excused from all other duties except mounted drills and target practice. They shall be chosen from men who have had at least eighteen months service and who are proficient in their military duties.

In order to insure uniformity in the amount given by officers to their orderlies, it is suggested that they receive five dollars per month for caring for one horse and for the performance of such other duties as are usually performed by them and an additional two dollars for each additional horse cared for.

A LIEUTENANT OF CAVALRY.

THE ARMY HORSE REGISTER.

IN the April number of the CAVALRY JOURNAL there appeared a reprint of a report made by the undersigned to the war Department, proposing a new system of identification of public animals, taking the name of distinguished brother officers, perhaps in vain, in endorsement of his idea. He has very properly explained to the Department that he had no part in the publication of that official matter, and that it was printed without his connivance or assent. But reforms are born amid agitation and controversy. He will, therefore, for want of any other opponent so far revealed, enter into a controversy with himself, in these pages, to show how inadequately his

proposition was presented and how greatly it may be improved upon.

He was mentally torpid in failing to present the practical utility of the *Army Horse Register*, sample partial pages of which are appended to this article, to enable the reader to visualize its use. He failed lamentably, too, in the usual appeal to passion by born reformers, when he did not expound the hitherto almost unrecognized principle that our animals possess personality, at least in the affections of the mounted service. They are, as much as we, part of the flesh and blood of the army. So why did he not emancipate them as chattel property, and propose that they be no longer so accounted for, but be taken up on the rolls of the organizations to which attached, by number, as possessing immortal souls? Practically souls are less easily lost than chattels.

He was deficient, too, in the quality of intolerance which characterizes all true reformers, and proposed a limited three place system to appease the supposedly existed faction which prefers to brand horses as, in England sheep are marked, on the inner side of the lip in India ink. As if a horse grows a coat of wool and must needs be branded on the inside of his anatomy, rather than on the outside, where he who runs may read! No, he should have frankly expressed his own conviction that a four place system is best, enabling the branding of 100,000 animals on any one quarter, either cheek, side of neck, shoulder, or hip,—800,000 in all, if the military exigency should ever demand it.

He failed to note that the only novelty of the system consists in applying to living animals a mark which has long been used on inanimate objects, notably bank notes. Even so, the publication of the letter did not show, what Captain Short said, that the London Bus Company has a similar system already in use. Also, on authority of the same incomparable horse-master, the device is now in use, on a smaller scale, in certain great breeding establishments. The gentlemen who have been so fortunate as to attend the Mounted Service School know, too, that horses there from the Diamond Ranch bear on their cheeks a numeral indicating the year they were

foaled. If they do not know then here is proof of its inconspicuousness.

He also failed to say that the characters of the new brand need not be larger than half the size of those of the present U S, or that they will be imposed on a surface which has first been carefully clipped. Nor will the characters be so coarse as the letters U S, but be drawn in finer, almost hair lines, the surface thereafter to be kept clipped, when necessary, to insure easy legibility. For this the stable police of the mounted service will bless his memory every Sunday afternoon henceforth, forever, as in every orderly room thanks to him will daily go up for the abolition of the descriptive list, with its bizarre attempt to apply the Bertillon system to equine subjects, who, not which, are incapable of crime.

But it is true he conceived the printed pamphlet containing lists of horses purchased each year, and now unto us the child is born, and christened, the *Official Army Horse Register*.

It will issue annually, and since appropriations for the purchase of cavalry and artillery horses are, and must always be, for the fiscal year, that will be the period covered. Successive annual issues will reprint no matter appearing in previous numbers, except in the casualty list. In that will be found the longevity of animals condemned, the name of the officer who made the original purchase, and the name of the inspector who made the condemnation, without having to refer to back numbers. It is part of the intent of the system that the names of these officers be identified with the career of the animal. It is believed this device will induce deliberate and careful judgement in the performance of their duty, as well as more care in their selection by higher authority.

With the inauguration of the system, without applying it in any way to animals now in service, the annual casualty list will increase in length, and ultimately approximate that of the horses purchased during the year. It will be of value mainly for statistical purposes, while the record of living animals must be made very easily accessible for ready reference.

As previously proposed a letter was to be assigned for the foals of each calendar year. That was merely to illustrate the striking possibilities of the scheme. But it will be better

to have the year of purchase indicated by the letter, so one may know at once in which number of the *Register* to look. The ages of horses purchased in the same year vary but little, while the year of foaling may be found exactly in the *Register*, when necessary, to decide bets, make sales, or discover liars.

With the four place system, in time of peace, the brand being placed only on the left shoulder, each letter of the series will provide for 4,000 animals. The annual appropriations for the purchase of cavalry and artillery horses, for a long period of years, have not permitted the purchase of nearly so many. Instituting the series, with a letter for each year, the alphabet will last for twenty-five years, when the first purchases, under the letter A, will all long since have gone out of service, and the series will again be available for use from the beginning.

It will not be difficult for the remount service to keep the series of brands imposed in strict alphabetical and numerical sequence. Each purchasing officer, or several operating at the same time, in various parts of the country, will be given a list of brands to use, according to the number of horses he is to buy. Unused blanks of these lists will be used at the nearest station, enabling the *Register* to be made up with few blank lines, or even with none at all. The whole system, of course, implies a high degree of concentration of control, but in the very nature of things the remount service is a centralized function, like the recruiting service, at least so far as reports, returns, and the allotment of funds is concerned.

The office of the Editor of the *Register*, pleasantly situated in Washington, is hereby created. Aspirants may fall into line in advocacy of the proposition. If the publication be properly edited, statistical data, in any form, required by the committees of Congress, the remount service, or by horse-breeding associations, may be quickly culled from its pages. The breeding associations already have their own registers, as is well known.

Let the editor-elect note that the result of his annual toil must not approach, in typographical bulk, that of the monthly list and directory of the human commissioned roster. Dressing his equine publication in the most compact style of the Government Printing Office, a dozen copies, bound together,

may be carried in any field desk, in smaller compass than that of the present descriptive lists. This is an imperative consideration which should guide his editorial policy and determine his tenure of office. Students of the appended sample pages will agree that this literary creature may not exceed the license granted by his creator.

Twenty years ago the writer endeavored to procure the adoption, in aluminum, of the ancient, and then familiar, whiskey flask, in lieu of the dangling tin cup and canteen. Time and tide achieved the end. For five years he has tried, and with thirteen more years to serve, he hopes to leave his mark upon our horses.

OFFICIAL ARMY HORSE REGISTER.

FISCAL YEAR 1914-15.

(Series A000 to 197A.)

3198 Animals.

F. Y. 1914-15.

Page 1.

Brand	Bought	Where	Buyer	Foaled	Price	Color	Class
A000	Apr.	Va.	W. W. W.	1910	\$158	Bay	Cav.
A001	Oct.	Ky.	C. H. C.	1909	\$158	Sorrel	L. A.
A002	Jan	Pa.	L. H.	1910	\$162	Black	H. A.
A003	Dec.	W. Va.	W. S. V.	1909	\$162	Brown	Rid.
A004	Feb.	Mont.	H. P. H.	1910	\$125	Bay	Cav.
A005	etc.	etc.	etc.	etc.	etc.	etc.	etc.
A006							
A007							
A008							
A009							
A010							
etc.							

OFFICIAL ARMY HORSE REGISTER.

FISCAL YEAR 1915-16.

(Series B000 to 56B2.)

2563 Animals.

Casualties Reported F. Y. 1915-16.

Brand	Bought	Where	Buyer	Foaled	Price	Color	Class	How disposed of.
A000	Apr.	Va.	W. W. W.	1910	\$158	Bay	Cav.	C. & S. Inspr.,
etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	J. G. G., etc.

GUY H. PRESTON,

Major Fourth Cavalry.

USE OF THE AUTOMATIC PISTOL BY CAVALRY.

EVERY cavalryman probably realizes that in our automatic pistol we have a wonderful weapon, and, at the same time, one not in general use by any other nation. However, it is a question as to whether we are prepared to use it to the greatest advantage. While the following suggested use may be but another variation of the old *pistol versus saber* controversy, the automatic feature of our present arm cannot fail to add strength to the claims of the pistol.

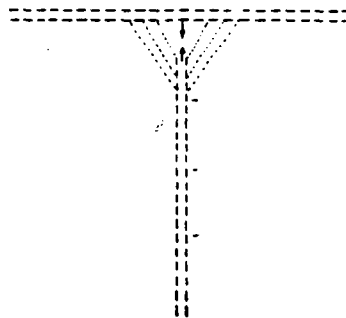
Briefly, this plan contemplates the use of the pistol mounted while in column of twos (half squads) against an enemy charging in line (single or double rank) with the saber. The men on the right (odd numbers) fire to the right-oblique or right, while those on the left (even numbers) fire to the left-oblique or left. Of course it should be the object of the unit commander to conduct his command so as to strike the enemy

as near the center of his line as possible. The following rough diagram may assist in illustrating the meaning.

In this illustration, the charge of an enemy's platoon of 24 men in double rank is met by a charge in column of half-squads using the pistol, the men on the right firing to the right-oblique or right, as they approach their target, the men on the left firing to the left-oblique or left.

Our charging platoon will be led by its lieutenant and file-closer, and it is believed they will have no difficulty in penetrating the enemy's line, either by shooting their way through, or on account of the enemy avoiding the shock. It takes no great amount of skill to hit a target as large as will be presented at ranges twenty yards or less, and the platoon should

Enemy's platoon in line, with sabers



Platoon half squads with pistol.

CONDITIONS JUST PRIOR TO COLLISION.

do effective shooting as they ride through. One hundred and eighty-two shots fired at such a short range ought to produce decisive results.

It is not believed that the enemy will be able to damage us very much, as they must come very close to use their sabers, and the closer they come the easier they will be to hit. In any case they will be thrown into confusion and their usefulness as a formed body will be at an end.

Of course this use of the pistol contemplates that men should be taught to use their left hand when shooting to the left with the automatic pistol which is not a very difficult feat. There is always some danger involved when firearms are used, but it is believed that there is much less danger in this method than in the charge as foragers with the pistol.

It will be noticed that the column of half-squads is a very convenient formation for maneuver, easily adopted, easily handled, easily led. It utilizes, too, to an unusual degree, the psychology of the mass.

Only the platoon versus platoon has been considered in this discussion, but its application to larger bodies and varying conditions readily follows. In this connection it should be borne in mind that in a terrain such as ours, actual charges by large bodies of cavalry will not be frequent—a platoon will charge much oftener than a regiment.

It is believed that if the method outlined herein be given a thorough test, it will be found that our cavalry will have a big advantage over any enemy that we may meet, and more extensive tactical uses will naturally present themselves.

C. BURNETT,

First Lieutenant First Cavalry.

FIELD SERVICE POST CARDS.

THE authorities of the British Army have a form of Post Card that is issued to those in their service at the front and which are transmitted through the mail free of postage. These cards are of the usual size and bear on the front the following: "Field Service Post Card." "The address only to be written on this side. If anything else is added, the post card will be destroyed."

On the back of the card appears the following:

Nothing is to be written on this side except the date and the signature of the sender. Sentences not required may be erased. *If anything else is added, the post card will be destroyed.*

I am quite well.

I have been admitted into hospital.

(sick) and am going on well.

(wounded) and hope to be discharged soon.

I am being sent down to the base.

I have received your { letter dated.....
telegram dated.....
parcel dated.....

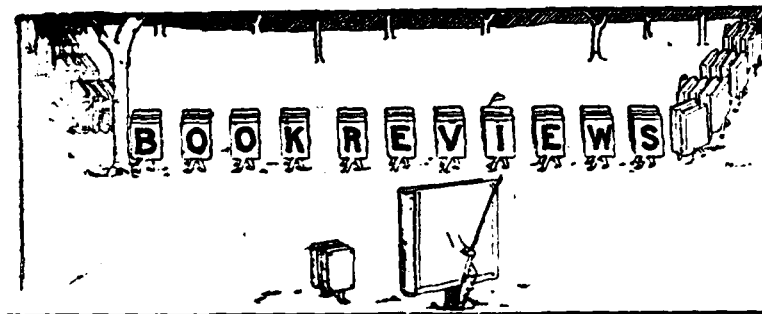
Letter follows at first opportunity.

I have received no letter from you { lately.
for a long time.

Signature only.....

Date.....

Postage must be prepaid on any letter or post card addressed to the sender of this card.



**St. Privat,
German
Sources.***

A notice of this work was published on page 723 of the CAVALRY JOURNAL for April, 1915.

The book contains fifteen articles translated from the German, dealing with the battle of

St. Privat.

Of these the most important consists of extracts from "The 18th of August, 1870," written by the Great German General Staff. So far as the account of the troop heading in the battle is concerned, the latter article is itself built up from many sources, most of which are available to but few historians; and as the General Staff has failed in many cases to give references to the sources on which their statements are based, it would be difficult to go behind those statements in order to determine for ourselves their degree of accuracy, even had we access to the original sources.

On the other hand the great value of Captain Conger's collection lies in the fact that the articles have been so chosen that we find in them evidence which is not necessarily in accord with the more important statements made by the General Staff in their work; and, consequently, the student of history can weigh for himself the conflicting evidence on certain points,

*"ST. PRIVAT—GERMAN SOURCES." Translated by Master Signal Electrician Harry Bell, U. S. Army. Staff College Press, Fort Leavenworth, Kansas. 498 pp. 1915. Price \$1.00.

such as in the dispute as to whether the Guards or the Saxons brought about the decision at St. Privat.

There seems to have been an impression among military men that the historical section of the German General Staff was the last word on the historical subject on which they might write. But a perusal of the German criticisms of the General Staff account, and a careful comparison of that account with some of the other articles on the same subject, impress on the reader the conviction that not even the German General Staff is free from a willingness to give to events the coloring which political considerations may make expedient.

Were the only merit of this collection of articles the revelation of this fact, it would be well worth while. But it also full of concrete examples of the results of the application or non-application of accepted tactical principles—examples which have to be dug out by the student, it is true, but which are consequently of more value to him.

The translation is very clear; the volume well gotten up, with bibliographical notes, and biographical sketches of the authors whose articles appear.

A complete and well arranged index is not the least of its excellent features.

**Military
Field
Note-Book.***

This is another of those handy manuals of condensed information that one is expected to carry around in his pocket, but never does.

Half the bulk of the book is made up of a pad of message blanks that can be replaced by a new filler when the originals are exhausted. This blank is less satisfactory in form than the official message book and lacks the latter's facilities for making duplicate copies.

The remainder of the book (except sixteen blank pages for keeping the owner's detached service record) is text, most

"MILITARY FIELD NOTE BOOK." By Lieutenants George R. Guild and Robert C. Cotton. Geo. Banta Publishing Co., Menasha, Wisconsin, 1914. Price 75 cents.

of which pertains to matters fully covered in the Field Service Regulations.

A few of the pages of condensed data, if printed in pamphlet form on one side of the paper so the sheets could be removed and pasted in one's Field Service Regulations would be useful.

**European
War.***

This is an analysis, in popular form, of the matter contained in the published diplomatic correspondence that preceded the European War made by an authority on the interpretation of state papers, together with comments on the European political situation based on the deductions made, on the political and economic history of the nations concerned and on the psychology of peoples.

The author is pro-German in his sentiments, but not violently so. He displays a profound knowledge of, so called, "public opinion" as will be seen from the following quotations:

"It is a fact of history * * * that the majority is generally on the wrong side of every great question in the beginning." "We have not yet formed any real public opinion about this war. Everybody feels, but only relatively few really think, and very few possess the knowledge upon which to found a sound judgment."

Those who wish to make it appear that wars are caused by rulers against the will of their people will derive very little comfort from such passages as the following:

"It is a general feature of political history that the governmental system tends to adjust itself to the economic." " * * * the sphere of * * * influence, as they call it, which is nothing less than the preliminary to annexation."

This is a strong, well written work, much above the average of the numerous books that are appearing under the same or similar titles and which are mostly violent expressions of prejudice founded largely on the author's emotions.

"THE EUROPEAN WAR OF 1914. ITS CAUSES, PURPOSES, AND PROBABLE RESULTS." By John William Burgess, Ph. D., J. U. D., LL. D. A. C. McClurg & Co., Chicago. Price \$1.00.

**History
of The
War.***

The only volume of this work which has appeared as yet is entitled "The Battlefield of Europe." Other volumes can be looked for as the present war in Europe progresses.

This first volume, which contains several hundred excellent illustrations and maps, is divided into twenty chapters as follows:

- I. Political Antecedents to the War.
- II. The Army and Fortresses of Belgium.
- III. The German Invasion of Luxemburg and Belgium.
- IV. The German Army and German Strategy.
- V. The German Army—1870-1914.
- VI. The German Army in the Field.
- VII. The German Theory of War.
- VIII. The British Army.
- IX. The Army of the Dominions.
- X. The Native Indian Army.
- XI. The Rally of the Empire.
- XII. The British Theory of War.
- XIII. The French Army.
- XIV. The French Theory of War.
- XV. The Story of Liege.
- XVI. The German Advance to Brussels.
- XVII. The First French Offensive in Alsace.
- XVIII. German Conquest of Belgium.
- XIX. The German Advance on Paris; Battle of Namur. Charleroi, Mons.
- XX. The Retreat to the Marne.

It will be noticed that this first volume deals chiefly with preliminaries. It is also noticeable that the English point of view colors the entire volume, which is not a defect, as when German and Austrian sources become available, the two conflicting views can be harmonized.

It is unfortunate that the names of the authors of the different chapters are not given. To the military student the work

*"THE TIMES HISTORY OF THE WAR—THE BATTLEFIELD OF EUROPE." By *The London Times*. American Edition. 1915. Woodward and Van Slyke, Inc., New York. Price unknown.

would be much more valuable were this done, and were a biographical sketch of each author appended. There is no doubt that men versed in things military have contributed to the pages of this volume, however.

The book is on the whole of intense interest, of great value to every trained officer, and should find a place in his library. Future volumes are awaited with interest.

**Military
Hygiene.***

This excellent work has been revised carefully, and brought up-to-date by its author, and is a book well worthy of study by Army Officers.

The chapter on Camps, has been entirely rewritten and the new text presents the subject, in a more practical manner to the reader. The section treating of camp latrines is particularly good.

Chapter XII has also been very materially altered and made more interesting to the lay reader. The author strongly recommends that individual drinking cups or bubbling fountains be used in barracks; but he did not note, that the Army was far behind civilian development along these lines.

It is noted that in the Canal Zone mosquitoes have been known, under favorable conditions, to fly more than a mile from their breeding places. This statement is extremely interesting as it explains the occasional failures in anti-malarial work and brings home to us very forcibly the great care necessary in sanitary surveys of localities occupied by our troops. This entire subject has been very carefully treated and the chapter is far from being a mere statement of facts.

A separate section treating of louse-borne diseases is extremely interesting at this time, particularly as Typhus Fever, so much before the public at the present, is considered and means of prevention suggested.

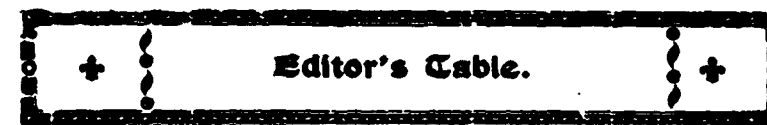
*"THE ELEMENTS OF MILITARY HYGIENE." Especially arranged for Officers and Men of the Line." New and Revised Edition. By P. M. Ashburn, Major Medical Corps, U. S. Army. Houghton-Mifflin Co., Boston and New York. Price \$1.50, net.

The supplement on prevention of mental and nervous diseases, which has been added to this edition, is very timely, and attention is called to the great importance of these diseases in the armies of the present.

All in all, this book is excellent and should be in the hands of all officers.

RECEIVED FOR REVIEW.

"MILITARY SKETCHING AND MAP READING FOR NON-COMMISSIONED OFFICERS—ILLUSTRATED." By First Lieutenant Loren C. Grieves, Thirtieth Infantry. 1915. U. S. Infantry Association, Washington, D. C. Price \$1.25, post-paid.



THE INTERNATIONAL MILITARY DIGEST.

This new periodical, as its title suggests, is a monthly digest of everything of value published on any military subject, either at home or abroad, and along lines entirely different from any military publication heretofore published. It will be to the military reader what the "*Literary Digest*" and other similar reviews are to the general reader.

It covers a broader field than does the valuable bi-monthly publication of the "*Index to Current Military Literature*" which is published with the *Journal of the U. S. Artillery*, or the "*Recent Publications of Military Interest*," which now appears as an appendix to the quarterly published by the British Imperial General Staff under the title of "*The Army Review*."

The scope of its work is set forth in the following extracts from the Editorial Foreword appearing in the first number:

"It is the purpose of the *International Military Digest* to furnish to its readers each month a synopsis of the contents of the current issues of all the leading military periodicals of the world. It is manifest that in performing this service, the principle of selection must be applied to some extent. By specifying the leading military periodicals, it is implied that some of lesser importance are not included.

"The Editors feel sure that they make no mistake in assuming that the readers of the *International Military Digest* will prefer that the principle of selection be applied still further. In the present issue, the attempt has been made to give digests

varying in length and completeness with the character and professional value of the articles reviewed. Some articles are covered merely by notes indicating their scope, usually in cases where the reason will be apparent. Others have been omitted entirely. In the future, it is the intention to give in somewhat greater detail digest of articles published in those languages with which few are familiar, because reference to the original articles would be difficult or impracticable.

"In this initial number, it has been impossible to include digests of articles from a considerable number of foreign periodicals which are recognized as important. This has been due mainly to the irregularity of the mail service with European countries, which has made it impossible in the time available to secure the issues of all the periodicals desired. The European War has also apparently caused the temporary suspension of publication of all of the French and part of the British, German, and Austrian military periodicals. The status of the Russian periodicals is not yet known. This suspension will, however, be more than compensated for by their added value when these periodicals resume publication.

"January 1, 1915, has been selected as the origin of the subject matter of the *International Military Digest*. It has not been possible to review all of the back issues of the periodicals taken up in the current number of the *Digest*. These will be brought up to date as soon as practicable. Such additions as may be possible will be made within the next two months to the list of periodicals under review. The digests of these periodicals will also be carried back to January 1, the back issues being reviewed and published in the *Digest* as opportunity offers between now and the close of the year. In general the whole list of publications to be reviewed will be revised at the beginning of next year.

"A considerable number of the more important non-military publications will also be scrutinized, and any articles of technical military value or current military interest appearing in them will be included in the *Digest*.

"The Editors have necessarily relied largely upon their own judgment in the preparation of material for publication in this first issue. It is their desire that the *International Military*

Digest shall meet the requirements of its readers. To that end, they will always welcome criticism. Suggestions as to additional periodicals to be included, or as to the character of the reviews will be especially valuable.

"The Editors of the *International Military Digest* need the assistance of officers familiar with different languages in preparing digests of articles in foreign military periodicals. Some such editorial assistance will be needed immediately, and other later as additional publications are taken up for review.

"The Editors desires to hear from officers who are willing to help with this work, particularly those familiar with Italian, Portuguese, Norwegian, Swedish, and Russian. Terms will be made known to those offering their services."

It is proposed to make every third number a Cumulative Digest of all that has been noticed in the two previous numbers, and finally to make the last number of each year a Cumulative Digest of all that appeared during the year. This plan is the one followed by the well known "*Cumulative Book Index*," which, however, is simply an index and not a digest and which covers only such books, on any subject, as are published in the United States.

The Editors-in-Chief are Colonel C. DeW. Willcox and Lieut. Colonel E. R. Stuart, Professors at the U. S. Military Academy, and they will be assisted by a corps of Associate Editors from every branch of our service. The well known ability of the Editors-in-Chief and the listed Associate Editors give assurance that their work will be well done.

This publication will fill a long felt want in our service as well as those in foreign countries.

ARMY HORSE INSURANCE.

Since the appearance, in the April, 1915, number of the CAVALRY JOURNAL, of the editorial discussion of this subject several of our mounted officers have written requesting further information and urging the formation of an Army Horse Insurance Company for the purpose of insuring the private mounts of officers in our service.

Some additional data has been obtained on this subject, the principal points being as follows:

It has been learned that another company, in addition to the two mentioned in our April number, that insures horses, it being a branch of the well known Hartford Fire Insurance Company. From their circulars, it would appear that their principal business in this line is to insure race horses, although they write that they will also insure officers' mounts, *but not in time of war*. In fact, it is understood that none of these Horse Insurance Companies will insure horses of officers except in peace times.

The Hartford Company insures four classes of horses and at a varying rate according to the age of the horses and the class to which they belong, which rate ranges from six to eight per cent. of the amount for which the horse is insured, and horses from yearlings to those twelve years old. They do not insure horses over the latter age, except at a special rate, to be determined by them in case the risk is found desirable.

The application blanks for insuring in all of the companies have a more or less extended list of questions to be answered, which cover the history of the horse, his pedigree, former ownership, his description, his medical history, so to speak, the condition of his teeth, etc., some sixty or more questions in all.

All of the forms of policies issued have the usual numerous conditions that are supposed to be necessary in insuring the property of the average civilian in order to protect the company against fraud, and, of course, for which the honest man has to pay a higher rate than would otherwise be the case.

In forming an Army Horse Insurance Company there are many things to be considered and that should be carefully thought out. Among these are the classes of horses to be insured, whether only officers' official mounts are to be included or whether polo ponies, brood mares, ladies or childrens' horses or ponies, owned by an officer, are to be insurable, and the varying rates for these several classes.

It is the opinion of your Editor that the plan should be as simple as possible and somewhat along the lines of the Army Co-operative Fire Association and have but one rate for all classes of horses insured, barring, if deemed advisable, stallions and brood mares, which are deemed extra hazardous risks by all the companies mentioned. There should be, of course, a small increase of the rate over the estimated cost of insurance, in order to build up a reserve for the prompt payment of claims which reserve should be made up of the amounts remaining to the credit of the individual members after paying their proportionate share of the losses. It would also be necessary to have a small per capita tax on each member for expenses.

As a starter, it is suggested that there be eight classes, according to the value of the horses insured, ranging from \$150 to \$500, there being the common difference of \$50 between each class. Also, as a starter for discussion, it is suggested that the rates be six per cent. of the value of the horse until the member's credit in the reserve fund has reached a certain proportionate amount, say two or three times his annual assessment, after which he shall pay only his proportionate share of the losses for each year. Six per cent. of the value is suggested as being the lowest rate given by any of the commercial companies, under the most favorable circumstances. All losses should be adjusted by a board of officers, members of the Association, if practicable, and stationed at the same garrison as the officer sustaining the loss, the same subject to revision by an Executive Committee.

It is believed that losses by fire should not be included as nearly all mounted officers now have their horses so protected by the Army Co-operative Fire Association.

PREPAREDNESS FOR WAR.

In his address given in New York recently, Dr. Lyman Abbott Editor-in-Chief of *The Outlook*, and a clergyman of great repute, took a broad view of the question of preparedness for war.

Dr. Abbott briefly traced the progress of this country in his life time, which began in 1835, and metaphorically handed the country over to his younger hearers with a word of caution as to the problems they must meet in their own life times. He said:

"Who, looking with those telescopic eyes which the press furnishes us, across the Atlantic Ocean, and listening to the boom of the cannon and the rattle of the infantry, and the groans of the dying, and the sobbing of the women and children, who can doubt that there is in this world yet a barbarism that regards might as right and acknowledges no allegiance and no loyalty except to force. We cannot assume that there are no burglars in New York, and therefore we need no police. We cannot assume that there are no mobs in Colorado, and, therefore we need no militia. We cannot assume that there is no militarism in the world, and, therefore we need no army and no navy.

"I recognize to the full the danger of a standing army to a republic. Gentlemen, I am not here solving the problems of the future. I have done what little I could toward the solution of the problems of the past and simply put the problems of the future before you, and I say this that a self-governing nation must be a self-protecting nation. Nor is it enough that we have a million men who have the courage to meet the guns—a million men unprepared to work together no more constitutes an army than eleven boys who can kick a football make a college team.

"We have got to find some way—you have got to find some way. It is not my problem. I am quit of it. It is your problem to show how you can make out of a citizen soldiery an organized body of men, equipped, prepared, accustomed to team work, and habited to give prompt obedience to authority."

THE NATIONAL SECURITY LEAGUE, INC.

That the public at large is aroused as to the necessity of a larger and better equipped army and navy is evidenced by the present attitude of the public press on this question, but more particularly by the formation of societies or leagues for the purpose of influencing legislation in favor of such measures as will, in their opinion, place these services on a proper footing.

The National Security League, composed of some of the most prominent and influential men of the country, has been organized for the purpose, so its circulars state, of advocating: A preparedness of the United States against war; legislation to carry out the moderate suggestions to that end of the General Staff of the Army and of the Naval Board; insurance of our nationality on a scientific and economical basis under the direction of a General National Defense Board; and to conduct a country wide campaign to convince Congress of a demand for absolute preparedness for war.

There was held recently in New York, under the auspices of this League, a "Peace and Preparation Conference," which was attended by delegates from a majority of the states, as well as from national associations, commercial organizations and patriotic societies. At this conference, which was addressed by many speakers of repute, final action was taken in the form of the following resolutions:

WHEREAS, The events of the past year have demonstrated the fact that war, no matter how greatly it may be deplored, may suddenly and unexpectedly occur, notwithstanding the treaties of peace and amity and have also shown that nations who were unprepared have paid and are paying the price of their delinquency; and,

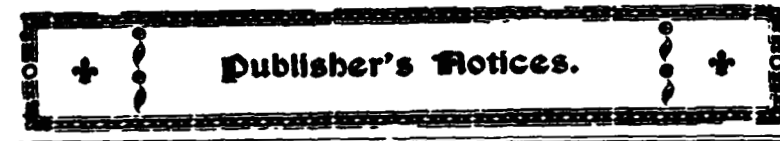
WHEREAS, The reports of our military and naval experts have made clear that the defensive forces of the country are inadequate for the proper protection of our coasts and to enable our government to maintain its accepted policies and to fulfill

its obligations to other states and to exert in the adjustment of international questions the influence to which the Republic is entitled; therefore be it

Resolved, That we appeal to the President, if consistent with the public interest, to call the early attention of Congress to the pressing need of prompt and efficient action so that the resources of our Great Country can be utilized for the proper defense of the Republic, and

Resolved, That the National Security League be urged to continue the work which it has already undertaken, of bringing the American people to a full realization of our deplorable state of unpreparedness and of the necessity of action by Congress.

In the literature sent out by this League, it is stated that: "They favor an army and navy with citizens reserve which will be sufficient only for the adequate protection of the United States. They do not believe in a large standing army or in any form of militarism." In this we most heartily concur, provided that we agree as to what they mean by a *large standing army, citizen reserves and militarism*. We believe in a standing army that is kept at full war strength at all times so that when needed it will be fully trained for field service and will not have to wait several months to train and assimilate from forty to fifty per cent. of raw recruits before being fit for service, as has always been the case in the past. As to its size, it is not, under the present restrictions, proper to discuss. As to a citizen reserve for the Regular Army, no scheme with the possible exception of the one advocated by General Carter in his recent work, entitled "The American Army," has been brought forth as yet that is practicable. As to militarism, we do believe in a more extended propaganda towards instructing the young men of this country in all that pertains to military life through the medium of student camps, instruction along these lines at our colleges and universities and in the formation of rifle clubs, etc.



The Army and Navy Co-Operative Company.

The attention of those in our service is called to the advertisement of this company which appears in this number of the CAVALRY JOURNAL. This organization has for its object the supplying of officers of the Army and Navy with the best of articles at the lowest practicable cost. Such co-operative companies have been successful in foreign countries and should be in this.

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THE PISTOL ATTACK.

(A Suggested Chapter for our Cavalry Service Regulations.)

BY CAPTAIN H. S. HAWKINS, THIRD CAVALRY.

PREFACE.

THE mounted action of cavalry has received, with the advent of the automatic pistol, an importance far greater than is generally realized. Whatever may be the merits, or demerits of the *arme blanche*, the *automatic pistol* is a weapon capable of making a cavalry, properly trained to its use, most formidable and efficient in its mounted attack. This efficiency would not be impaired but rather increased by the peculiarities of the terrain which might make close order combat difficult.

If the army should be required to intervene in Mexico the cavalry, if properly handled, would be a most important arm. It could almost be said *the* most important arm. But to call one arm more important than another in an army where all branches are necessary, is like asserting that one limb of a soldier's body is more important than all else. If all parts are necessary, then, without regard to the numerical strength required for any branch of the service, all branches are of equal importance.

But in Mexico the cavalry could hardly be too numerous. Its numbers would be limited only by the following:

1. A failure on the part of our authorities to appreciate the value and to provide the proper number of trained regiments. Untrained regiments would be useless.
2. An inability of our government to provide the great number of horses necessary for remount purposes.
3. The difficulties of feeding a great number of horses in the theater of operations.

Take these three limitations away and the more cavalry we had for intervention purposes the better. In such a case, indeed in any case, the automatic pistol would be sure to play a tremendous part. We should therefore prepare.

If we had to oppose the cavalry of a modern army, the automatic would, provided a proper system of tactics is used and troops properly trained, revolutionize the mounted combat and increase its importance a hundredfold.

Learning to shoot the automatic has been proven to the satisfaction of many American officers to be easier than learning to handle the saber.

There are two general forms of the pistol attack as described in this paper.

An apparent but not a real objection to the first form of pistol attack herein described, which is used when the enemy is charging in close order, with saber or lance, and which involves the turning of the trooper in front of the enemy so as to ride with him in the same direction, is that in the mounted attack the trooper should not be encouraged to turn his back upon the enemy. But a training and explanation to the trooper that this is an offensive movement, that it is not running away but simply a method of inducing the enemy to close with him in a position where the trooper could have the enemy at his mercy, would obviate all objection on the ground of moral effect.

That the trooper should always go forward and "*never turn his back upon the enemy*" is a trite saying to bolster up the trooper's courage when using the *arme blanche*. We have been given a weapon of great usefulness, and to allow an old saying,

made for another arm, to prevent our putting the automatic pistol to its greatest usefulness and developing a tactics to enable us to use it to efficiency and to its greatest possibility, would indeed be foolish.

There are those, who, holding fast to old traditions, may say that a cavalry, trained to use dismounted action with great efficiency cannot be trained to the more dashing and more bold and reckless mounted work sometimes demanded of it. This was utterly disproved in our Civil War. To be sure, a cavalry resorting to too much dismounted action may lose the spirit of dash and the inclination for mounted work. It may become too cold and calculating. This should be carefully guarded against.

Now, the pistol attack as described here is the most inspiring, most dashing form of cavalry mounted action. It, in addition, gives the trooper, a method by which he may attack his enemy with greatest effect and without leaving him ignorant or speculative as to what happens when he reaches his enemy. It enables him to use his pistol with little chance of endangering his comrades, or himself becoming a victim to their fire. And this latter thing will refute another old and unproved assertion, that in the mounted combat the pistol is as dangerous to friend as to foe.

The pistol attack will therefore have the effect of imbuing our cavalry with the spirit of mounted action, a result that, in view of the events of the latest wars, may possibly not be attained by training with the saber or lance.

It remains to devise and insert in a chapter for our drill book a system of combat with the automatic pistol so that its possibilities may be fairly realized.

THE PISTOL COMBAT.

The first essential in the training of troops for the pistol combat is equitation and horse training. The second essential is target practice and a skillful and safe manipulation of the arm.

The third essential is a system of tactical training to enable our troops to bring into action every pistol that it is possible to use in any given case without interference with each other and without confusion amongst the troopers, and with the deadliest effect upon the enemy and the least loss to ourselves.

The Platoon in the Pistol Attack:

The form of the pistol attack depends upon the kind of enemy to be attacked.

There are *two forms* of the Pistol Attack broadly speaking.

The *first* is that where the enemy consists of *cavalry in close order* and attempting to charge, and where the troopers in the pistol attack charge down upon the enemy, those immediately in front of him turning about and riding in the same direction as the enemy, allowing him to approach within ten yards before shooting; those overlapping the flanks riding so as to envelope the enemy's flanks.

The *second form*, which is the one that will be of more general and frequent application, is that in which the troopers ride home and do not turn about in front of the enemy. This finds application against cavalry deployed as *foragers*, against *infantry* or *any dismounted enemy*, *artillery*, *convoys*, *irregular cavalry*, etc. In these cases the troopers ride so as to use their pistols at close range. They may, in many cases, ride through, pull up, and turning about, ride through again. In attacking artillery, or convoys, or similar objectives, the troopers not detailed to attack the escorts pull up around the carriages, wagons and teams. In some emergencies, such as striking a wire fence, marshy ground, a group of houses occupied by the enemy, etc., they may leap from their horses and use their rifles, thus changing the character of the fighting according to circumstances.

Each of these two general forms of the Pistol Attack is initiated by the same general commands and means. The rest is left to the judgment and initiative of the leaders.

To attack *modern cavalry* armed with saber or lance and attempting to charge in *close order* the platoon advances in close order as long as conditions permit, and then deploy as

foragers with three yards interval, and dashes toward the enemy. When at about sixty yards from the enemy the chief gives the signal for turning to the rear. Each trooper closes his legs and pulls his horse up on his haunches and turns to the left about. The enemy naturally will now be coming on at full speed, and as the troopers of the platoon turn and are getting under way to the rear the speed of the enemy will bring him almost upon the heels of the platoon. This is what is desired. The troopers will be able to gain enough speed to avoid being run over, and, at distances of ten yards and preferably less, will commence firing to the rear. The men must be trained to be bold and allow the enemy to come so close that the troopers can hardly miss. The enemy is now at the mercy of the platoon. (First form.)

Contrary to the above method, when attacking a line of pistol men or infantry, or when pursuing fugitives, the troopers charge home, commencing fire at ten yards and attempting to ride up alongside of their opponents if the latter are mounted, or over them if dismounted. (Second form.)

The platoon commander must train his men carefully in practicing these attacks on different kinds of imaginary, outlined or a represented enemy. He practices his men in riding as full speed, pulling up the horse so that he halts on his haunches with his head still turned toward the enemy, and turning speedily about on the haunches and starting to the rear at the gallop.

In executing that form of attack in which this turn is necessary the men must be taught not to turn about on a wide circle of several yards but to pull up as indicated above and turn to the left about on the haunches. The horses soon learn to do this with great rapidity. Practice will make it easy to turn in this manner even those horses that are pullers. The trooper sits with his body well back and closes his legs well back and vigorously. At the same moment he pulls on the reins allowing his weight to pull without any jerking on the horse's mouth. A little daily practice at this will soon make a horse check up at the signal of leaning well back. This leaning back must be done as in the half-halt. If the horse does not immediately respond the trooper does not continue to lean

back and pull on the reins, but immediately straightens up releasing pressure on the horse's mouth, and again attempts the half-halt by the same means. This resembles the stop and turn of a cow pony or a well trained polo pony. The about on a circle at high speed is bad because it is apt to put the horse out of hand, and cause collision with comrades, take the trooper away from his place or out of the action.

In the pistol attack, as may be readily seen, the stop and turn on the haunches is useful in various ways besides that of attacking a close order line of saber men. It is the only way to turn about in a combat amongst charging horsemen.

The platoon, whatever its numbers or its formation, must always be divided into squads of eight men each. These squads should be as permanent as possible, and in the field should be used for administrative as well as tactical purposes. More than eight men is too many in one squad.

To execute the pistol attack the chief signals or commands:

- (1) *Platoon to the Pistol Attack,*
- (2) *March.*

The platoon immediately deploys as foragers on the center corporal with three yards interval. The chief places himself in front of the center corporal and conducts his platoon. He now proceeds to the attack according to the nature of his enemy. When deploying from column of squads the leading squad must be careful to oblige to the right to its position at a gait not too fast to allow the other squads to gain their position on the line at a twelve mile gallop. The gait may be increased when all are on the line. In deploying from line or from column the squad leaders must lead their squads until the deployment is completed, when they take their places in the line unless otherwise ordered. To do this the squad leaders command:

(Such) Squad, follow me;
and when clear of the column;
As Foragers.
March.

If they now must take their places in the line they command:
Guide on the Center Corporal.

They then drop back in to the line near the center of the squads. It will usually be found best to have squad leaders lead their platoons throughout the action.

If he desires his attack to take the form of turning in front of the enemy (1st form) the leader rides at his objective to the proper distance from the hostile line (about sixty yards, depending upon the speed of the two hostile lines and determined by practice), when he gives the signal "*Troopers, About,*" and also shouts the command. At the same time that he checks his horse upon his haunches he gives the command of execution. His horse's check is an additional signal for the execution of the command. Here again it is necessary to emphasize on the importance of making the horse check or half-stop on the haunches with his head still turned toward the enemy until the stop is almost complete, when the whirl or pirouette to the left about is executed. It is necessary to keep the legs well closed both at the commencement and at the end of the movement so as to force the horse rapidly into the bit and into his stride in the reverse direction. When once turned and the horses have gotten into their stride the troopers allow the enemy to close to dead sure distance (ten yards or less) and commence firing to the right rear and rear. Firing at the heads of the enemy's horses may bring them down and cause rear rank files to fall over them, and great confusion in his ranks may ensue.

The trooper must be careful to ride straight in front of that portion of the enemy's line before which he has turned his horse about. He continues to fire with such deliberation as is necessary to make every shot count.

The enemy's line should, under such fire, be gradually broken up and dispersed. He will naturally press his horse to full speed to endeavor to overtake the firing line and use his sabers or lances. But he will be helpless. The longer he stays in close order the better the target he affords. If the enemy breaks up or deploys, the troopers of the firing line will no longer feel any danger of being overridden, and still attempting to keep their opponents slightly in rear of them will allow them to come still closer, and pick them off at their leisure. Thus the enemy is in a bad way in any case. If he has gotten enough and

puts up to run away the troopers turn about again and pursue. In this case each squad leader should assume personal control of his squad.

If ammunition is exhausted before the proper effect is made on the enemy the chief attempts to rally his men as best he can either on the flanks or straight to the rear. But as the trooper has at least three clips of ammunition and should be able to load while galloping at full speed, there is little probability of this contingency. The first clip will probably be enough. If the attack fails there is nothing to be said. Squad leaders on the flanks might draw their squads off and rally. By retreating on radiating lines the enemy may be drawn into a dispersion which may allow isolated groups to be attacked or at least may cause him confusion and place the hostile troopers out of control of their commander.

In the pistol attack on *hostile formations other than cavalry in close order* (second form) the chief of the platoon does as his judgment and fighting spirit dictates, bearing in mind the cardinal principles of getting close to the enemy before firing.

If, when a platoon is already deployed, the chief wishes his squad leaders to lead their squads, which may be very advantageous in the pistol attack, he commands or signals: *Squad Leaders to the Front, March.* The squad leaders immediately command:

(1) *(Such) Squad follow me.*

They then place themselves in front to lead, regulating on the directing (base) squad which follows the chief and is indicated by the chief who places himself in front of the selected squad. This is especially applicable in broken or wooded country but may be used at any time.

The platoon may be deployed in the pistol attack by first forming *Line of Squads*, and then at the desired moment commanding:

(1) *Platoon to the Pistol Attack.*

(2) *March.*

Or, the platoon may already be deployed as foragers and the pistol attack ordered when desired, the men closing to three yards intervals if not already at such intervals.

If the platoon leader desires to launch a *squad* into the pistol attack he indicates the objective and commands:

(1) *(Such) Squad to the Pistol Attack.*

(2) *March.*

The squad leader of the designated squad commands:

(1) *(Such) Squad to the Pistol Attack.*

(2) *Follow me.*

The men deploy on the nearest man to the leader or the leader may designate the base trooper as he moves out to the front.

In charging out of an ambush or other critical position, especially where many obstacles exist or a roadway is the only possible exit, it may be necessary to charge in column of squads or half-squads, fours or twos. In such case the troopers on the right of the column fire to the right and those on the left fire to the left.

The unit being in column the commander orders: *Forward, Charge.* The men draw pistol and the column gallops forward. This command cannot be mistaken for the Pistol Attack which involves a deployment. In order that all pistols may be used it would, obviously, be better to charge in column of twos than in column of fours. But this method is only an expedient for units no larger than a platoon and where there is not time to deploy into the Pistol Attack. If at the moment the emergency arrives the unit is in column of fours there will not be time to form column of twos. If there were time it would be better to send each squad forward into the pistol attack, followed, at about seventy-five or one hundred yards by the next squad. If there is room to deploy the whole platoon on one line it should be done. This form of attack is therefore only an expedient to dash out of a critical position where time and space do not allow deployment.

A platoon caught in a narrow space will usually have time to execute the Pistol Attack by successive squads and this will be far more effective than charging in column.

A *squad* acting alone, and not having space to deploy, must, however, use this form of attack. It should be practiced

and the men taught to realize the difference between it and the ordinary Pistol Attack.

GENERAL PRINCIPLES.

The following general principles are to be carefully studied and observed.

1. The pistol is a weapon of short range; and while, with a steady rest some accuracy is attained at a range of several hundred yards, it is intended for use in hand to hand fighting or at a distance rarely exceeding ten yards. Troopers should therefore be trained to withhold their fire until the enemy is at or within that range. To fire and miss disconcerts the trooper and heartens his adversary. To withhold his fire until he is almost certain of hitting and then successfully hitting the enemy, gives the trooper a confidence in himself and his arm that renders him invincible.

2. Shooting against an enemy to the rear or right rear is very easy, and a trooper who, in the face of a charging enemy, armed with saber or lance, turns his horse to the left about and gallops in front of his enemy, allowing the latter to approach to within ten yards or dead sure distance, is not running away and loses no morale thereby. If he once brings down an enemy in the above manner he will gain such confidence that he will never retreat from a combat except to entice his enemy into "dead sure" range of his pistol.

On the other hand, to teach and require him to continue to advance against an enemy charging in close order, after commencing to fire with his pistol, and, as a consequence to come into violent contact with his enemy even though the latter be already hit by bullets from his pistol, is to insure his loss of confidence and to make it impossible to ever charge freely home again without a check or voluntary, or involuntary, pulling up to avoid the shock. Thus he is refusing to follow his training or obey his orders, and loss of spirit, of discipline and of morale will follow.

3. If it is necessary to shoot straight to the rear the trooper should be careful not to carry his bridle hand to the right and thus deflect his horse. In some cases he may shoot

to the rear by turning his left shoulder to the rear and shoot thus to the rear from the left side of his horse instead of from the right. It has been proved on the target range that shooting to the left is as easy as shooting to the right. Shooting to the left rear is not difficult and may be necessary. But, when riding in front of, and, in the same direction as his opponent the trooper should endeavor to keep the opponent on his right rear and at dead sure range.

4. In attacks on cavalry in close order those troopers who, by the extension of the flanks of the deployed unit to which they belong, find themselves out beyond the enemy's flanks and not directly threatened by opponents in their front should continue forward to attempt to place themselves on the enemy's flanks and rear. Then, by turning, so as to ride with the enemy, they shoot to the right or left, depending whether they are on his left or right flank, being careful to avoid interference with each other and to close to dead sure range from the enemy. In case there are more troopers on the enemy's flanks than are able to shoot without interference, those in excess of the convenient number for flank firing should ride to the enemy's rear.

5. Pistol attacks are always made in extended order as foragers when it is possible to deploy. In case the attack with pistols is attempted, but from lack of time or space the unit is unable to deploy into extended order, then only the first rank should fire, and succeeding ranks should withhold fire until a more favorable position is attained.

6. The attacking line with pistols should be ordinarily deployed as foragers with intervals of three yards.

7. Only that unit for which there is space to deploy, or which is sufficient and not superfluous in numbers to properly cover the enemy by a swarm of foragers, should be launched against him. Too large a force will not have sufficient room to get all into action without interference and undue confusion.

For example:

- (a) When a whole troop on an open plain encounters a hostile platoon no more than one platoon should be launched into the pistol attack in the first line.

(b) When in column on a fenced road and the enemy is encountered in column on the same road, there may be only room for the first squad or other leading unit to execute the pistol attack. The same applies to any restricted space.

In such cases successive lines should be employed. If the attack is against cavalry riding in column in close order the first line executes the pistol attack and succeeding lines may be deployed and turned about so as to allow the first line to check the enemy and, after exhausting ammunition, to return through the intervals and be replaced by the succeeding lines. Or, the units in rear of the first may break through the fences and attack the enemy's columns in flank. This could be done especially where the first line of attack is the advance guard, thus giving the main body more time for such a maneuver. If the restricted space is a defile, the rear units may retire until the ground opens out and more room for deployment and flank attack is obtained.

In a sudden and unexpected attack against a short infantry column under such conditions, the succeeding lines may ride entirely through the column.

It may also be possible for the leading unit to execute the pistol attack and units in rear to dismount and crawl through the fences or seize a favorable position to fire on the enemy's column in flank.

8. When the enemy is believed to be near or likely to be suddenly encountered pistols should be carried loaded and locked. There is little danger in this for short periods. Extra magazines, at least two for each trooper, should be loaded and carried where they may be readily obtained for reloading pistols.

9. When reloading troopers should be trained to carefully save the empty magazines by dropping them into the pocket of the blouse or shirt. But as many may be lost in a combat plenty of extra magazines should be taken into the field.

10. In pursuit of a retreating enemy any formation convenient for gaits necessary to overtake him may be used. But, if successful in overtaking him the units should be deployed according to the prescribed principles. In such case the trooper

should withhold fire until the enemy is overtaken. If unable to overtake him longer ranges may be used by direction of the leader or the unit halted and rifle fire resorted to.

11. In retreating from an enemy in pursuit the object is to get away, and the unit should be covered by only a force sufficient in size to deploy without loss of time. This force may be permitted to fire pistols to the rear at ranges up to 150 yards. To fire at any distance greater than the above is wasting ammunition, and, if necessary, the rifle should be used.

Retreating as considered in this paragraph is not to be confused with the turning of the horse and riding at dead sure distance in front of the enemy as described for attacking cavalry in close order. The latter is an offensive movement consistent with attack. The former is a defensive movement consistent only with retreat.

12. In the pistol attacks the units must be led by their chiefs as is done in other forms of attack. When the enemy is reached the troopers move up abreast of the chief.

13. The platoon is the fighting unit and the troopers must be trained to give their attention, even when firing, to the chief and to obey his signals and orders. The chiefs of platoon are given great latitude and their initiative encouraged and developed. Once the attack is launched it becomes a matter of platoons.

14. The pistol attack finds particular application as follows:

(a) Patrols, for attack and defense. (First or Second Forms.)

(b) To draw the enemy under fire of other troops or into position offering other troops advantageous opportunities to attack in flank or rear. In such cases the troopers should turn at signal of chief at sufficient distance to allow other troops to attack. (First Form.)

(c) To attack close order formations of hostile cavalry depending on the saber or lance, and to break up their order and throw them into confusion when they may be attacked by

other lines of pistol men or by any other form of attack. (First Form.)

- (d) To pursue fleeing troops of any arm. (Second Form.)
- (e) To attack infantry under any conditions which allow cavalry to reach it. (Second Form.)
- (f) To attack artillery. (Second Form.)
- (g) To attack or repel an attack on a convoy. (First or Second Forms.)
- (h) To attack irregular troops. (Second Form.)
- (i) To attack led horses. (Second Form.)
- (j) To delay an enemy's attack on your flank or rear. (First or Second Forms.)
- (k) To charge through and escape an ambush. (Second Form.)
- (l) To retreat from a very superior force. (Second Form.)
- (m) To attack in brush or wooded country or villages. (First or Second Forms.)

15. An essential of the pistol attack is surprise or confusion in the enemy's mind as to your intentions. It must therefore be made at the swiftest speed compatible with control of the horse. If the enemy by his movements shows his intention to attack mounted he must be induced to commit himself to the charge and believe that you intend the same. The turning about in his front must come as a surprise. You must therefore approach in close order as long as conditions permit. If he turns and flees the troopers continue after him in pursuit as long as is judged wise by the chief.

In sudden encounters when the enemy is close the deployment must be made at once and no advance attempted in close order. The same applies if you are brought under artillery or rifle fire.

THE SQUADRON (TROOP) IN THE PISTOL ATTACK.

The squadron executes the pistol attack either alone or in combination with other troops. When alone a reserve must be held in close order and combat patrols furnished.

When the enemy is seen and the pistol attack is decided upon the Captain commands:

- (1) *Squadron (or Troop) to the Pistol Attack.*
- (2) *(If acting alone) such Platoon or Platoons in Reserve.*
- (3) *March.*

The Captain indicates to the base or directing platoon its objective.

The base platoon moves to the front toward the enemy's center at the trot.

The other platoons gain the proper intervals for deploying fan shape at the gallop. The formation now becomes a line of platoons and when all are on the line the base platoon deploys as foragers at three yards interval and all take the gallop. It is important that the platoons be all on the line of the base platoon and not in echelon. A rough line is, of course, all that is necessary.

The speed is increased and the attack made as prescribed for the platoon, each chief of platoon leading and determining his direction so as to work together and to cover the enemy's front with a swarm of foragers, guiding on the base platoon.

The enemy's flanks are overlapped as indicated for the platoon, (General Principles No. 4). In case a platoon finds itself out beyond the flank of the enemy, due to lack of room on his front, the leader attacks the enemy's flank or rear and exerts all his faculties in getting into action and putting his men to useful employment. The greatest initiative and independence is here expected.

Platoon leaders on the flanks should not hesitate to direct their attacks upon a force of the enemy executing by surprise a flank attack on our line, provided this new enemy is not so far away that he may be attended to by our reserves. But it must be borne in mind that a position of the platoon *in front* of the enemy is the most important place for it to fill, and the platoon should not therefore be borne away from this objective if it can avoid it. Once our attacking line is in position to fire its pistols in front of the enemy it cannot be endangered by a flank attack of the enemy since the position is so close that such

an attack by them would harm their own troops more than it would ours.

If, in the first form of attack, the enemy's advance continues until the cartridges in the pistols of our attacking line are all expended, the chiefs attempt to lead their platoons away on radiating lines so as to allow the reserves to deploy and to attack the enemy. Pistols are reloaded as soon as possible, the platoons rallied and then conducted as the captain may signal or direct; or, in the absence of his instructions, to re-attack the enemy. Here again, the initiative, resource, and fighting spirit of the platoon chief is expected.

The reserve may be handled according to circumstances, to form another attacking line, allowing the first line or lines to rally and reload, to repel flank attacks or to make them, to draw saber and charge in close order against the lines of the men broken by the pistol attack, or to use dismounted fire, as the conditions may indicate.

It must not be used to attempt a reinforcement of the attacking line or lines unless these units are so thinned out by losses as to make too much crowding or collision improbable, or unless the attacking units are withdrawing to reload.

When the attacking line is sent forward it must contain all the units that can be successfully used against the objective. If the enemy's lines are extended, units of the reserve may be sent to reinforce the attacking lines, but the group reinforcement must be always used unless the losses in the attacking line make imperative and practicable a reinforcement by mixing.

A platoon may find itself in rear of or on the flanks of the first line of the enemy. The chief may then make use of any kind of combat training. If an obstacle, hill, clump of trees, deep ditch, barbed wire fence, offers advantages he may dismount and link in couples to use rifle fire on the enemy's second line, his flanking groups, his reserves.

By breaking into the fields a platoon or indeed a larger force may be able to execute a pistol attack upon an enemy's column caught in a road between barbed wire fences. The advantages of the pistol attack are here apparent. The enemy may also be induced to charge with an undiscovered barbed wire

fence between him and us. In such cases the pistol men let him hit the fence and then ride to it and open fire.

If the Pistol Attack is used to attack infantry or deployed cavalry (Second Form), several lines are very advantageous. Depth may be here a necessity. Distance between lines depends upon the size of the force, strength and formation of the enemy, and terrain.

If, in the second form of attack, the attacking force, less the reserve, is disposed in *one line* this line charges through the enemy's lines or columns. Then, at signal or command of the platoon leader, "*Troopers, About*" the troopers pull up to the half-halt and turn about on the haunches and charge back. Thus each platoon charges through the enemy's ranks, forward and back, until a decision is obtained.

If the attacking force is disposed in *several lines* attacking over the same ground, then all the lines charge through the enemy forward before any of them charge back. It is necessary in this case for each line to rally after charging through in order to avoid confusion with succeeding lines. After rallying the lines are rapidly disposed so as to deploy and charge back without loss of time. A line which has charged through forward should not attempt to charge back while a succeeding line is charging forward. As the leader of any unit sent to the pistol attack may not know whether a succeeding line is charging the enemy over the same ground or not, he must, after pulling up or rallying, be careful to observe whether or not a succeeding line is following him before he charges back. As this may be difficult, especially in thick wooded country, the commander of the whole should determine the matter before the attack is initiated.

When the Captain wishes to *attack in several lines* he commands:

- (1) *To attack in (so many) lines.*
- (2) *(Such) platoon (or platoons) to the Pistol Attack.*
- (3) *March.*

The objective is now indicated, if necessary, and the commander sends out other units at the time and distance he judges

the situation demands, bearing in mind the necessity of having a succeeding line attack the enemy before he has recovered from the attack of a preceding line.

Different platoons may be sent to the Pistol Attack on different objectives.

When a platoon is acting alone the squads are handled in the same manner as platoons are handled in the troop acting alone.

Larger forces than the troop conform to the same principles, substituting the words *Troop*, or *Squadron*, for the word *Platoon*, in the commands.

Troops must be practiced in making the Pistol Attack under all the contingencies referred to herein or that the instructor may conceive. A command in which squad and platoon leaders have been taught to lead and control their units under all conditions, may be relied upon to bring order out of confusion no matter how unforeseen the circumstances. With the initiative of its unit leaders well developed such a command may be apparently in great confusion and disorder and in reality, may be capable of logical, combined and formidable action.



FIELD TRAINING FOR CAVALRY.

BY LIEUTENANT COLONEL DEROSEY C. CABELL, TENTH CAVALRY.

THE recent official Bulletins from the office of the Chief of Staff containing parts of the proposed Manual of Training for officers serving with troops indicates that the course will consist of *garrison* and of *field training*, somewhat as is now the case under the provisions of General Order No. 17, 1913.

The years of work and experience we have in the past devoted to garrison training have evolved a good system. We have the Garrison School, with its methods and textbooks, worked out and in good running shape. This work is supplemented by that at the Army School of the Line and at the War College. We have regular hours for drill and will doubtless soon have a satisfactory drill book. So that the theoretical part and the drill part of our education are both well provided for.

For an accomplished officer a knowledge of these matters is essential; but it is not enough to make him a practical soldier.

For the enlisted man we also have schools and drill; and yet he is, like the officer, far from being made a practical soldier or efficient instructor for the new men we must train for war.

The proposed Manual of Training, under the heading, "Tactical Handling of Troops," refers to the Drill Regulations and the Field Service Regulations as the written guides for this training.

It is a mistake to say that in *field training* it is possible to give general principles only, and that it is not practicable nor desirable to go into details nor to give exact directions nor explicit examples. In drill, as we know, this principle does not apply.

In *range firing*, a part of *field training*, this would not be sufficient. Our Small Arms Firing Regulations gives many illustrative examples of Combat Firing. It is understood that the School of Musketry is at present working out problems to be used in *Combat Firing* and in the *Proficiency Test*; and that these are to be sent out to the troops not only as tests but as examples or problems to guide them in developing the training of the troops. If this can be done in *Range Practice*, there seems no good reason why it cannot be done in other parts of *Field Training*.

If it is to be done for the other parts of *Field Training* it should be done as carefully and with as much intelligence as it has been and as it is proposed to do for *Range Practice*. This will require the best work of one or more selected officers of experience, in other words, the work of a selected Board. This Board might meet at the same time and place as the Board for the revision of the Drill Regulation, which, it is hoped will soon be ordered. The work of the suggested Board should result in a Manual of Field Training. The need for such a Manual is a real one.

In twenty-five years actual service with cavalry troops I never have, up to the present year, seen any real attempt made at progressive systematic field training. For many years the months of each year favorable for outdoor work were devoted to drill, and mostly to close order drill. Long ago it was seen that this was wrong; and orders were issued prohibiting more than a certain amount of close order drill. This was the first step in the right direction, but it was a step in the dark. We were told what not to do; we were not told what to do, still less how to do it. In the course of time G. O. 17 came out telling us in general terms what to do. It then remains to learn how to do it.

Our success in garrison training has come by reason of its details having been worked out by thought and experience and this knowledge embodied in Manuals and Regulations followed by orders telling us the days and hours to be devoted to different parts of garrison training and laying down methods to follow. No Manuals of Field Training exist. Brigade

commanders are each year to prepare a course for instruction in field training for the regiments of their brigades.

General James Parker has done this for his brigade and as far as I know is the only officer who has gone into any of the real details of the matter for Cavalry. His course, embodied in several orders and circulars, is a long step in the right direction.

In previous issues of the JOURNAL several of these orders have been published, and cavalry officers who believe in the proper field training of our arm will find them a prolific source of good ideas. One feature that General Parker has introduced into his training is competition and he has at his inspections regularly held competitions between the troops of each regiment. The cavalry owes much to him for this work. As his troops were scattered into small groups, and as he had necessarily to begin at the beginning, I do not think his system has yet reached the desired perfection. His many exercises to teach scouting, attack and defense, etc., are all good; but the fact that troops were to compete in these exercises known beforehand might lead to their preparing themselves somewhat automatically in certain exercises only.

If we had a manual showing the best methods of training scouts, of attack and defense, of managing advance and rear guards, etc., in short the best methods of training in each of the different things we need to know how to do in field training, such a manual would be the same aid to *Field Training* that a good drill book is to drill. It should contain, besides the methods of doing each of the above things, exercises based upon these methods and perhaps in some cases indicated acceptable solutions. These exercises would be a help to even the best officers; to those officers who lack initiative and ability to originate ideas and methods, they would be a Godsend.

In field training, more than in any other preparation for war, the initiative of commanders of all units should be encouraged; but initiative without knowledge or intelligent direction is of little value.

A manual showing good methods of training would not hamper initiative; it would aid an officer by suggesting many things that might not have occurred to him.

Once we get such a manual, the next thing is to utilize the *Field Training* period to the best advantage. For this purpose we need a well thought out systematic, progressive course.

As in drill, this course should begin with the instruction of the smaller units and progress on up to the largest units we can get together, the instruction of each unit being as complete as possible before proceeding to the next one. The instruction of the troop should be finished before taking up that of the squadron, etc.

To attain the best results the course should be general in its nature, should allow the unit commander latitude in its application, should permit of helpful supervision by the next higher commander, and finally should provide for testing from time to time the results of the work done. At times, at least, these tests should be competitive.

About two months of the field training season will be devoted to *Range Practice*. This leaves four or five months for all the other training. Owing to changes of station, maneuvers, inclement weather, etc., considerable more of the time will be taken up, leaving perhaps but three or at most four months. To utilize this time to the best advantage, it should be divided into periods, each for the instruction of a unit in a particular subject or subjects.

An appreciation of the above ideas governed the work in *Field Training* here during the past year. Owing to favorable weather we were able to finish a thorough course in drill by March 31st, at the same time not neglecting plenty of theoretical work. The *Range Practice* season had been designated as May and June. Therefore April and July were given over to the troop, August to the squadron, and September to the regiment.

The troop program for this training was as follows:

APRIL.

(a)

1. Scouts, at least five men per troop.
2. Map making, road sketching.
3. Packing, at least eight men per troop.
4. Advance and rear guards.

5. Outposts.
6. Camping, including use of individual mess kit.
7. Pursuit and retreat.
8. Signalling.

(b) The training will be by troop under supervision of squadron commanders.

(c) At the end of the month a competitive test in these subjects will be given the troops.

JULY.

The program for this month included all the remainder of the subjects of field training mentioned in G. O. 17, such as convoys, attacks mounted, dismounted, and both mounted and dismounted, night attacks, field fortifications, etc.

The tests for the subjects of training for the month of April were as follows:

EXERCISE NO. 1.

Outposts, Scouting and Sketching:

Your troop, two platoons, bivouac at The enemy with an equal or superior force, is known to be going into bivouac at (about two miles apart.) There are no forces covering your troop. One platoon of your troop is detailed to outpost the line through.....

2. Using not to exceed four scouts and two sketchers, you will reconnoiter the enemy's bivouac and outposts, returning within one hour with report and sketch of the numbers and location of the enemy's troops in bivouac and outpost.

(A similar exercise was given to the opposing troop.)

EXERCISE NO. 2.

Pursuit and Retreat—continuation of Exercise No. 1—The Pursuit. Situation:

A force of the enemy occupies..... A small enemy raiding party was severely defeated yesterday at It is reported in bivouac at..... Your troop is bivouaced at this place, having three pack mules for rations, and with out-

post in position. You receive order to attack and destroy the raiding party.

Note.—

1. The load for your pack mules will be furnished by the Chief Packer. (One of the packs consisted of a large box and keg, difficult to pack.)

2. This exercise to illustrate: (a) A pursuit. (b) Packing. (c) Outposts. (d) Advance Guard. (e) Use of Scouts.

A similar exercise, involving a retreat was given the opposing troop; the pursuit and retreat was conducted over a distance of some six miles.

EXERCISE NO. 3.

Camping:

1. Troop equipped for field service, three pack mules carrying field mess outfit with rations sufficient for one meal, including bread, hard or soft, meat, uncooked and two vegetables, coffee and sugar.

2. Troop lined up near its camp site. At signal the troop will go into camp, pitch shelter tents, care for horses, establish camp guard, cook its meal, individual cooking.

3. Time will be taken from signal to make camp to serving of the meal. The methods and results of tent pitching, care of horses, cooking, guard and arrangement as adapted to the ground will be inspected.

4. After a reasonable time Boots and Saddles will be sounded, time taken till the troop is mounted ready to move. Conditions of saddling, packing, etc., inspected.

In all the above exercises troops were carefully marked and their relative standing published.

Similar programs for the squadron and for the regiment have been made and will be carried out with proper tests at the end of each month if the troops are still in the post.

Had there been a well written Manual of Field Training the task of preparing the problems for the daily work as well as for the monthly tests would have been greatly facilitated and would perhaps have been better done.

TRANSPORTATION FOR A CAVALRY REGIMENT.

BY COLONEL W. C. BROWN, TENTH CAVALRY.

IN attempting to make a practical application of the organization tables and recent War Department Orders in loading the baggage of a cavalry regiment on its baggage section, we have encountered difficulties here which seem so certainly to spell *failure* in active operations that we have looked for a substitute which it is believed has practically all the advantages of the scheme set forth in the Tables of Organization while giving to each troop a wagon of its own.

The Tables of Organization provide that the Regimental Field Train shall consist of five wagons in the baggage section and seventeen in the ration section. These tables have not been amended in this respect but General Orders No. 8, c. s., War Department, page 7, states that six wagons are required for the 16,974 pounds of baggage enumerated in that order. This same order gives the total number of wagons in the field train as twenty-two, thus reducing the number in the ration section to sixteen. This division leaves the sixteen wagons, the loads of which are constantly varying, at the disposal of the quartermaster when any wagons can be emptied by the shifting of loads and make them thus available to be returned to the base for supplies.

This arrangement appears in a measure to be the result of an effort to make the scheme adopted for an Infantry Regiment to fit a Regiment of Cavalry, ignoring the fact that in active operations while Infantry Regiments will likely remain intact the contrary usually will be the case with cavalry. At the present moment the Infantry Regiments on the Mexican border are generally kept intact, the cavalry being scattered in squadrons, troops, and even detachments. Its mobility and nature of its duties are in our country opposed to concen-

tration. This is our experience in the past fifty years, and doubtless it will be the same in the next half-century.

Let us first take the operation of the scheme in the rare occasions when the Cavalry Regiment forms a single command and the space on its six wagons is to be divided among fourteen troops. With every effort on the part of Troop Commanders to not to exceed the allotted proportion of six-fourteenths of a wagon load per troop, misunderstandings are sure to result, and the fractions of wagon capacity to be dealt with, whether the whole or any part of the regiment is being considered, are about as inconvenient as could be devised.

Now let us suppose that our Captains looking after their field equipment have arrived at that degree of perfection that none send to the baggage wagons more than six-fourteenths of a wagon load no scheme can be devised which will do away with the inconveniences resulting from carrying baggage over the long distances covering the front of a cavalry bivouac to be loaded. The same difficulties will be experienced when delivering loads at the end of the day's march.

All baggage must be suitably tagged or marked, which is no difficult task, but in spite of every care there is an inevitable mixing up of baggage, with the confusion and loss of temper incident thereto.

Troops "A" and "B" for instance can each get its six-fourteenths of a wagon load on wagon No. 1, but Troop "C" must put part of its baggage on No. 1 and part on No. 2, etc.

An allotment of transportation which it is thought will prove more satisfactory is to give each troop one wagon for baggage and a certain number of days rations; combat wagons to remain one wagon per squadron as at present. There will then remain eight wagons available for rations or grain or both or for general purposes. These could be attached, two to each squadron and two to the Headquarters Troop and Machine Gun Troop or left in one train under the direction of the Quartermaster.

If the regiment be assembled with a prospect of remaining in one place for some days and wagons are required to be sent back to the base for supplies, let all be taken for this purpose except the Combat Train, the wagons of the Headquarters

Troop and Machine Gun Troop and one for each squadron. These five with some help from the Combat Train will carry the baggage as now provided in case of an unexpected move. While normally we wish to give each troop its own wagon the fact is recognized that in active operations the allowance must frequently be reduced. In this case, the first *cut* should be to take wagons from the squadrons, say two from each and one of the two assigned to Headquarters and Machine Gun Troops. The regiment can still carry on its remaining seven wagons its baggage and have the space of one wagon load for rations. Two troops can, without much confusion, carry their belongings on one wagon, but when it comes to putting the baggage of fourteen troops on six wagons or the baggage of a lesser number of troops on the proportionate number of wagons it requires the use of too much arithmetic and calls for an evenness of temper not usually found in the American officer. The next *cut* made will probably be to allow but one wagon per squadron, but troops of a squadron are near neighbors, usually close friends and may be depended upon to get along without friction.

In the scheme set forth in the Tables of Organizations we adopt a scheme at the very outset which makes the regiment uncomfortable *all* the time, whereas by a different arrangement, we might make them comfortable *most* of the time.

A parallel to the Tables of Organization plan may be found in the scheme many years ago proposed by some of the brainier officers in the Army, and put into execution at a number of posts, which consisted in the establishment of post messes. There was no question but what troops were more economically and better fed in this way and that too with less trouble to their captains; but the advocates of the scheme had omitted from their calculations certain characteristics of the American soldier. This individual always had had a company mess, and would have no other, and so great was the dissatisfaction over what was really an economical, and in many respects an admirable arrangement, that after some years trial the project was abandoned practically everywhere except at the Recruit Depots.

Give each troop its own wagon, and that wagon and the mules which draw it are certain of the best care. When it

becomes necessary to cut down on transportation the necessity will doubtless be so apparent to all that it will be submitted to without much complaint and the *cut*, if made in the manner proposed above, will work the minimum of inconvenience to all concerned.

The following comparison of the two schemes is submitted:

Tables of Organization and G. O. No. 8, W. D., 1915:

	Total Wagons.
Combat Train, 1 wagon per squadron	3
Regimental Field Train { 6 wagons in baggage section	6
16 wagons in ration section	16
Total	25

Proposed Plan:—

Troops.	For Baggage and Rations. No. Wagons.	Combat Train. No. Wagons.	Rations and Grain. No. Wagons.
Hdqrs	1		2
M. G. Troop	1		
A	1		
B	1		
C	1	(1)	2
D	1		
E	1		
F	1		
G	1	(1)	2
H	1		
I	1		
K	1		
L	1	(1)	2
M	1		
	14	3	8

If the proposed plan does not meet with approval, the alternative plan is suggested of giving a wagon to every two troops at the outset, and as the baggage of each troop seems to have been established as six-fourteenths of a wagon load, two-fourteenths of the space on each wagon will be available for rations and grain and fifteen wagons would remain for the ration section.

I do not desire to be considered as recommending this but simply suggest it as a better arrangement than the scheme set forth in the Tables of Organization.



AUSTRALIAN SYSTEM OF UNIVERSAL TRAINING FOR DEFENSE.*

AUSTRALIA is a huge country. It has enormous wealth and illimitable resources; but, relatively, a tiny population. It is a country that is well worth having and defending. Up to the present it has been the good fortune of Australians that their territory has not been the objective of any foe; but it has always been realized that the time might come when it would be necessary to meet an oncoming enemy, and to do this many systems and schemes have from time to time been adopted, and used for longer or shorter periods according to the varying conditions.

Australia has not been uncommon in that there have been spasms of wonderful military enthusiasm among its civilian population, alternating with such slumps as made citizen defense, as it was known in the past, a thing of small utility. That has, we think, all been changed by the introduction of the system of Universal Training for Naval and Military Defense regarding which I have been honored with the invitation of your Commanding Officer to give you some general explanation.

Until quiet recent years it was part of the defense scheme in the States of Australia before federation, and of the National Government in the earlier days of federation, that Australia's isolation was her surest safeguard against aggression, and that the worst we should have to fear in times of war would be a raiding attack by some daring enemy, seeking either to establish a naval base in one of our many deep water, unprotected har-

*An address given by Captain J. W. Niesigh (Retired, Commonwealth Military Forces, Chief Intelligence Officer for the State of New South Wales at the Panama-Pacific International Exposition) at the Camp of Regular Troops, the Presidio, San Francisco, July 30, 1915; Major James G. Harbord, First Cavalry, Commanding.

bors, or seeking for coal at any of our coastal collieries, or intending to hold temporarily some section of country for strategical reasons.

Developments in the East, the sudden rise to conspicuous power of at least one nation, coupled with the ever increasing ability of navies to operate far from their home ports—as very emphatically demonstrated by the voyage of the Russian Baltic Fleet from Europe to Japanese waters, and, later by the world-tour of your own magnificent fleet of battleships under Admiral Sperry—such things as these taught us that times were changing and that with them we must change our policy.

We had hitherto relied upon the theory that Australia could only be attacked after the British Navy had been definitely worsted in distant waters, and with such reliance we provided merely small cadre units of artillery and engineers for the maintenance of forts and other coastal defenses, and our actual defense force was created by voluntary enrollment of citizens organized into units that were in some instances paid for militia service and in others received no remuneration at all.

Whenever there was a prospect of war the ranks of these citizen units filled rapidly, and under the influence of national excitement attendances at drill were remarkably regular; but, war being over, or the threatened emergency having disappeared the energy and enthusiasm for soldiering faded away. Consequently there were recurring periods during which we had an establishment which, speaking truthfully, was not maintained in fact. In other words it was not an uncommon thing for a considerable percentage of the defense force to exist in official returns only. Such conditions did not make for efficiency, nor provide that measure of national insurance which the wealth and pride of our country demanded.

After federation in 1901 the forces which had previously existed under independent commands in each of the states were brought under one general control, and an entire reorganization took place. For a time the results were eminently satisfactory, but after the excitement of the South African War and the Russo-Japanese War had abated, there was again

a falling off in attendances, and considerable difficulty was experienced in recruiting. This brought us up to a period about six years ago when public opinion developed rapidly in favor of compulsory service which, thereupon, formed the subject of political debate and presently became a part of government policy.

A scheme was drafted by Australian officers, notably Colonel James Gordon Legge who is now commanding the Australian troops at the Dardanelles, and was submitted to Lord Kitchener then Commander-in-Chief in India. Lord Kitchener made an extended tour of inspection in the Commonwealth, in a large portion of which I had the honor of taking part. He furnished the Commonwealth Government with a report and recommendations in February, 1910, and in 1911, necessary legislation having been passed, Australia initiated the system by which the youth of the country were brought under an obligation to train for service in the naval or military forces. I would here interpolate that such service is specifically for home defense. Under our Defense Acts no officer nor man may be ordered away on foreign service, and in the event of Australian troops being required for service outside Australia they must be raised entirely by voluntary enlistment. That restriction of activities to the Home-land is an important consideration in the scheme, and in the national policy which is now known as "Lord Kitchener's Scheme."

Now for the scheme itself. It requires that every boy when twelve years old shall commence a course of approved physical training in the schools; at fourteen years of age he has to register for service and then becomes a "Senior Cadet," and is taught elementary drill and the principles of discipline; at eighteen years he passes into the recruit stage of the "Citizen Forces" where he remains for twelve months learning the more advanced work of the soldier or sailor as the case may be; and at nineteen he becomes a full member of the Citizen Forces—the fighting force in case of need. He remains on the roll then until he is twenty-five years old after which he is required, in the twenty-sixth year, to attend only a muster parade, and afterwards passes into the reserves. That is how the force is constituted.

The training is so arranged for that it shall not interfere to any greater extent than is absolutely necessary with the private pursuit of a civil occupation. Generally speaking the attendance required for training is approximately only sixty-eight hours a year divided up into evening parades of one hour's duration, afternoon parades of about two hours and what are called whole-day parades of about four hours. This training is supplemented by voluntary parades and frequently by voluntary camps. With the citizen army, that is those over eighteen years of age, a portion of the training is continuous for ten days in camp as regards infantry and cavalry, or as we call it "light horse," and twenty-one days for scientific corps. It has been argued that this training is not sufficient to ensure efficiency but experience has, I may safely assert, proved the contrary; more especially as the first drafts entering the citizen army had the advantage of the example and steadying influence of the remaining personnel of the old militia regiments which, of course, had to be kept under organization until new the personnel had sufficiently developed to take its place.

Under this system it was estimated that a fighting force of between 80,000 and 90,000 troops would be established and maintained, supplemented, as the trainees reached maturity, by an ever increasing reserve of men who had been through the ranks and passed out of them at the age of twenty-six. This estimate of numbers proved to be exceptionally conservative and is, of course, always subject to the influence of increasing population and the consequent creation of additional training areas under conditions which I will presently explain.

The plan of organization is that each of the six states shall be under the control and direction of a district commandant who is responsible to the minister of defense and the Military Board at the Federal headquarters. Each state, in turn, is divided into brigade areas and the brigade areas into battalion areas, which again are divided into training areas. In each training area there is an area officer, generally a smart young lieutenant or captain but sometimes of higher rank. This officer is assisted by one or two non-commissioned officers of the permanent administrative and instructional staff. The battalion command is exercised in the ordinary way and, of

course, the brigade command, which is held by a permanently employed officer of the staff, follows in the usual course.

The relative commands are exercised upon lines laid down at headquarters and are strictly systematized throughout the Commonwealth, every training area being held responsible for the strict observance of the law and the regulations made under it.

The area officers are not permanently employed and receive a small rate of pay upon the understanding that they are following some civil occupation and that they shall only give to their military duties such personal attention as is required for the proper supervision of those under them, the bulk of the necessarily heavy office work falling upon the staff non-commissioned officers.

The command of battalions and companies is with officers who have either transferred from the previously existing militia or who have in the first stages been specially appointed; but it is intended that, subsequently, as the scheme develops, all commissions shall be filled by promotion from the ranks and entirely upon the qualification of merit.

Owing to the magnificent distances and scattered population in a very large portion of the island continent it has been found necessary to declare some areas exempt from training as, you will readily understand, it would be impossible to bring trainees together in such places in sufficient numbers to teach them efficiently, and the expense of maintaining staffs to travel in the out-back country would be out of proportion to the benefits derived. Furthermore some of the districts such as these I have in mind are so remote from centers of mobilization for military usefulness that residents therein could not be speedily used to advantage in the case of national emergency; but, if required, could quickly be brought into camps of training and drilled into a sufficient condition to form a second line of defense.

The great difficulty we had to contend with in the initial stages was to find the area officers and the staff non-commissioned officers who were to set the ball rolling. To meet this applications were invited from men then serving, or who had served in the permanent cadres or the militia forces, from ex-Imperial soldiers, and others who considered themselves suited

for the positions. Medical and educational tests were applied as a preliminary to weeding out the large number of applicants and those who came through successfully were then put into camp for six months and for that period were continuously and rigorously drilled and trained in every phase of their administrative and executive duties.

The result was eminently satisfactory, and the system has been followed from year to year as the citizens force has increased and the demand for instructors has grown proportionately.

The first school of instruction of this nature concluded in time for the training to be commenced on July 1, 1911. the enrollment of all youths between the ages of fourteen and eighteen having been commenced on January 1st of that year. Now it is necessary for every boy on reaching the age of fourteen to register on January 1st, and to commence his cadet training in the following July, at which period, of course, the boys passing the eighteenth year are drafted on to the recruits and so on.

It will interest you to know how the public took this innovation. There were, of course, opponents of the system. We had our "passive resisters" and we had some of those delightful citizens who call themselves "conscientious objectors" but we were able to meet each case as it arose and to respect the gentleman of conscience by telling him that his son could be made a very useful soldier in several spheres which would not require him to take part in the immediate horrors, to say nothing of the dangers, of war, in other words that we could make good use of him, far from the firing line, in ordnance stores or in a dozen different ways that it is unnecessary to detail in a camp such as yours. Numbers of boys failed to register but it did not take long to discover who they were because each boy who was properly performing his duties became a policeman for his district and refused to shield by his silence his playmate or neighbor who was shirking.

In this way the rolls were quickly completed, and by the imposition of fines, and the enforcement of those fines, parents soon began to realize that it was cheaper for them to see that their sons complied with the law than it was to defy constituted

authority. After the enrollment, again, there were many boys who treated the whole thing as a gorgeous joke; who thought the parade ground was a playground; and who regarded Area Officers and Staff Instructors as fair butts for their juvenile wit and practical jokes. But firmness, tact, and judicious punishments eliminated these undesirable features and indiscriminating prosecutions for non-attendance at drill had a very salutary effect, although, of course, the cleaning up process was by no means rapid. Non-attendance at drill involving inefficiency was followed by prosecution in the police courts, and the imposition of fines as well as the ordering of additional drill generally on the basis of two hours drill for every hour missed with increasing severity where the offense was repeated.

The police court process and the imposition of monetary penalties which fell upon parents often not able to afford the luxury of paying for their childrens' delinquency appealed to the authorities as something that could with advantage be altered, and instead of the publicity of police court proceedings separate courts were instituted, something in the nature of childrens' courts. Instead of fines penal battalions were established in permanent encampments and the drill shirkers were sent immediately upon conviction, to those places and were kept there under very strict control until they had performed the necessary periods of duty and the extras imposed by the magistrate. That, perhaps has had a more salutary effect than any other form of punishment.

Under the Act, necessarily, there are certain exemptions allowed; but they are not numerous. Physical incapacity, for instance, is taken into account, although with restrictions which require the individual to present himself for further medical examination at a stated time or whenever called upon. Also when a person liable for training resides more than five miles from a training place exemption is granted. In all cases of exemption the certificate is liable to revocation at the will of the authorities. It is right that I should explain that I have now been absent from Australia since September of last year, and cannot, therefore, speak with certainty of anything that may have happened since the outbreak of the European

War, but my private advices lead me to believe that Australia's participation in that war has given increased zest to the compulsory training movement, and this, following on the popularity which the scheme gathered as it developed, has made universal training a part of the national life.

Having referred to the punitive action taken in the case of recalcitrant trainees it is apropos that I should tell you that provision is made for the protection of the trainee against hostile employers or other persons who may be desirous of interfering with those enrolled. The Act provides for adequate redress in such cases and there has not been any hesitation on the part of the government in putting the law in motion wherever necessary. For the credit of the country, be it said, there have been few records in this regard.

Universal Training is something that goes into every home. The millionaire's son has no privileges that are not enjoyed by the son of the poorest member of the community. No distinction is made; no favor is shown. Thus, gradually, a condition has evolved by which a lad who has not performed his military obligations is regarded as somebody beyond the consideration and kindness of his fellows, be it in the cricket field or the class-room, and as a person who is not deserving of the favor and smiles of the girls at a picnic or evening party.

In this way the Army for Australian Home Defense is growing in numbers year by year, and in practical efficiency day by day; so that in a few years, if the Kitchener Scheme be adhered to, we shall have an efficient force of all arms and departments. Our Light Horse Regiments—Cavalry, you would call them—are still largely maintained on a voluntary basis, inasmuch as while you can order a man to perform military service it would be beyond reason to compel him to provide a horse. Therefore, the trainee has the option of volunteering for mounted service other than the Field Artillery where the horses are provided by the government.

It is estimated that in the event of mobilization for war the mounted regiments could be rapidly filled. Garrison and Field Artillery and Engineer Units are recruited from among those trainees whose civil occupations fit them particularly

for those branches and some very fine results are achieved in consequence.

I have referred almost exclusively to the military side of training but it must be understood that the same system of training applies also to the Naval Service. Certain stated quotas are detailed to the Navy in the same way as are those for the Army. The Naval trainees receive a proportion of their instruction on shore with occasional drills on board ship, and an annual period of several days sea training on a specially provided vessel. The personnel of the Australian Navy is, of course, a separate organization of permanently employed men, the citizen sailors being only required as a supplement of that Navy on ships which are serving in home waters. As some of you no doubt know the ships of the Australian Navy are now operating in foreign waters under Imperial command.

Apart from the value of the Universal Training System for defense purposes, a moment's thought will lead you to the conclusion that it must have with it enormous social advantages for the community at large. The discipline taught in the Defense Units must be reflected in the conduct of the growing lads and young men in their homes and in the streets of their home cities. The setting up which they acquire in the course of their drill as well as the physical training must have a marked influence on the sports grounds and playing fields of this very sports-loving country. And again, the improvement in the physique and morals of the young men of the country must be handed down with ever increasing marked effect upon the national character.

In this connection it is interesting to note that the initiation of physical training of the twelve-year-old boys in the schools led to a popular demand for similar training for girls. Female teachers took the matter up and requested that they might be taught the drill in order to teach their pupils, and the request was readily complied with so that now there are, perhaps, few schools in which the girls as well as the boys are not being given the advantage of physical culture. The race improvement which must be a part of the evolution of such conditions in a few years when the well trained lads marry girls

who have had this physical training cannot fail to produce a generation with exceptionally fine bodily and mental qualities.

In conclusion, I would like to again emphasize the fact that the measures of defense provided in the System of Universal Training are wholly and solely for defense and not for overseas offense. Our men who are now serving abroad are serving of their own free will; they are nothing to do with the national training system, although I do not doubt that many of the older lads who were seventeen or eighteen at the time of the initiation of that system have volunteered and taken their places in the fighting lines.

Also I should like, as a final word, to say that I trust this explanation I have been permitted to give you of a very interesting experiment in national defense is not intended to be in any way part of a controversy which has arisen in this country, particularly on the Pacific Coast, since I was honored with the invitation to come to your camp.

I have endeavored to tell you what Australia is doing, and, in telling you I have flattered myself that I had a sympathetic audience because of the strong bonds of fellowship which exist, and must always exist, between you people in America and we in glorious Australia.



CAVALRY EQUIPMENT—PAST AND PRESENT.

CAPTAIN EDWARD DAVIS, THIRTEENTH CAVALRY.

HUMAN nature seems to fortify the confidence of each successive generation by giving it a marked degree of self sufficiency. This innate feeling of superiority is wisely tempered by the trait of curiosity as to the deeds of the past. Where this curiosity leads a people to add the lessons of the past to their natural self-confidence, we find a nation characterized by thoroughness. Without that addition the product is merely a spirited superficiality.

The American Cavalry, as an institution, can claim no vastly extended experiences, as compared with European Cavalry, but it can claim a series of intensified activities, productive of valuable lessons, peculiarly applicable to our national necessities in so far as they can now be foreseen. Our predecessors in the mounted service were actuated by a desire to improve conditions and they made many experiments with a view to progress. The documents pertaining to their efforts regarding equipment include interesting letters, drawings and specifications. Some of the ideas thus proposed developed into service equipment; others, through lack of practicability, or because of insufficiency of current scientific attainments, or perhaps on account of commercial or other personal hostile influences were destined to remain undeveloped or to await a more favorable period. Ideas incapable of application at one time, became sufficient at a later date, perhaps through a new discovery as to metals, or by reason of the progress of mechanical appliances, such as tools, dies and machinery.

The history herewith presented, in the form of extracts from old papers and reproductions of old drawings, will interest those who value the experiences of their predecessors and will be pleasing to all who confess the pardonable curiosity of the antiquarian.

CAVALRY EQUIPMENT.

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THE GRIMSLEY EQUIPMENT.

Prior to 1840 the available record is silent as to the officially recognized type of equipment, but about that time the "Grimsley" product was authorized. Colonel S. W. Kearney is reliably mentioned as the originator of some of its best features, but it was improved upon and actually manufactured by Mr. Thornton Grimsley, of St. Louis, Mo. In those days, in fact until recently, it was customary to give to a saddle the name of its inventor or manufacturer. In 1847 a board of officers recommended formally the adoption of the Grimsley equipment. The members of the board were Brig. Gen. S. W. Kearney, Q. M. General Thomas Swords, Major P. St. George Cooke, 2d Dragoons, Bvt. Lieut. Col. C. A. May, 2d Dragoons, and Captain H. L. Turner, 1st Dragoons.

The Board of 1847 described the Grimsley saddle as follows:

"Combining strength, durability, peculiar fitness to the horses back and convenience for military fixtures, this pattern, more than any other yet furnished for Dragoon service, gives an erect posture and easy seat to the rider, at the same time that little or no injury is done to the horses' back on the longest marches. Some of the members of the board have had the fairest opportunity of testing the merits of this saddle, having used it on marches of more than 2,000 miles in extent * * * . In outward appearance this saddle resembles more the French Hussar saddle, than any other with which the board is familiar: * * * the forks of the high pommel and cantle are, in every case; and under all circumstances of reduced flesh, raised above the withers and back bone of the horse. * * * Quilted seat, sewed down, and leather skirts to protect the blanket (on which the trooper rides on service), and the pantaloons of the rider, from the sweat of the horse. Also small underskirts to protect the sides of the horse from girth buckles.

Stirrups: Brass, and of same pattern as those furnished the First Dragoons in 1834."

The bridle is thus mentioned: "Of the form and pattern submitted by Lieut. Col. May with an "S" bit, having a strengthening cross bar connecting the lower extremities of the

branches, etc." The halter was "the same pattern as that furnished the First Dragoons in 1839, and since.*

The Grimsley pattern persisted somewhat unmolested for ten or fifteen years, a period marked by long marches across the plains from the Missouri River to the Rocky Mountains and from our northern boundary to Old Mexico. It made friends and created opponents. An alteration in the pommel and cantle arches, making each less erect, brought forth the following comment in 1855: "Whilst the original model, by the uprightness of the cantle and pommel, confine the soldier to a fixed and more perfect position, the saddles recently re-

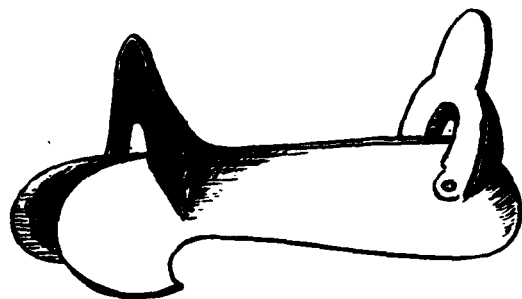


PLATE I. THE TREE OF THE GRIMSLEY SADDLE.

ceived, by the unnecessary sloping of the cantle and pommel, admit a freedom and play in the seat which not only fatigues the rider, but allows him to throw his whole weight at times upon the very slope of the cantle, etc."

Colonel Albert Sidney Johnston, Second Cavalry, in 1856 viewed unfavorably certain adverse criticism of the Grimsley saddle, stating: "I have to observe with regard to the remark in the report that 'with the Grimsley saddle a large proportion of the horses' backs were made sore,' the sore backs might rather have been produced by the ignorance of the soldiers of the proper method of adjustment, than from any fault of the saddle. The men had but little experience before the march in

*The specifications indicate almost no change in the design of this article until 1912. The blanket was of dark blue wool, the girth and surcingle of indigo blue, worsted webbing. A dark blue cloth valise was attached to the cantle, each end of the valise having "a brass plate, with beaded edge," and with the "letter of the company one inch long raised thereon."

riding, and the greater portion of the horses were not much accustomed to the saddle and were untrained."

Captain Earl Van Dorn, Second Cavalry, in 1857, wrote from Camp Colorado, Texas: "In every scout or march * * * in which the Grimsley saddle was used, I never failed to have sore backed horses (withers generally) in proportion to the distance I have marched over, or the kind of weather I had to encounter."

Colonel E. V. Sumner, First Cavalry, remarked in 1858: "I agree with Major Sedgwick in this report but I am convinced from long experience, and close observation, that the Grimsley saddle and bridle (old pattern) are the best and most durable, neatest and cheapest equipment that we can get for the Cavalry. With sufficient care, this saddle will rarely injure a horse's back, and, without care all saddles will injure them. I have used one of these saddles since 1844, and I consider it by far the best saddle I have ever had. The exceptions that are made to the McClellan equipments by those recommending them, are sufficient to condemn them."*

Captain Thomas J. Wood, First Cavalry, wrote from Lecompton, Kansas Ty., in 1856, as follows: "From an experience of a number of years, during which I used the Grimsley saddle, and had the fullest opportunity to observe its use by the enlisted men, I unhesitatingly state that it has not a single requisite that a cavalry saddle should possess. It is too low and narrow in the gullet—consequently it almost invariably wounds horses on the withers and loins. * * * The bars separate and spread out, and the consequence is, that much of the weight on the horse presses immediately on his spine. * * * So defective is the shape of this saddle that a few days hard work with it * * * almost invariably causes serious injury to the backs of three-fourths of the horses in a mounted company. * * * It is double as heavy as there is any necessity for its being."

Captain Thomas Claiborne, Regiment of Mounted Rifles, wrote from Camp Crawford, New Mexico, in 1856: "The Grimsley saddles made in 1848 and used by the Rifle Regiment

*The McClellan equipment was at that time being used experimentally.

in the march to Oregon, were of most excellent character, as far as material and workmanship were concerned. In 1852-53, while on two trips to the Rocky Mountains, I had also good opportunity to judge Grimsley saddle. The saddles were bad and numerous horses were rendered worthless by them. * * * However, I must say, that after full experience I believe the Grimsley saddle to be the best I have ever used."

THE HOPE OR TEXAS SADDLE.

This saddle was used experimentally during the period 1855-58. While a drawing is not available, its features appear in some of the following extracts.

Captain George Stoneman, Second Cavalry, stated at Camp Cooper, Texas, in 1857: "Hope's, as compared with Grimsley's fits the horse much better forward, but aft not so well, and the withers are relieved from much liability to injury, a very great desideratum. * * * The cantle, that worse than useless protuberance, particular for short legged men, is dispensed with, * * * instead of the quilted, padded, semi-soft, hot, pile engendering heat, we get a smooth, hard, open, cool locality for that part of the trooper which suffers most, particularly with tyros in equestrianism, and the dragoon when he is at the end of his first enlistment is little more * * * The bars appear very well shaped, and better in front than in rear. * * * To use a nautical expression, with the present bearing and the usual cargo aboard, the craft is loaded too much by the stern. * * * Whoever invented Hope's saddle hit very nearly the California vaquero saddle, and wherein he differed from it he has failed."

Colonel A. S. Johnston, Second Cavalry, made the following remarks regarding the Hope saddle, at San Antonio, in 1856: "The tree conforms generally to the horses' back, and readily adapts itself to his different conditions. Its equipments are simple consisting of two pouches, wooden stirrups and stirrup leathers, the Mexican girth, etc. * * * The saddle with these equipments weighs fifteen pounds and costs \$23.00."

Lieut. Col. J. E. Johnston, First Cavalry, in camp at Lecompton, Kansas Ty., in 1856, remarked: "All the officers in the field in Kansas, who have been able to obtain it (Hope's

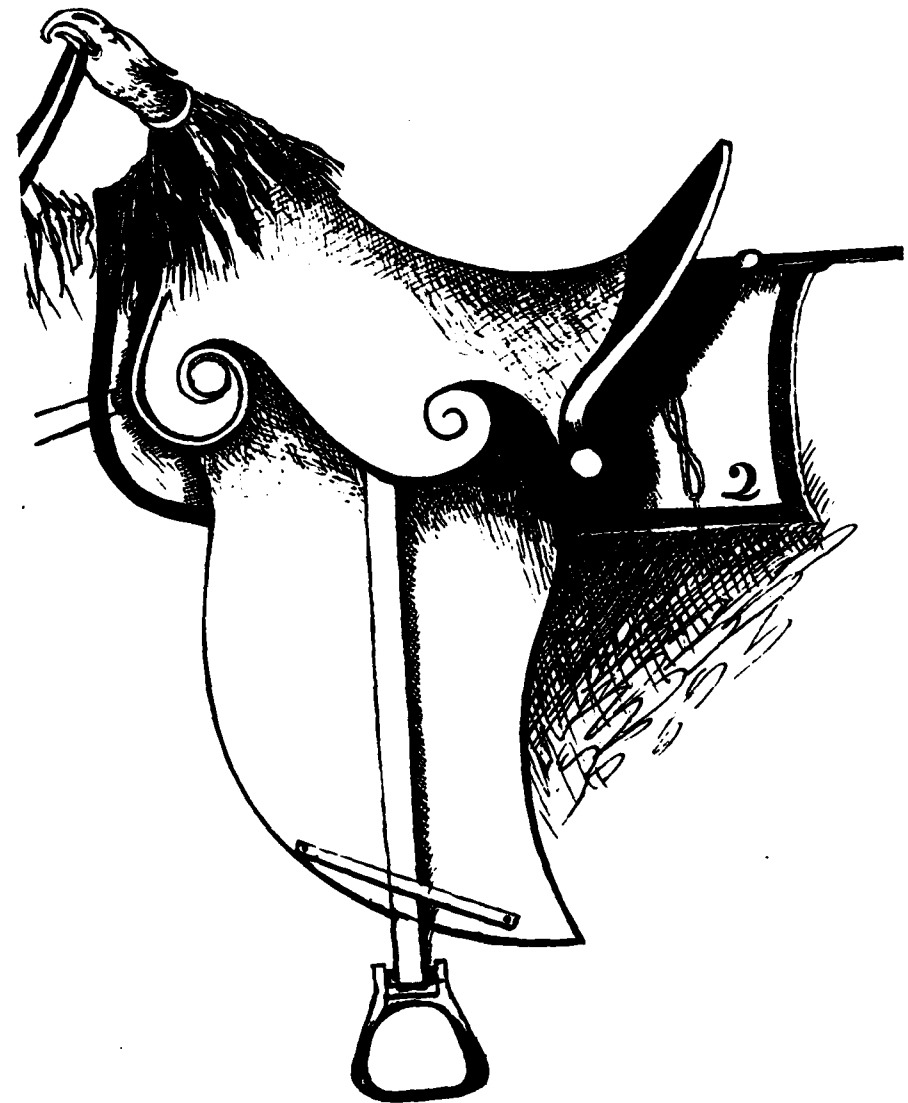


PLATE II. THE VAN DORN SADDLE.

saddle) use it, except that they have the California tree instead of Hope's. * * * I think it is better for our service than either of those now furnished by the Government."

Captain Earl Van Dorn, Second Cavalry, at about this time remarked as follows regarding his use of the Hope saddle: "I marched one hundred and thirty miles at a trot in two days, and a few hours, in an incessant fall of rain in which everything was saturated with water. * * * Not one horse was injured by the saddle." Also, "I marched, in little more than a month nearly 700 hundred miles over an exceedingly rough and mountainous country and although I lost thirteen horses by exhaustion, from want of sufficient grass and good water, not one was injured in anyway by the saddle." However, Captain Van Dorn objected to the finish of the saddle, saying: "I see no reason for following the uncultivated conceit of the Mexicans and attaching a parcel of dangling leathers and strings that can be of little use. * * * The leather hangings to the stirrup are superfluous and ugly. The soldiers' boot and thick stockings should be protection enough for his foot. As far as my taste is concerned, I don't like the finish of the saddle at all."

Captain Van Dorn suggested a saddle conforming in design to the tree of the Hope saddle but with the cantle not quite so high. * * * and "the pommel should be a massive brass aegle head, with beak open to hold reins, and a fall of horses' hair from a ring around the neck * * * the stirrup should be a deep one and made of brass."

THE JONES SADDLE.

Lieutenant Wm. E. Jones, of the Regiment of Mounted Riflemen had been impressed with the defects of equipment while on a march "from the frontiers of Missouri to Oregon, in 1849." The horses started in good condition, using the Grimsley saddle but "before we reached our destination, scarcely a company could mount one man in ten." "Frequently were seen horses lying and groaning for hours in agony from injuries unconsciously inflicted 'by the Grimsley saddle.'"

The Jones saddle, patented in 1855, was one of the first American efforts to secure lateral adjustability of side bars. From the drawing it will be seen that the cantle and pommel

arches were each composed of two metal pieces, the joint secured by a rivet. The motion of the portions of each arch was controlled by a rod and the side bars could be moved closer together or further apart at either end, or both, and the distance between them fixed at will. The side bars were fastened to the ends of the arches by hinges, thus permitting various degrees of slope. The attempt was an ambitious one but the mechanical resources of the day were insufficient to the necessities of the device. However, the saddle did very well and received much praise.

In 1856 practically all the company commanders of the Regiment of Mounted Riflemen, united in praising the results obtained by the use of the Jones saddle during a march from San Antonio, Texas, to Camp Crawford, New Mexico, a distance

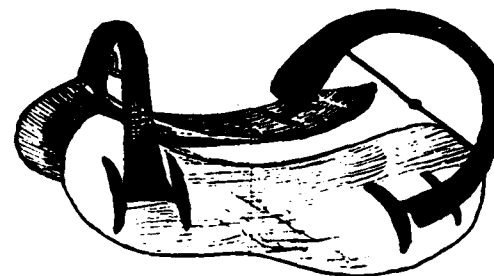


PLATE III. THE TREE OF THE JONES SADDLE.

of nearly 800 miles. Some of these officers referred to the Grimsley saddle as being inferior, other praised it, although claiming some superiority for the Jones saddle.

Captain Wm. Steele, Second Dragoons, at Ft. Laramie, in September, 1855, remarked: "After the experience of the past summer, I am of the opinion that the principle of the saddle patented by Lieutenant Jones is a good one and worthy of adoption in the service. Since the 11th of June, I have marched 1,300 miles using the two saddles furnished to my company. One of them was stolen by a deserter after about 1,000 miles travel."

Captain Alfred Pleasanton, Second Dragoons, at Fort Pierre, in 1855, reported that two of Jones saddles "used in the company, during the past summer are now unserviceable.

* * * The Grimsley saddle which have undergone the same wear are still in good serviceable condition."

Jefferson Davis, Secretary of War and his successor in that office, John B. Floyd, expressed interest in Jones' saddle and 300 of them were authorized for experimental use in 1857.

THE CAMPBELL SADDLE.

Although the specifications of this saddle are not obtainable it is known that the inventor, Daniel Campbell, sought to obtain adjustability, and possibly other advantages, by using springs in the tree. During 1855-6-7, the First and Second Cavalry used this saddle, several hundred having been issued for test.

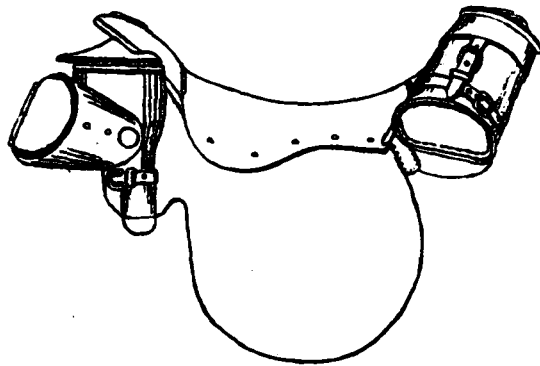


PLATE IV. THE CAMPBELL SADDLE.

Writing from Lecompton, Kansas, Ty. in 1855, Captain W. D. De Saussure, First Cavalry, remarked: "The Campbell equipments were issued to 'F' Company, First Cavalry, five months ago and have been used ever since, in the field, continuously. I much prefer this saddle to the Grimsley saddle now in use in the mounted service. It is much lighter and certainly less liable to injure the withers and backs of horses. * * * The 'Moss Rug' (saddle pad) is a failure, being too hard and soon destroyed."

Major George H. Thomas, Second Cavalry, at Fort Mason, Texas, in 1857, expressed the opinion that "the Campbell saddle tree is the best which has ever been tried in our mounted

service. It is strong, light, and, with its proportions, can be easily fitted to any horses' back so as not injure it."

Other officers spoke similarly with regard to this saddle, while still others complained that "the springs of the pommel and cantle" had given away and that numerous horses backs had been injured. "K" Company, First Cavalry, used this saddle on a continuous march of about 1,000 miles. The "Moss Rugs" (saddle pads) which were also used about this time did not give satisfaction; the blanket was preferred.

THE MCCLELLAN SADDLE.

During the period when the Grimsley, Hope, Jones and Campbell saddles were in use, Captain George B. McClellan, First Cavalry, returned from Europe where, as one of a commission of officers, he had observed the operations in the Crimea, and had also made an extensive study of the armies of Europe. He submitted the model of a new saddle and suggested changes in other articles of equipment. In a letter referring to these models Captain McClellan stated under date of December 25, 1856: "I cannot pretend to say that this equipment is by any means perfect, but I feel safe in saying that it is an important step in the right direction; that it is not a copy of any European model and that it is superior to any equipment in Europe." At the time of its proposal and since, the origin of the McClellan saddle has been vaguely characterized as "Crimean," "Russian," "European," etc. However, although Captain McClellan's letter above quoted states that his saddle "is not a copy of any European saddle," an examination of other statements made by him and a comparison of manufacturing specifications has led to the conclusion that the McClellan saddle tree was suggested by the saddle invented about that time by Captain Cogent, then director of the saddle factory at Saumur.

A Board of Officers convened in 1857, examined the equipment proposed by Captain McClellan and, after making certain alterations, recommended an issue to the service for experimental purposes. Among the alterations the following were noted: "The saddle tree not to be covered over the seat with leather;" the "leather foot guards on the stirrup shall be dispensed with;" "the sweat leathers to be dispensed with."

The McClellan equipment received favorable comment, although a number of experienced officers opposed it. Practically all the officers of the Second Dragoons stationed at Camp Floyd, W. T., in 1859, expressed a desire to have that regiment equipped with the McClellan pattern. A defect in the method of attaching the bits was generally mentioned.

Captain G. H. Stewart, First Cavalry, who favored this equipment, remarked that he had used it on a march from "Fort Leavenworth to Utah and back, a distance of over 2,000 miles." He said further: "The saddle should be covered with rawhide instead of leather. A light crupper is indispensable especially in a very hilly or mountainous country. * * * The saddle bags, or valises, furnished, were constructed, and also attached to the saddle, in such a manner as to injure the horses' back, and could not be used."

Another Board of officers was convened in 1859 to "examine into the subject of Horse Equipment." Among the members of this Board were Colonel P. St. George Cooke, Second Dragoons, Lieut. Col. Robert E. Lee, Second Cavalry, and Lieut. Col. J. E. Johnston, First Cavalry. They considered the various articles then in the service and finally recommended equipment based principally upon the McClellan models, modified by the Board. A hair girth was first decided on; then the Board changed to webbing. Saddle bags were accepted, as were also the "wooden stirrups with leather shields."

The bridle was to be of black leather and "the saddle to be russet leather throughout," but the Secretary of War would not adopt the recommendation as to russet leather.

Disapproval of the Board's decision was expressed by its President, Colonel Philip S. George Cooke, who dissented from the main conclusion of his colleagues, and called attention to the merits of the Grimsley equipment. He remarked: "It is impossible that men should agree; any new Board would change any established equipage: but it is confidently believed that that now established unites the largest suffrage in its favor."

However, the McClellan equipment was adopted and served satisfactorily for many years. Modifications were made from time to time and it is thought that the shape of

the under surface of the side bars may have departed from that of the original model. In the course of years such a change might naturally have come about. Some of our experienced cavalry officers believed it probable. General Mordecai in relating his acquaintance with the subject from an Ordnance Officer's viewpoint once said: "When I took command of the Leavenworth Arsenal in 1870, saddle trees were being covered there and I had to throw out many ill shaped trees. In 1874, on the Cavalry Equipment Board, I went over, at Watervliet Arsenal, a large number of trees, to select a few that might, in the opinion of the Cavalry Officers, answer for models, and from them the drawings in the report of that Board were made."

THE WHITMAN SADDLE.

After twenty years service the McClellan saddle was discarded and the Whitman saddle substituted, in the recommendation of the Equipment Board of 1879. They remarked: " * * * the Board, while remembering that the McClellan tree has been of great service, is satisfied that a change is now necessary. This conclusion is due in a measure to the experience of the Board, but chiefly to the opinions of a great number of officers who are riding saddles of various kinds. * * * The Board has endeavored to find a suitable saddle combining the merits of the various trees now in use. This, it is believed, has been done in the selection of the Whitman tree."

The Chief of Ordnance opposed the recommendation of the Board, calling attention to the fact that "42,000 new McClellan saddles were on hand, left from war supplies." General Sherman, commanding the Army, recommended the adoption of the Whitman saddle for general use, after "the present stock of McClellans' is reduced below 20,000." The Secretary of War directed that the Whitman saddle "in future manufacture be adopted as the model." Later, the Whitman saddle was issued to some of the cavalry regiments, but it did not firmly establish itself to the exclusion of the McClellan, which continued as the regulation type.

THE WINT SADDLE.

During the early '80's, Captain T. J. Wint, Fourth Cavalry, designed a saddle which he believed would be less injurious to the horses back than the McClellan. Long experience as a cavalryman and peculiar aptitude for solving the practical problems of the mounted service combined to give Captain Wint's opinion great weight. He sought to gain lateral adjustability of side bars, by designing the cantle and pommel arches so that they were, in effect, connecting arms, so curved

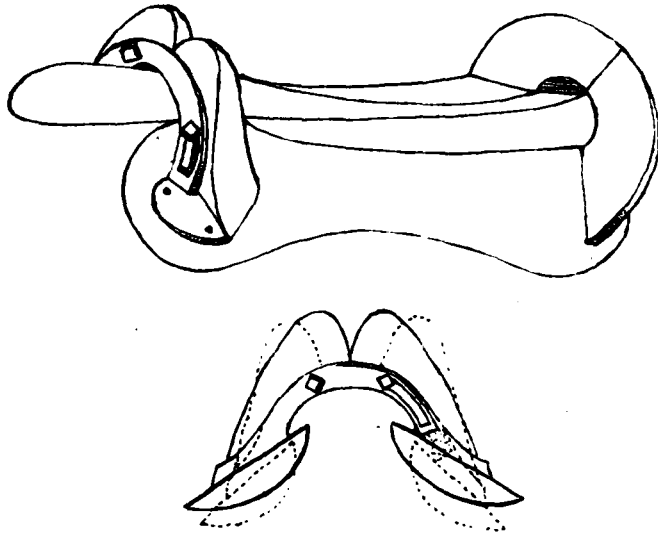


PLATE V. THE WINT SADDLE.

as to form the true arc of a circle, and made so that the metal arms would slide upon each other, thus causing the angles of the side bars to correspond with those of the horses' back, without materially opening or closing the space between the upper edges of the side bars.

Captain Wint did not care to urge the adoption of his saddle and it had no service test save by several officers. Of these, one now retired and another still on the active list, have praised the saddle after many years use. While the device undoubtedly was a step in the right direction, a service test

upon a large scale probably would have proved that the bolts and nuts designed to clamp the arms of the arches together would have worn out too rapidly. As yet, we have found no metal which will stand up under such wear.

MODEL 1912 EQUIPMENT.

Dissatisfaction with the McClellan type continued to assert itself and finally the authorities decided that a complete change of the equipment was probably desirable. A board of officers was convened for this purpose in 1910. They made an exhaustive study of the subject, assisted by reports and recommendations offered by all officers of the mounted service who were sufficiently interested in the subject, about 400 in all. They sought principally a service saddle which would reduce the sore back evil to a minimum; a method of carrying the rifle which would contribute to the same end and properly serve its main purpose; an assemblage of other equipment into a pack which would be light, tight and noiseless, and also comprehensive as to its components. The equipment recommended by that Board is believed to be the nearest possible attainment to the ends sought; that is to say, the principles adopted are correct and no mechanical absurdities or impossibilities are included in the devices produced. That there are defects in some of the articles is necessarily true, because a Boards' work has the limitations of the laboratory phase, even though special marches are made in preliminary tests. Actual use in the service, involving considerable quantities, is the only real test of any equipment. During the past half-year, or more, several squadrons have used the new equipment in daily service, three of these squadrons, at least being stationed on the Mexican Border where we find our nearest approach to campaign conditions. The result of the experience of these border squadrons has been an opinion from them favorable to the new equipment, with reasonable exceptions as to minor defects. The curing of these defects will be attained in due course.

THE BOARD OF 1915.

In keeping with precedents of equipment history a Board will now proceed with a revision of the new type of equipment. The function of the new committee is logically that of corresponding Boards, similarly appointed in the past, that is to say, the function of correction and revision not rejection and re-creation, because of the latter method there is no end and man desireth some peace and permanence here below.

It is merely speaking in the light of facts when one states that the Board of 1912 made by far the most exhaustive study of this subject ever made in this country. Their report contains the facts ascertained; an array of data that, fortunately, he who runs may not read; he will have to stop and actually get thoroughly acquainted with it. The Board of Revision equipped with all the data heretofore accumulated, and thus spared the necessity of going over ground already scrutinized, is entitled to another essential advantage, or rather, a business right. They should be authorized to visit troops actually in the field, using the new equipment. Seeing, in this matter, is believing. Passing through the equipment of such a troop, one observes with accuracy the bearing of all straps, buckles and metal parts, discovering an excess of wear here, the insufficiency of an adjustment there, an unnecessary weight of metal or faulty cross-section in another part, all developed by that king of critics, actual use. Remedies are apparent in some cases and already improvised in others. In short, the close scrutiny of the working equipment, in quantities, and with great attention to detail, is an absolute essential for which no other kind of information can possibly be substituted.

General Cooke, said, as we have read, on this very subject: "It is impossible that men should agree; any new Board would change any established equipage * * * Of course there is a great deal of truth in that remark and it applies to many army matters other than equipment. It is also true that the service is developing now a self-protective spirit of enlightened conservatism which urges all concerned that there be made only such changes as are absolutely necessary.

With the above spirit of conservatism in mind and fully recognizing the seriousness and correctness of this opposition to needless change, I would point out, in the light of certain special experience, a few alterations which ought to be made in the new equipment and which can be made at no great expense.

THE SERVICE SADDLE.

Opinions, checked as to source values, and based on troop records, indicate that this saddle will save horses, which means in service, more troopers present and more rifles on the line in each organization. The horse side of this saddle is almost identical with that of the British Model 1910, including the adjustable feature, and we know that more favorable cavalry news has thus far come out of the British Zone in Flanders and France than from any other European source, especially as to horses' backs. The men who have ridden the saddle for hundreds of miles seem content with the comfort of the seat. It would improve the saddle, however, to make the seat larger, with a more extended "lowest part." Some would lower the pommel and cantle arches, but I deem this very hazardous. As now designed we have a sure clearance for the kind of horses we are certain to get in time of war. I prefer the cantle as originally recommended by the Board of 1912 without the protuberance which grew later. In short, give the seat more length and such change of curve as may seem desirable, but do not change the side bars or the height of the arches. The trooper is not "too far above his work" in this saddle, although some have concluded that he is. His height above the horse as compared with other covered-seat saddles, is best determined by actual measurement. Furthermore, other considerations cannot be made to depend entirely upon this particular factor.

The sharp tread stirrups should be replaced by a similar steel stirrup with a flat tread. The marching trooper in time of war will gain more comfort from the flat tread than he will from some of the refinements of equitation. The stirrup loops need not be as heavy as they are; reduce the cross section. The loops, if moved forward a trifle, will be more practical as to comfort, although less correct in theory. A further reduction

in the thickness of the stirrup straps is not necessary; well cared for, they are sufficiently pliable and very serviceable. If the girth straps are shortened and the girths lengthened we will get an easier adjustment and help the lazy man, thus helping everyone else.

THE OFFICER'S SADDLE.

This has had a limited test and is a very good saddle. Some hasty criticism has been hurled at it. My remarks as to the service saddle here apply. However, the question of the officers' saddle is, with us as in other armies, capable of separate treatment. Our special case is this: Our new spirit of interest in riding comes from the Mounted Service School, a worthy, deserving and successful institution. The school has used for years only the Saumur type of saddle, recognized as an excellent saddle for use on officer's mounts. Officers have gone to the school quite indifferent as to its methods and have, with few exceptions, come away with a spirit of enthusiasm and solid faith. They naturally believe in the saddle which is a part of the system by which they were rejuvenated or reconstructed. It would be entirely consistent to recognize this type of saddle as our "officer's saddle," and that procedure would really be in the nature of avoiding a change for many officers—"a consummation devoutly to be wished."

THE BLANKET.

It seems definitely proved that no saddle pad exists fit to supplant the blanket. We should, however, endeavor to secure a blanket of the superior texture, as to ventilation, possessed by the English, French and German Cavalry. Their blankets have a coarser "feel" and appearance than ours, but are just as well or better woven.

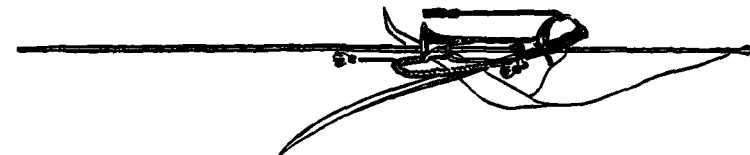
THE RIFLE CARRIER.

The rifle, in the new equipment, hangs in exactly the right place. The principle is absolutely correct. The inconvenience and strain of its carriage are divided in proper proportion between the man and the horse with no real dis-

advantage to either and with due allowance for the fighting moment. No one who has studied the American closely will attempt to hang the rifle entirely on the troopers back. To put the rifle as now manufactured, under the trooper's leg would be to render useless most of the splendid general progress made in equitation. Besides, the rifle, hanging as in the McClellan equipment, exerts a violent pull in a direction at right angles to the median line of the saddle, at every step of the horse, flopping and jerking, and causing pommel sores. There will doubtless be improvements in the mechanical details of the 1912 carrier, but its principle ought not be disturbed.

OTHER ARTICLES.

There are other modifications of minor importance which need not be mentioned here. The Board of Revision will finally remedy most, but probably not all defects. Complete settlement of the new equipment will require a few more years. It has always been so, in cases of large improvements, and it always will be so. The work of those especially attending to these matters, from time to time, may be accepted as earnest and diligent but the results will not come speedily.



EXTRACTS FROM A REGIMENTAL SCRAP BOOK.

BY SEV. H. MIDDAGH.

"Not all of war is made up of death and suffering; where the good soldier rides there are acts of mercy found, and deeds worthy of any day of chivalry."—SWIFT.

It is seldom we hear of the service of a military organization, other than that during hostilities involving engagements with the enemy, referred to more fully than in the foregoing true and forcible statement.

It was my fortune, at the opening of hostilities with Spain, to belong to a regiment which failed to come in touch with the enemy during the subsequent war, with the exception of one of its troops. Still it performed valuable service during the period between the declaration of war and the time when the island of Porto Rico—its field of operation—was turned over to a civil government.

During the brewing of that trouble, conditions were carefully watched by its officers, many of whose entire commissioned service had been spent with the troops in which they had worked their way to a captaincy. Among their following were men who had joined with them, men who had passed the better years of their life in promoting the efficiency of their respective troops; a lithe, active set, cheerfully taking the hardest kind of knocks incident to the hard work performed during the Civil War and the twenty or more hard years of Indian campaigning which had followed. Among them were found men commenting on the efficiency of the regimental pack train, an organization that was fast becoming a thing of the past, praising the traits of their favorite mule and using the terms "*macho*," "*sencero*," "*cargo*," and "*cagador*," with the familiarity of the muleteers in the days when the pack train was introduced in California

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from the Andean slopes of Chili and Peru. In addition to the packers there were found to be as good teamsters as ever handled the lines from the seat of an escort wagon, or guided a team with a jerk-line.

The description of the service of these men is a difficult task and it is believed that in giving some idea as to why they failed to see active service, together with a description of the country and its people as found and understood by them and leave the reader to compare the country of that day with that of today, will come nearer to giving a clear understanding of that service than any other method.

It was in February, 1895, when the natives of Cuba, for the sixth time in fifty years rebelled against Spain and founded a Republic. The war deeply interested our people as upwards of \$50,000,000 of American money was invested in various enterprises on the island which lay at our very doors, while our yearly trade with Cuba was valued at \$96,000,000.

Two years later a large part of the island had reverted to a wilderness, the people by order of Genral Weyler, having been driven into the towns where they were dying of starvation and our country began to send them food and medical aid.

* * * * *

Prior to the demand of our government in 1898, that Spain relinquish her control in the Island, Congress had appropriated \$50,000,000 for strengthening our defenses and buying ships and munitions of war. In the interim between that time and actual hostilities, efforts had been made to secure material for military operations on a more extensive scale than had been done in former years.

This proved a difficult problem. The great amount of war material in possession of the government at the close of the Civil War, had been sold or used up by issue to the militia or to the regular forces that had been engaged in operations on the frontier for the last thirty years—a duty from which our regiment was enjoying a well earned rest—while the fact was, we

had a very small army, 25,000 men, with war material sufficient only to equip that force and furnish it with a small amount of ammunition. The tentage, transportation, and camp equipage was insufficient for any important military operations.

By an Act approved April 26, 1898, this force was increased to 65,597 enlisted men, while an enlistment of 10,000 men "possessing immunity from disease incident to tropical climates" was subsequently authorized. The raising of this army was to cope with the Spanish Army in Cuba, estimated at 150,000 men of which 80,000 were reported efficient for military service. There were two serious obstacles to be avoided however, one was the placing of an army on the Island of Cuba before our Navy controlled the Cuban waters, the other was the putting of an army on the island at a time when a large number of men must die of a disease that had prevailed in that country for the past one hundred years.

On April 15th the regular infantry was ordered to New Orleans, Mobile and Tampa, preparatory to an immediate movement on Cuba should war be declared. Spain severed diplomatic relations with us on April 21st, war began on that date as declared by Congress a few days later, and on May 10th, the regular cavalry and artillery were ordered to Chickamauga and Tampa. Subsequently 70,000 men were ordered to Cuba, and commissary stores for ninety days and thirty days forage were directed to be concentrated at Tampa, where the large amount of supplies and war material were scattered along some forty miles of track, owing to the absence of depots and facilities for handling.

It transpired, however, that none of the movements on Cuba were to materialize for some time, the want of proper equipment and ammunition rendering them impracticable. A strong expedition consisting of 5,000 men had also been organized to move to Tunas on the south side of the island, but when fully prepared was delayed on account of the movement of the fleet of Admiral Cerveras, from the Cape Verde Island to the waters of the West Indies.

* * * * *

In May, 1898, for the second time in its history, our regiment moved from Texas to participate in an international war, the troops leaving their stations and proceeding by rail to New Orleans, La., at which place the regiment, with the exception of Troops F, was mobilized, going into camp at the Fair Ground as a part of a Provisional Brigade under Brigadier General Snyder, U. S. V., until May 24th. On this date, it broke camp and proceeded enroute to Mobile, Alabama. Headquarters and Troops "A," "B," "E," "I," and "K," leaving New Orleans on May 25th by transport, while Troops "C," "D," and "H," proceeded by rail, "C," and "D," under command of First Lieutenant Jessie McI. Carter, leaving on the evening of the 24th and Troop "H," under command of Lieutenant Alonzo Gray, the following evening. Troop "F," commanded by Lieutenant L. W. Cornish, having moved by rail from Fort Brown to Point Isabel, Texas, proceeded by steamer to Mobile, joining the regiment June 2d.

The Fourth Army Corps, to which the regiment was assigned, was camped about five miles from Mobile in an open piney woods, with abundance of room for evolutions and a bounteous supply of pure water. The health of the command was good; measles made its appearance early, but never spread to any serious extent. The regiment, however, did not remain long enough in this camp to experience any of the unpleasant conditions existing prior to its arrival or those predicted for the future.

On June 4th it proceeded by rail to Tampa, Florida, arriving in time to see the Cuban expedition pull out on flat cars as it ran into the camp of the U. S. Forces at 7:00 A. M., June 7th, our men congratulating themselves that they were in time to join the expedition and for many days they had hopes of doing so. We were on the ground and for a week after, the Fifth Corps were embarking on transports at Port Tampa, while Major General Coppinger was organizing the remaining troops at Tampa and Port Tampa into two divisions of infantry and a provisional brigade of cavalry.

The orders for the movement taking place on our arrival had been given on May 30th, one month and nine days after the declaration of war. It was then expected that the transport

engaged would convey some 25,000 men, but it was found that many of the steamers were not suited for transport service, having been built for freight and not properly equipped for conveying troops and munitions of war.

The orders were that the expedition sail on the 8th of June, but a report having been received that Spanish war vessels had been seen in the Nicholas Channel, the movement was suspended until June 14th, on which date the expedition consisting of 803 officers and 14,935 men finally sailed, leaving behind 10,000 troops owing to insufficient transportation; the Fifth Cavalry being numbered among the 10,000.

Here we severed our connection with the Cuban Campaign.

* * * * *

It having been supposed that our stay at Tampa would be short, a camp had been selected convenient to the railroad and without special regard to sanitary conditions and it transpired that, after the hustle and uncertainty of the first two weeks, we settled down to duty incident to that time in what was soon to become a fever stricken camp.

While in Florida, 395 recruits were assigned and 500 horses were received, and in addition to the usual duties—troop, squadron and regimental drills—there were held recruit instruction and the breaking of the new horses, every effort being made to prepare both for the active service we expected to be called upon to perform at a moment's notice. Time was not thrown away in this respect and drills in one form or another were in progress from breaking of ranks at reveille to sundown.

During the month of July the Florida rainy season set in, followed by malarial fever, typhoid fever, and a local fever of a peculiar type with diarrhea that assumed alarming proportions in a short time. The ground became soaked with water, palmetto flats were converted into swamps, most of the camps had to be abandoned, and, in the latter part of July the regiment was moved to what was supposed to be a better site. This camp also being flooded by August 5th, another change was made to Tampa Heights.

The return for May shows an enlisted strength of 730, with 27 men on sick report; for June, enlisted strength 1,049, sick 58; for July, enlisted strength 1,194, sick 176; for August, enlisted strength 1,169, sick 279; of which 169 were absent in hospitals at Fort McPherson, Ga., Tampa, Fla., and Fort Thomas, Ky. This number does not include 78 men who were absent on furlough under the provisions of General Orders No. 114, A. G. O., series 1898, which provided that "sick and wounded soldiers sent to the U. S. General or Field Hospital when able to travel, be granted by the surgeon in charge one months furlough and transportation to their homes," making the actual number of enlisted men sick in the regiment 357, a gain in its sick report of 330 during the period from June 7th to August 14th, while at Tampa, Florida.

On June 21st, Troops "L" and "M." were reorganized under provisions of General Orders No. 27, A. G. O., 1898, five men from each of the established organizations, selected with reference to their ability to assist in the instruction of recruits and the training of horses, being transferred to these troops. Sergeant Terrence Hamill, transferred from Troop "I," was appointed First Sergeant of Troop "L," and Sergeant Eugene Bohne, transferred from Troop "C," to Troop "M."

* * * * *

On July 24th, Troop "A," under the command of Captain A. C. Macomb, left the regiment for Port Tampa, at which place it embarked on the transport "*Morgan*," sailing the same day under sealed orders for Porto Rico. The orders, opened at sea, directed the "*Morgan*" to proceed to Cape Fajardo and there await the arrival of General Miles who was to land a force at that point, but it transpired that the landing point of Miles' expedition had been changed after the sailing of the "*Morgan*" which lay off Cape Farjardo until a Naval Scout Ship arrived with the information and with orders for the transport to proceed to Ponce, where the troop landed on the 7th and was ordered to Yauco, to report to General Schwan, who was organizing an expedition for the advance on Mayaguez.

This command, consisting of the Eleventh Infantry, two batteries of field artillery and Troop "A," Fifth Cavalry—approximating a strength of 26 officers and 1,400 men exclusive of brigade headquarters, was to proceed via Savana Grande and San German, to Mayaguez and thence to Lares and Arecibo.

Marching from Yauco on the 9th, information was received at San German the following day that the entire Mayaguez garrison had marched out on the San German road to contest the advance of Schwan's troops. Following the road, as it winds through the narrow valley of the Rio Grande, to the junction of that river and the Rio Rosario south of Homigueros, Troop "A,"—acting as advance guard—was fired on by the enemy's scouts concealed behind a hedge along a wagon road leading to Homigueros, located about fifteen yards from the main road.

A short encounter ensued after which the dispersed enemy was followed with the object of preventing the fleeing Spaniards from gaining the town. The troop having become separated from the main command, in an endeavor to rejoin, moved to the rear when it was again fired upon from a ridge, by a force estimated at about three hundred. Dismounting and concealing its horses in a corn field, a portion of the troop returned the fire, while Lieutenant Valentine with a platoon wormed his way to the river embankment and, having formed as skirmishers, his line being reinforced by the advancing infantry, and the hill charged, the enemy firing volleys at the main body of the command and retreating.

From the top of the hill an exchange of fire was engaged in for a short time when the enemy's fire ceased and he retreated along the Mayaguez road followed by Troop "A," which kept up the pursuit to within a short distance of the city of Mayaguez, rejoining the main command at dark. Three prisoners were captured by the troop, but with the exception of these and the several dead scattered along the road within range of the hill, none of the enemy was encountered.

During the affair, which ended about 6:00 P. M., the brigade had one man killed and one officer and fifteen men wounded as were several horses of the staff.

The following morning the command marched on Mayaguez, Troop "A," followed by brigade headquarters, marching through the city at about 9:00 A. M. Colonel Soto, who commanded the Spaniards, upon hearing the result of the Homigueros fight had "pulled up stakes" and our troops found the town clear of the enemy, after whom Troop "A," was despatched to keep in touch. Returning in the evening with the information that the enemy was ten miles distant and still retreating, twenty men of the troop, under Lieutenant Valentine, was detached to accompany a reconnaissance in force consisting of six companies of infantry and two pieces of artillery, organized to harass and retard the progress of the retreating enemy.

Leaving Mayaguez on the morning of the 12th, this command marched along the road leading to Las Marias, bivouac-ing for the night at the junction of that road and the road from Mareaco. The latter part of the march, a climb all the way, was made in a drenching rain. The following morning the advance, preceded by Lieutenant Valentine's detachment, pushed forward, but after an hour's travel, the road became almost impassable, the artillery being obliged to haul their guns by hand over a section of the road causing a delay of about an hour. Lieutenant Valentine was ordered to push forward with his men to ascertain the movements of the enemy.

At Las Marias the lieutenant learned that the Spaniards, estimated at about a thousand, were endeavoring to cross the Baccacio River, which, owing to its flooded condition was being accomplished very slowly. Reporting this fact to the commander of the reconnaissance, he was directed to make contact with the enemy, it being desirous to capture that portion of the command which had not succeeded in crossing the river. Emerging from a cut, after having traversed a rough trail for two miles beyond Las Marias, he came out on a portion of the trail that afforded a view of the valley, across which a party of about one hundred and fifty Spaniards could be seen winding their way up a trail on an opposite hill about one thousand yards away. They were fired upon, the result being their taking to cover in the dense undergrowth that clothed the hill and returning the fire. During this exchange of fire, the main com-

mand came up and Captain Macomb with the entire troop proceeded along a bridle path to the ford where a number of pack animals were in sight. Having taken a Spanish lieutenant colonel prisoner and picked up several bull carts with supplies and records, they rejoined the command and camped for the night.

As only two wagons had reached the camp, but a scanty supper was provided for the tired men and for breakfast there was even less. That the Spanish forces were demoralized and for the most part disintegrated was obvious and to give the *coup de grace* seemed easy if they were given no peace and the pursuit was resumed at once. The men were weary and hungry but there was no doubt that the enemy was more so as they had lost all heart in their cause, while our men were enthusiastic. The command pushed forward to Lares, where Troop "A," already scouting in the vicinity was to join, but having crossed the river and taken two prisoners, Captain Macomb received a message from General Schwan, to the effect that a protocol had been signed, and the following day, he with his troop established the first station of the Fifth in Porto Rico, at Las Marias.

The regiment remained in camp at Tampa until August 15th, when it proceeded by rail to Huntsville, Alabama, where it arrived August 18th, numbering 25 officers and 845 enlisted men, going into camp at Camp Wheeler, near that place. The name of this camp was later changed to "Camp Albert G. Force."

Many cases of typhoid contracted at Tampa now developed and the wisdom of the change was not at first apparent, but the bracing breezes of the uplands eventually did their work, and by November 1st there was a great improvement in the health of the command.

On November 4th, Headquarters with Troops "B," "D," "E," "G," "K," and "L," departed, proceeding by rail en route to Savannah, Ga., at which place they embarked on the transport "*Michigan*" and sailed for Porto Rico on the morning

of the 9th. Headquarters with Troops "D," "E," and "L," disembarking at Mayaguez and Troops "B," "G," and "K," at San Juan; the Headquarters with one troop being stationed at Mayaguez, while the remaining troops were scattered over the central and western parts of the island.

The remaining five troops, with which the writer was serving as a member of Troop "I," remained at Huntsville until January 21, 1899, when they proceeded to Savannah, Ga., near which place they went into camp until February 1st, when the command embarked on the Transport "*Michigan*" sailing the same day for Porto Rico.

On sighting the Island, all thoughts of the discomforts experienced during the five day's voyage disappeared. At best it had not been a pleasure trip, our horses, a shifting cargo, occupying the upper decks, demanded constant attention, while the wretchedness of the voyage had caused many to wish themselves snugly quartered in their old barracks in the states.

On nearing the harbor, the Castles of Morro and San Christobal with their background of housetops lying against the hill, demanded our attention, the view changing as we entered the harbor where square upon square of artistically designed structures were descried, located upon the side of a gently sloping hill receding from the waters' edge, behind which the old forts were all but lost to view.

We landed at San Juan, February 6, 1899, as a part of an army of occupation where many of our comrades, members of the first detachment were gathered to welcome us. But little time was allowed, however, for our introduction to that old town with its 32,000 inhabitants, of whom 18,000 were packed within its walls inclosing about 140 acres, the remaining 14,000 being scattered about the suburbs of Puerta de Tierra and Santurce.

When we had seen the last of our property loaded, and were still engaged in fastening the wagon covers, "*Boots and Saddles*" reminded us that another duty demanded attention, and the next breathing spell found us in the saddle. As we moved out in column of fours on the military road, we observed a sign "Artificial Ice" that had been posted on one of the build-

ings on the wharf, and speculated as to the composition of such an article, but the road on which we found ourselves demanded all our attention.

Troop "I" was fortunate in traversing this road from San Juan to Ponce. We were told that it was constructed by convicts under military direction and that its completion had required three hundred years at a cost of \$30,000,000. It was eighty-two miles long, macadamized the whole distance, and winding like a serpentine trail from San Juan on the Atlantic seaboard to the coast of the Caribbean Sea.

For the first seven miles we passed numerous villages and haciendas, the yards of which were filled with orange and cocoa-nut trees, together with banana plants and flowers, apparently of every known tropical variety.

We camped at Rio Piedras, seven miles distant from San Juan. Resuming the march across the Island, on the third day after landing, we climbed the mountain over the military road which was as free from dust as an asphalt pavement. The road wound in gentle grades along its mountainous course, around frowning chasms and over rushing streams, cut into the sides and through the face of the mountain range known as Cordillera Central, Sierra de Cayey and Sierra de Luguí, which were from 2,000 to 3,000 feet in altitude and which extend through the center of the Island, culminating in the east in the Peak of El Yunque, 3,609 feet high. There were foothills here and there on both sides toward the sea, forming fine valleys watered by over thirty main streams, of which a few are navigable for a short distance. The climate though tropical was not exceedingly warm, the average temperature being eighty degrees and the men were in their glory.

Everything we now encountered was new. The road, we found was kept in repair in about the same manner as our railroads in the states. At about every three or four kilometers we would pass the Caminero's house, who, as the railroad section boss, superintended the repair of such portion of the road as was under his supervision. The huts of the peons constructed of poles and palm leaves, were scattered everywhere and here and there the home of the planter was passed. The cocoanut trees in the lowlands were soon passed and in

the foothills we found oranges, limes, lemons and bananas, and as we would halt to view the landscape—while our horses obtained their regulation rest—the natives approached with oranges, procured from groves where we could see the clusters of yellow fruit growing in abundance.

Much of the cultivated land was very steep, but the constant moisture gives the rich soil a thick growth of vegetation and clinging roots that hold the earth and there is no frost to loosen up the ground.

The trees—of the semi-tropics—were shrouded with Spanish moss and flowers, and bushes white as snow with their bursting pods of cotton, standing as they were against a background of green foliage, presented a picture that was unequalled.

As we ascended the foliage changed, the royal palms marked the landscape in every direction, while a scattering of bread-fruit trees and coffee plants with their red berries and the ever present banana plants for shade, could be seen in every direction. On the summit were the pastures.

Troop "C," which had started with us from San Juan, left early in the march for its new station at Humacao, Troop "M," falling out at Cayey, leaving Troop "I," to climb the grade to Aibonito, accompanied by members of Troop "G," who had ridden out to meet us with the information that a steaming dinner was waiting. Many a heart rejoiced and the mountain scenery failed to interest us as we anticipated the first meal in a mess hall since we had moved out from Fort Clark, Texas.

Aibonita is situated in a pocket in the hills and about two and a half miles northwest of the town, on the main divide, are the Asomante and El Penon Hills. On the summit of these hills the Spanish had their batteries in 1898, while on the slope below their infantry was entrenched completely sweeping the road with a plunging fire. As we passed that point we were at an elevation of 2,700 feet and further on we passed the point where Captain Potts of the Third Artillery, had turned from the road under a heavy fire and silenced the Spanish guns in just fifty seconds. So impregnable were these works that some of our best engineers declared that if they had been manned by men of courage, all the armies of America could not have prevailed against them.

From this point the road stretched along the mountain side like a thin line of chalk, the winding course of which we followed in and out among the hills to Coamo. After this we passed through the cane districts of the lowlands, and after a rest at Juana Diaz, pushed on to Ponce, where the troop, under the command of Lieutenant Joseph A. Cusack, pitched tents in a palm shaded yard on one of the principal streets. Later on, we occupied a building in the town, and, on the departure of the Nineteenth Infantry for the states, moved into the barracks occupied by part of the Eleventh Infantry.

We were on the ground, the volunteers were being returned to the states, the war with Spain was a thing of the past and the question arose as to what our duties consisted as an army of occupation. So far as the men engaged are concerned the question needs no answer, but for the civilian and the large number of young men who have subsequently joined our regiment, an explanation of that service is necessary for a proper understanding of the work done by a military organization, especially as the "*list of battles and engagements*" is not an index to our military record.

In the following, an effort has been made to set forth the characteristics of the inhabitants; the system of laws and customs under which a wilderness had been developed into a densely populated community; the handling of the situation by Spain before American occupation; the conditions as found by us; the changes made by our government; the system adopted in effecting these changes and the service of the regiment in carrying out that system.

The aboriginal inhabitants of the Island, with its area of about 3,400 square miles, or a little less than one-half the size of New Jersey, we find belonged to the Carib race, but differing somewhat in *racial* characteristics from the Caribs inhabiting the Windward Islands. They styled themselves *Borinquenos* and called their island home *Borinquen*. It is variously estimated that the natives at the time of the discovery of the island numbered from 600,000 to 800,000 but whatever the number may have been, there is abundant evidence to the effect that twenty or twenty-five years later there were no natives left in the island available as mine workers. It was

the custom in those early days among the Spanish adventurers, to seek riches and distinction by any means within their power or control. No laws restrained them; no order of the King controlled them save that they were to search for gold and Christianize the heathen inhabitants.

Along with the allotment of the lands the Indian inhabitants were apportioned as serfs to the grantees.

The early inhabitants, if statements of voyagers are to be relied upon, were gentle and exceedingly hospitable in disposition; they possessed very rude and imperfect ideas of divinity, still their daily life had been a living example of nearly all the essential virtues of christianity. Their abodes were better and more adapted to comfort and cleanliness than those of the common people of the European nations at that time. They received the Spaniards with open-handed hospitality and their kindness was repaid by murder, rapine, degrading and insufferable slavery, the destruction of their homes and the desecration of every object that was sacred to them. Within a little more than one year after the second landing of Ponce de Leon, he had civilized these natives by murdering nearly the entire population and the few who survived his butchery were reduced to slavery worse than death itself. The allotment of Indians, practically slaves, was described by the word *encomienda*. That all of those so allotted were not worked to death is certain, for the women were made concubines and their children surviving as half breeds, created an admixture of Indian with Spanish blood which is recognizable in the Indian features of some of the present generation. The remaining traces of the aborigines however, are not numerous and it is evident that they have had but an inconsiderable influence in determining the type of the population in which we were interested.

If we should follow the fortunes of the early adventurers—men accustomed only to arms and warfare—we would discover an influx of seamen, sailors, and stowaways who had deserted from every vessel which touched the island. With no code of law conducive to good order, and unrestrained by the government, this class spread over the mountains and valleys; built themselves miserable hovels and lived upon the plantains,

native fruits and the cattle which roamed among the mountains. They were worthless and lazy, possessed no implants, had no knowledge of agriculture and with no one to assist or aid them in clearing the forests, advancement was beyond expectation. To encourage such laziness there was a balmy climate, which required little clothing, and with five days' work a whole family could secure enough plantains to last them a year and with bread made from the flour of the cassava, milk of the cows, a little corn and the wild fruits they were contented. For beds hammocks were made from the bark of a native tree, while clothing was procured by trading their cows, dyewoods, horses, mules, coffee, tobacco and other articles, the possession of which required but little effort.

They had advanced from this stage step by step. The whites found no repugnance in intermarrying with the mulattoes. The island had been a military post, its troops being stationary, or what we today in our foreign possession term "colonial troops." The officers, despairing of ever returning to Europe, married with the creole ladies, many of whom, proud of descending from the first conquerors, were considered noble. In this manner becoming at once soldiers and agriculturists, they looked on Porto Rico as their homes and many of the most opulent and respectable families had descended from them, forming what may be called the Porto Rican aristocracy.

In their poverty they had been inexorable in exacting from their inferiors the homage paid to superior rank, while the common or lower class, called Jabaros, would make the necessary effort only to procure that which afforded them frugal subsistence.

The slaves had been given their freedom in 1873, the number liberated being 29,229, the owners being compensated at the average rate of 200 pesos for each slave. At the time of American occupation, there was a race prejudice, the natural tendency of the mulatto being to deny the existence of negro blood, while it was a warrantable presumption that a very considerable number of those who rated themselves, or were rated as whites, were actually mulattoes and would be classed as "colored" in the United States.

The number of persons living together as husband and wife by mutual consent, constituted about one-fourth of the population.

At the beginning of the readjustment of affairs under the military government, it is a conservative estimate to place the laboring class as quite 600,000. These did not own a rod of land or possess property of any kind except their miserable cabins or thatched huts and a few insignificant articles of household goods. The remaining population is accounted for as the agricultural and urban proprietors, and their families, with the families of the farmers and those of the few professional men. The old landlords had not cultivated their estates, which would have employed this labor, and the simple needs of the *jibaro* and his family were few. A week's work yielded the field hand a dollar or two; one week's labor with the fruits and roots that were found in abundance sufficed for two or three weeks existence in idleness and contentment. It was found that seventy-nine per cent. of the plains and valleys, hills and mountains consisting of cane, coffee and tobacco fields, though swarming with inhabitants who belonged to the laboring class, were not cultivated at all. This essentially agrarian island was accustomed to expend of the proceeds of its external trade approximately \$5,000,000 a year in the purchase of foreign grown food stuffs, to the production of which the soil of the island was perfectly adapted.

Of manufacturers there were none worth mentioning save sugar, molasses, rum, and cigars and cigarettes made from local tobacco. There were hides and pelts in abundance, but no tanneries, shoe or harness shops. Cotton could readily be grown, but there were no factories for working the fiber. There were 5,000,000 pounds of common soap imported in 1897, every ounce of which could have been made at home and all the meat imported could have been raised on the island. The waters teemed with fish, yet there were brought to the island over 25,000,000 pounds of salted and dried fish the same year.

The idle laborers should have been employed in growing food crops for their subsistence. They would not work but instead existed apparently without any incentive, energy or ambition.

Of local industries, there were four so-called match factories where imported match sticks were dipped into imported chemicals and the finished matches packed into imported pasteboard boxes, marked with imported labels. There were some individual shoe and harness makers working up a small quantity of imported leather, while village blacksmiths and wheelwrights mended and occasionally constructed natives carts or assembled imported materials into carriages. Macaroni from imported flour was made in a small way; small quantities of native cassava were converted into starch and some conserves made from the guava fruit.

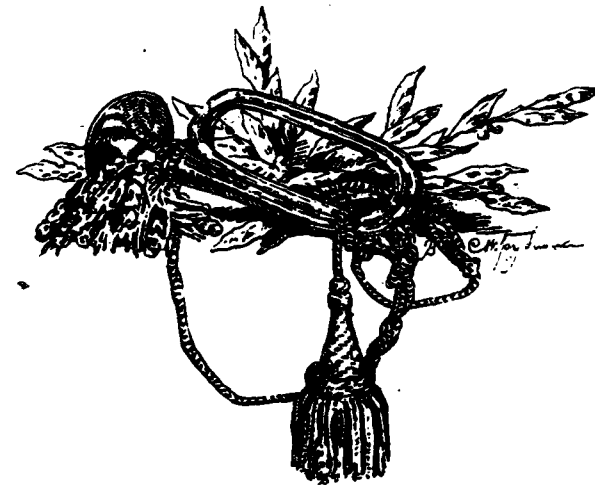
The natives were no more stupid or ignorant than the Filipinos, as our experience with them since that time has proved. The Filipinos make from the native fibers beautiful fabrics and mats that command a ready sale and high price. The Porto Rican was no lower in the intellectual scale than the natives of central Mexico who make choice pottery and handsome embroidery, saddlery and lace; than the Pueblo Indians of New Mexico, who produce fine basket work and silver ornaments; than the native islanders of the Pacific famed for their excellent mats, or than the Equadorian from the shores of the Gulf of Guayquil who make Panama hats from native grasses that are known and prized throughout the world. The Porto Rican could have made similar mats of available material and did make a hat almost as fine as the Panama from native fiber, but the hatters were few in number, lazy, without enterprise and the excellence of their goods was unknown. In fact, there was nothing choice, interesting, curious, attractive, or ornamental of local fabrication and as a whole it would be difficult to find anywhere in the world a community of a million people classed as civilized who were less self-reliant or more indolent and helpless.

It is believed that nothing more need be said to give a comprehensive understanding as to the people among whom we were to serve during a very trying period.

It has been said that Spain repressed and discouraged all initiative, still it is a fact that Panama hats and pita hammocks were well known before Spain let go her hold on South America and we have since found that the Spaniards encouraged local

industries in the Philippines. The difficulty may well be placed at the door of the Porto Rican, of whom the well-to-do were as proud as Spanish hidalgos, considering labor demeaning, while the poor jibaro and freed slaves and their descendants had never worked systematically or regularly in their lives, regarding manual labor with abhorrence. Yet some of them had heard, and they believed, that if they only knew how to read and write they would be able to live without the necessity of working for wages.

[To be continued]





PRACTICAL ADVICE TO CAVALRY ORGANIZATIONS.*

(War of 1914. Résumé of new procedures imposed by the present war, from an experience of five months in campaign.)

BY CAPTAIN DE SÉZILLE, FRENCH ARMY

IN ADVANCE of new regulations which the experience of the present war will certainly bring out, when the declaration of peace will re-open the doors of our great military schools, this modest essay sums up the personal information which we have drawn from the first five months of campaign, spent at the head of an active squadron.

We have had the good fortune to be employed successively upon the principal fields of battle and thus called upon to participate in operations of mounted cavalry (scouting, security, protection), in the course of the marches of the beginning, and then in the missions of coöperation with the infantry in the trenches. We have intended to be of use to the instructors of the depots or of the rest camps, as well as to chiefs of units or platoons having to employ their troops in circumstances or situations new to them, by exposing the principles whose formulae should, in the future, be familiar to all the bodies of cavalry.

We have divided this little work into two parts:

The first treats of the employment of cavalry mounted. The second studies its utilization in the trenches.

A short annex completes this study by some advice of a purely practical nature.

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FIRST PART—CAVALRY MOUNTED.

Present Necessities of the War:

The present necessities of the war requires procedures other than those to which the troops have been trained and which they abandon with difficulty.

The object pursued up to the present in our arm has consisted of being always as much grouped as possible in view of cavalry combat which was supposed to be imminent.

Today, the main idea is to preserve the troops to fulfill their diverse missions by keeping them constantly sheltered from ambushes, surprises by fire, etc., which constitute the present conduct of our enemy.

The characteristic of the field of battle is the absolute emptiness which it presents. The airmen declare that they cannot perceive anywhere masses of troops or strong columns. The cavalry ought not to be the only arm which continues to hold forth and to promenade in the zone of action as visible objects, as targets to aim at.

There is room then to particularly modify its conduct of marches, halts and combats.

Marches and Halts.

(A) Formations.

As soon as one arrives in the zone of action, even far behind the line of combat, measures of precaution should be taken to avoid surprises by the aeroplanes, then by the long range artillery, and finally by the closer fire (field artillery, machine guns and rifles.)

It is necessary, first and foremost, to repudiate heavy columns and large masses, vulnerable and visible.

Aeroplanes. To escape from the view of the airmen, it is necessary to disperse by platoons or by squads, utilizing the edges of shelter (the borders of woods, hedges, slopes, straw-stacks, clumps of trees, etc.,) by preference in the shadow, and to maintain an absolute immobility. This dispersion will be made rapidly, before the arrival of the aeroplanes, by means of a brief signal or conventional command emanating from the

chief, as soon as he hears the whirring of the aerial motor. He will not retard the dispersion by seeking to discover the nationality of the aeroplane. His signal should indicate the direction from which the machine is advancing, in order that the troops may reckon on the orientation of their shelter. Take for example, this command: "Aeroplane to the right! Disperse!" In default of shelters or screens, they will take rapidly in the open ground, a very thin formation (200 meters distance between platoons, each itself dispersed by squads in column or in extended order having between them 100 meters interval), and become motionless. It is in every case recalled, that the officers alone are qualified to have fire opened on the aeroplanes, when they fly low, and their nationality is quite certain. The troops should not therefore, under any circumstances, be too curious about these machines; they should be severely trained to purely and simply hide themselves as soon as the conventional command reaches them.

Long Range Artillery. This artillery produces in general, more noise than execution, if our troops are well opened out. Experience has permitted us to establish that the range was habitually lengthened out after the first shell; it seems then advantageous to move, if one can, immediately in the direction of the battery which is firing, passing by the point of fall of the first shell.

Field Artillery. It is the same thing regarding the field artillery. If one is at a halt, dismounted, the explosions will often be avoided by lying down. In any case, if one finds that he is a target, he must resort to mobility, which will permit him to rapidly get away from view and shots.

Machine Guns and Rifles. It seems superfluous to enlarge upon the necessity of applying likewise the above-mentioned principles to protect oneself against the surprises by these arms. Their limited range will otherwise render their intervention difficult if the protecting patrols are employed as they should be.

(B) *Marches on Road.*

It is necessary to open out the columns by increasing the distances (one kilometer between the regiments of a brigade,

several hundred meters between the squadrons, variable distances between platoons.)

If the terrain and circumstances permit, increase as much as possible the number of routes of march.

(C) *Marches on Varied Ground.*

They should be utilized even behind the first lines when the going is good, and in every case, as soon as circumstances indicate.

It is necessary to open out and echelon the units. It should be understood that all extension of the front requires an echelonning in distance, without which the direction and the formations are with difficulty followed and seen by the units or subordinate sub-divisions.

The subordinate units and sub-units open out and echelon themselves in their turn, taking as soon as there is room, the necessary intervals and distances.

(D) *Halts.*

Halts of whatever duration should, in the same manner as prolonged assemblies, call for, if not already existing, immediate breaking up and opening out.

If halting long in a village, conceal the men and horses in courtyards and shelters. No man should in this case stand in the streets or in the doorways. The prohibition against trying to see aeroplanes is rigorously enforced. If hostile artillery is to be feared, a part of the troops will be sheltered in the cellars (vaulted ones preferred), where they will hold themselves ready to go out at the first call of the vedettes (left outside under the shelter of planks, mattresses, etc.) The security of the troops is more complete when they occupy an emplacement protected by two thick walls on the side from which the projectiles arrive.

In the open field, if the halt must be prolonged, get shelter in holes, quarries, etc., and conceal them with branches and earth. The following arrangement is excellent against the shells of heavy artillery, if one has the time and materials necessary to construct it over a hole. A layer of poles (A—B)

is covered with eighty centimeters of earth (C). Upon this earth, are laid in a direction perpendicular to the first poles, a second row of poles (E—D), which are also covered over with earth (C) to the depth of sixty centimeters.

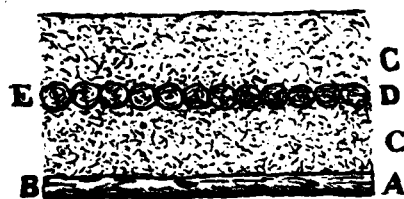


FIG. I.

(E) Utilization of Terrain.

During the *march on roads*, seek to diminish visibility by avoiding the center of the road; even in default of trees, the low sides add notably to this diminution. Utilize also hedges embankments, etc.

On *varied ground*, in the sector of march, each unit profits by all the accommodations offered by the ground, as much by its form as by its shelters, to escape the view and shots of the enemy.

In order that this utilization may be as complete as possible, it is necessary to leave to the sub-divisions the greatest latitude in formation and echeloning; the distances or intervals mentioned are only loose indications and not strict limits; all geometric ideas are to be banished.

(F) Connection—Communication.

The spreading out, the hiding of the elements, has for its greatest objection, the difficulty rendered to transmitting orders and to rapid assemblies. It is necessary to endeavor to reduce this difficulty as much as possible by good organization of connections, agents of communication, and connecting files.

In principle, the connection is *made to the Chief* (or on the element which he designates). It is up to the units or sub-

divisions to thus establish it without special orders, either toward the front or toward the rear, by detaching at proper times agents of communication or connecting files.

Some conventional signals, augmenting the regular ones, should be employed to permit of control at a distance and particularly of the rapid assembly or dispersion.

This arrangement makes it easier for the chiefs of the different echelons to move about freely at a distance from their organizations.

(G) Security—Protection.

Marches and assemblies should be *automatically covered at a long distance and in all directions*. The great range of modern arms and their power of destruction impose now a zone of security of about nine kilometers, in place of the four kilometers which were advocated in the instructions of our professors in the times of peace.

In the most dangerous direction, the *advance guard* should be generally reinforced, not for the object of combat, but to constitute a reservoir permitting the reconnoitering elements to be multiplied, *no cover being allowed to remain unexplored*.

The main body of the advance guard should, as all other main bodies, and for much stronger reasons, adopt measures for the march and for halts as dispersed as possible.

Patrols and groups of scouts should avoid giving, by showing themselves on the crests, any indication to the enemy regarding the form and direction of the troops which follow them. *Vedettes* will observe generally on foot: the two horses remain behind the crest, held by the second trooper, while the first advances toward this crest, screening himself or crawling. It will be always otherwise advantageous to replace these runnings about of troopers, when possible, by a single post of extended observation, in a tree, on a hay stack, a roof, etc. The second trooper of a group of two scouts should always carry his carbine advanced or across, in order to be able, in case of need to give the alarm.

The procedure of *reconnaissance* should also be corrected.

In the Dangerous Zone.

A wood is not reconnoitered, even when its edge has been reached by a line of foragers; it should be traversed, or at least searched a good distance from the edge, over all the extent from which fire might come.

A village is not reconnoitered when it has been turned and traversed. It should be searched street by street, and at times, house by house. (The enemy frequently hides in the cellars and shoots through the vent holes into the back of the detachment.) It is necessary, on that account, that the scouts, acting in groups of two, be taught to dismount to complete their mission. In the majority of cases, the dismounting should take place at quite a distance from the outskirts, which should be approached with precaution by groups ready to fight on foot. One should watch specially the trees or high buildings where are frequently perched vedettes or isolated marksmen, at times in civilian clothes. Before pushing forward into a doubtful village, one should try to get hold of an inhabitant, outside—farm hand, shepherd, traveler, etc.—and learn from him as to the possible presence of the enemy. If this informer declares that he knows nothing, he should be instructed, in a firm tone, to go immediately and find out exactly in the village and bring back the desired information. If he does not come back, one can conclude that the enemy occupies the village; if he returns saying that there is no enemy there, keep the man within pistol range while crossing the village, warning him of imminent punishment if his information is false. One can also, in order to reduce the goings and comings susceptible of awakening the attention of the enemy, agree with this man on special signals to reveal the occupation, as for example: hang out linen on the edge of the town, release pigeons, make a dog bark, etc.

All that requires time certainly, but except in case of absolute necessity, we no longer operate with the superficial and conventional rapidity of autumn maneuvers into "an open grave!"

Necessary prudence should back up bravery in order to permit the latter all its useful effects. These new measures

assure the best execution of the mission, while avoiding useless losses.

The *contact squadron* should of course, apply all the principles enunciated above. Not losing sight of its mission, which consists of getting information, it sends out without interruption into the interesting directions, the "eyes" of which it is the reservoir. Be on guard against the dangerous temptation to push with the main body up on to the line of observation of the patrols when one's duty is to remain as their support*

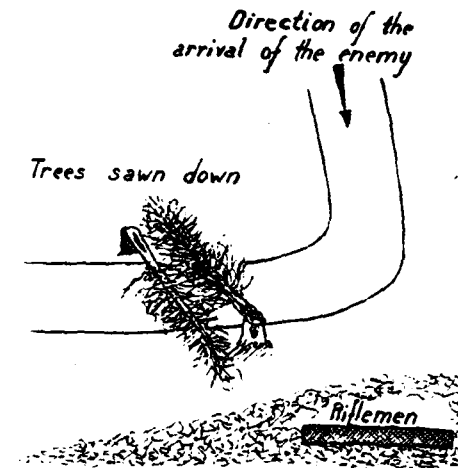


FIG. 2.

and rallying point. Most often the contact squadron warned of the proximity of contact†, organizes itself in support of its reconnaissances and patrols at a favorable point. It is then generally exposed to surprises by hostile cyclists or by armored automobiles. To prevent these, it is necessary to organize *temporary barricades* on all the neighboring roads and lanes, by

*In the forest of P——, where we were operating as contact squadron, parallel with a squadron of a neighboring regiment, we witnessed the surprise by German infantry of this squadron, which had advanced up on to the line of "eyes."

†We recall that the contact is determined by fixing the limits of the hostile line. Visual observations, information from inhabitants, will often be insufficient, and the fire of sentries will alone establish the location of that line.

falling across these approaches, nearby trees, hastily sawed. The latter should not be entirely detached from the stumps but should remain attached by the bark so as to make them difficult to displace. One should be careful to clear the road when leaving the vicinity, so as not to compromise the circulation of our own automobiles. The location of these barricades will be chosen, preferably near a turn in the road or a fold in the ground, so that the enemy will be close up before he sees them. The riflemen assigned to this duty will be placed on the flanks 200 to 400 meters from the road and in the direction of the enemy, thus holding him under fire during all the time he is stopped in front of the barricade.

These kinds of protecting ambushes facilitate the task of the squadron and give it an effective security. *Detachments of chasseurs cyclists* are at times placed at the disposition of contact squadrons. We have found it very advantageous to employ them as support, to hold behind us defiles or points of passage necessary for our retreat, and also to cooperate in the attack of a village with our platoons. We refrained from trailing them along with us across fields, to the detriment of our mobility. Whilst receiving their independent mission, they remain in connection with us, in order to be able on our call, to rapidly intervene at an opportune point. If the contact squadron rests at night in a farm or hamlet, with horses saddled and bridled, and men equipped they should encircle it with wire, fagots, ploughs, etc., keeping only one double exit and not letting any inhabitant go out of the enceinte, whatever may be his pretext. This measure, concerning the inhabitants, will be the rule in villages where the squadron stops during the day. In hostile country, several hostages will be gathered upon arrival who will be guarded during the entire halt; the telegraph or telephone offices will be destroyed or occupied, all ringing of bells forbidden, signals of all kinds watched for. Inhabitants coming from outside will be allowed to enter, but no one will be allowed to go out. The attitude of the officers and non-commissioned officers will be dignified, but very firm, especially with the officials, such as the burgomaster, school teacher, etc. It is the custom to take possession of the public funds and to set the clocks to the French time. For the transmission

of information, the dispatch post is indispensable; there will be attached to it always one or two cyclists. The dispatching of the above mentioned information will be made whenever possible by telephone, to gain time.

Combats.

It is well to continue to prepare the troops for *shock action*, which we will certainly have to use later. But it is necessary to be on guard against the ways of hostile cavalry, who always try, by a crafty retreating movement, to draw us into ambushes of infantry or machine guns. Without ceasing to preserve our natural keenness, we should avoid prolonging our pursuing gallop beyond three or four hundred meters, if we do not know where it will lead us.

As to *fighting on foot*, it has taken on a fundamental importance, and preparation for it should be actively pushed. It comprises:

Combat on foot such as we know, with opening of fire near the horses, sometimes even with the bridle on the arm, but also:

Combat on foot like that of infantry, the horses left at a long distance, with progression of firing lines up to contact, and up to shock action with side arms on foot. For that, it is necessary to organize the horses in a mobile column able to rejoin rapidly and take away from those fighting on foot all anxiety about their mounts. The men will be habituated to advance like infantrymen, with the carbine and the lance, if they have no bayonets. In this case, the trooper carries his carbine in his right hand and lets the heel of the lance drag, while he holds it in his left hand near the point. This exercise of advancing on foot may be prolonged for several kilometers. Marching to action, use the woods, shelters and defiles; in open ground, the march will be executed in small columns at wide intervals, with a non-commissioned officer behind each column. Beware of crests and cross roads, etc., which may be already ranged by the hostile artillery; cross them by increasing the gait and lengthening the distances. The attack, in open ground, will be made in several lines advancing at long distances and preceded by a platoon of advance guard, in line

of squads. The lines will successively take the same formations as the first, whether their mission is, according to circumstances, to outflank or to reinforce. When the *attack* takes place in *close country* or in the fog, it is necessary to beware of surprises, to increase the service of small protecting patrols, to assure the direction of march by means of the compass and by the visible lines of the ground, to watch out for connections. The distances may be diminished but the intervals should be maintained. *In the woods*, it is preferable to have recourse to the line of squads, by four, by two or by one, with a guide at the head and a non-commissioned officer at the tail, these small columns keeping well connected. In case of encounter, the first elements attack directly to the front, those which follow try to deploy.

In every employment of fire, it is always recommended to the chiefs of platoons to indicate low elevation and keep the firing low.

SECOND PART.

Cavalry in the Trenches.

Measures Preparatory to the Occupation of the Trenches.

The squadron arrives, mounted, at dusk, at a designated point, always situated three or four kilometers from the trenches. It dismounts, except one man of each three, to whom falls the care of leading two horses by hand, one on the right, the other on the left of his own horse.

The dismounted column is put on the march toward the trenches, it having been furnished before leaving the horses, with, an extra supply of cartridges, carbine with bayonet, or carbine and lance — this latter carried over the left shoulder, overcoat across the shoulders, cleaning kit, including mess kit, cold meal and reserve ration and a blanket. It is led to the entrance of the approach trench, where its emplacement is indicated to it by a connecting agent of the commander of the sub-sector.

In the course of the march, the cooks are left at some distance, at the locality—farm, hamlet, etc.—where each night the supplies are left by the provision wagon.

Each platoon, under the command of its officer, occupies a portion of trench. The captain, sometimes, occupies with his agents of communication a post of command dug behind the trenches, with which it is habitually connected by communicating trenches. But more often this installation is missing, and all the officers take their places among their men.

The whole system is under the orders of a commandant of sector—General, Colonel or superior officer—seconded by the commanders of sub-sectors.

Warm meals are carried up in the evening under cover of darkness; they are composed of the ration for a period of twenty-four hours.

Duties in the Trenches—Precautions to Take.

Trenches of the First Line: In the daytime they will be permanently guarded by a post of observation occupying a special shelter. It is necessary to avoid showing oneself at the loopholes, and to crouch when passing them in the trench. Prevent idleness among the men, by occupying them in improving their underground quarters—superior shelters, green branches, making the soil healthy, etc.

The men will remain constantly equipped, having their arms within reach. If they have lances, place them on top and in front of the parapet; they are thus ready for eventual use and do not encumber the trench.

In case of attack, avoid wasting ammunition. Open fire at short ranges, with sights set at 200 meters, and observe the order of "hold or die."

At night, place at some distance from, and on a long face of the line, a listening post—a corporal and a trooper—lying down or sheltered behind a tree, a slope, etc., and in permanent connection by voice, with the trench where a sentry is watching. Abstain from visible light. Avoid sleeping heavily in the trench.

Trenches of the Second Line: The service is analagous but a little less severe by reason of the distance. One is more exposed to hostile shells.

Attack of Hostile Trenches.

Every attack of hostile trenches should be minutely worked out in advance. One should have reconnoitered the terrain, the trace of the hostile trenches, their flanking defense, machine guns, their accessory defenses—wire, *trous de loup*, etc.

The installation and intervention of our machine guns should be also foreseen and organized, as well as the communication with the artillery.

The attack is made by a strong line of skirmishers, accompanied by sappers carrying wire cutters, grenades, explosives, etc. This first line is, if possible, furnished with shields or sand bags, behind which it takes shelter, opening a steady fire on the hostile trench. During this time the sappers work at the destruction of the wires. As soon as the hostile trench is reached, it is rushed with the bayonet. If the attack succeeds, the attackers install themselves in the hostile trenches; the reserve spreads out to right and left and pushes ahead after the enemy.

The *night attack*, executed by troops knowing well the terrain and the position, is employed to recover a point of defense lost during the day, or else to gain ground toward the hostile trenches. In the first case, they advance in a line of small columns, preceded at short distances by patrols. If the enemy lights up the terrain by his search lights or his rockets, lie down during all the time the light remains. A reserve marches behind at a short distance, and coöperates in the occupation, consolidating it. In the second case, patrols are pushed, at the commencement of the night, up to contact. As soon as they are fired at they stop, shelter themselves by digging holes and report. The troop then moves up to the line of the patrols; it digs, in its turn, trenches between the holes of the patrols and installs wire in front.

All this is afterwards perfected.

The End of the Mission and Measures to Return to the Cantonment for Rest.

The mission of occupation of the trenches always lasts from four to eight days. The return is affected with the same measures of detail as was the going in. The led horses are brought up at a stated hour, near night, to the place where they were previously quitted.

SUPPLEMENT.

Advice of a Purely Practical Nature.

Subsistence.

The reserve rations keep very poorly in their packages, where they are exposed to damp air, to the lye of the stables, barns, etc. It is necessary to examine them carefully and to put them, if possible into a metal box.

Light.

The lack of light is frequent; several electric lamps with a reserve of batteries and bulbs should be provided.

Carry besides, a folding, triangular lantern for candles, practical and small.

Finally, these means of lighting may be very well completed by a bicycle lantern for acetylene. Find a place for it on the machine of one of the cyclists of the squadron, who can thus light the road in front of the column during marches on dark nights; in cantonment it will take the place of an indoor light. Its provision with fuel is easy, with a small supply of carbide, which will find a place in the chest of the baggage wagon.

Smokers should furnish themselves with a patent tinder box with wick, very useful when the wind blows.

Clothing.

The new light blue cloth has not been finally adopted for the cavalry.

The officers have an interest in being from a distance undistinguishable from their men. They should sacrifice the nicety of fit, very natural when in garrison, and wear loose clothes. These do not impede the circulation when sleeping in one's clothes, and they permit the wearing of warm vests and underclothes.

The rank insignia should be reduced to the minimum allowed by regulations. Decorations, very conspicuous, should be marked only by a ribbon.

The best *gaiter* is the issue model with instep cover. One may prefer the puttie, but in this case, one must attach to the spur straps an instep cover of leather to protect the eyelets of the shoes from the rain.

The *ordinary laced shoe*, oiled and flexible, lightly hob-nailed is the best for march on foot, now customary.

Whatever it may be, the shoe should be chosen a little large. During cold weather, one will make use of two thicknesses of socks, the one worn next the skin being somewhat finer in texture, covered over by a paper sock. But as the paper preserves the foot at its initial temperature, the latter should be very warm when placed in the arrangement. If it is put in cold it will keep this temperature and not get warmed up. For cantonment we recommend a pair of barrack shoes in felt, water-proofed rather strong in the sole; wear them in rubbers on rainy and muddy days. Very much recommended is a false stocking of wool, knitted, without feet, black from ankle to knee, and red, or shade of breeches from the knee to its upper extremity. It advantageously replaces the leggings or leg bands; it can also be worn under the gaiter when very cold. The upper part may be turned under in a cuff (like the stocking of a cyclist), or drawn over the knee and thigh, which it keeps very warm.

The gloves should be preferably impervious to rain, but especially large and soft. For the cold, one wears over a thin glove of fine wool, a very large glove of fur.

The warm underclothes include a sweater without collar, to which one can on the march add a double plastron of fine knitted wool. As a complement to this paraphernalia, one

should be provided with a double plastron of paper, suitable in case of very great cold, to cover over all.

Neuralgia of the head is avoided with a knitted head covering. It should be of very fine wool, in large meshes, in order not to impede the circulation of the scalp and neck.

The cavalry overcoat, with removable, hooded cape—this last provided with an interior lining in the upper half, of water-proof material—should be reinforced with pieces of water-proof material over the knees.

Equipment—Horse Furniture, etc.

Many officers make use of a double sling of leather worn over each shoulder and supporting a belt, to which are attached

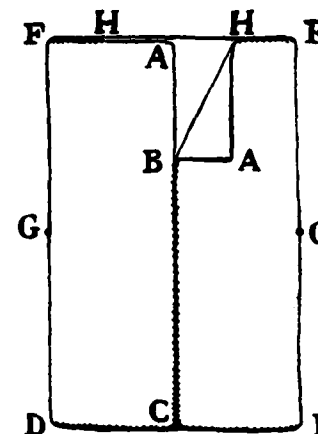


FIG. 3.

revolver, field glass, etc. This system, permitting rapid putting on, avoids besides, the compression of the chest produced by wearing cross-belts.

The horse-blanket of the regular outfit may be transformed permanently into a practical sleeping bag, without prejudice to its normal use under the saddle. It will thus render the most appreciable services in bivouac, or upon the straw of the cantonment. For this change, the blanket being extended flat, turn overtoward the middle the two borders of the short sides. Sew from B to C and from D to E, as well as

from H to F. The corners A remain movable between B and H. which facilitates getting into the sack.

One may be assured besides, against all injury to the back of the horse, if the sack is provided with a buckskin on the outside part of the bottom, between G and F. This skin will preserve besides, the cloth from becoming impregnated with the horse sweat; it will constitute also a little mattress under the back of the sleeper in the sack.

BREAKING AND TRAINING COLTS.*

Suggested Precautions in Early Horse Training.

THE erroneous idea that cruelty in horsecracking and training is necessary is practically a thing of the past. Well directed patience has been found to give better results than inconsiderate application of the *persuader*. However, all horses are not to be treated alike; a high-strung, sensitive horse must be handled gently, the dullard treated sharply. "The first thing in training a horse is to get his attention; second, make him understand what is wanted. The education of the horse continues the bulletin, is based on reward and punishment and each should immediately follow the act. The advantage of breaking a horse when he is young before he has developed a strong independent instinct is easily seen. The plan generally followed is to break the colt to being led and handled before it is weaned, and to break to harness between the ages of two and three years. Colts should not do heavy work until they are four years old and should be accustomed to it gradually.

The following description of a rope harness to be used in teaching the colt to stand is also used in the first lesson on leading. A colt tied with this harness cannot easily injure himself in his efforts to get loose. A pull on the rope, as adjusted,

*Extracts from Farmer's Bulletin No. 667, Department of Agriculture.

exerts a pressure almost simultaneously on the crupper, surcingle and on the halter.

Before a colt is broken to being led it should be taught to stand tied; this applies to unbroken horses of all ages. To do this, put a strong halter on the colt; then take a rope about fourteen feet long, double it, putting the loop under the horse's tail as a crupper, twist the two ends together about three times so the twisted rope lies on the colt's back a few inches ahead of the tail, then let one come forward on each side of the horse, and tie them together in front against the chest just tight enough so that it will not drop down; then run a surcingle loosely around the horse behind the withers, tying into it the crupper rope at both sides. Have an additional rope about twelve feet long, run it through the halter ring, and tie it at the breast to the rope that forms the crupper. Tie the other end of the rope to a solid post, allowing about three feet of slack. Leave the colt tied for an hour. Another method is to have a loop in one end of the rope, run the lead strap through this loop, and tie it with a little slack to the rope that forms the crupper, the other end, of course, being tied to a solid post.

While tied the colt should be gentled and accustomed to being handled on both sides, on the hind parts, and on the legs. To do this, hold the headstall in one hand and with the other hand pet and rub the colt, first on the neck and head, then on the back and sides, and last on the legs. To gentle the hind parts take a stick about four feet long, wrap a gunny sack around one end, and tie it. Allow the colt to examine the stick with his nose, then rub it all over his body.

With this arrangement the colt's hind legs may be rubbed without placing one's self in danger of his heels. If he kicks at it do not hit him, but allow him to examine it again, and proceed as before. This lesson should continue until the colt will stand being approached from either side and rubbed all over. The second day he may be tied up again and further gentled with sacks, blankets, and noises until he has no fear of them around him, under him, or upon him.

Another method of gentling a horse is to tie the halter rope to the tail. This forces him to go in a circle. When he gives in and stands quietly he may be harnessed, saddled, mounted,

accustomed to strange sights and sounds, and handled with safety. This is one of the best aids in use in gaining a horse's submission.

BREAKING TO LEAD.

The horse is now ready to lead. Loosen the rope from the post, step off from the horse, and tell him to "come," following the command with a pull on the rope. As soon as the horse advances pet him, then step away and repeat. He will soon follow without the pull on the rope.

The next day the crupper should be put on at the beginning of the lesson, but should be discarded after a short work-out and the halter alone used so that the colt will not depend on the crupper rope. These lessons should be continued until the colt leads satisfactorily.

To break to lead without crupper ropes use a strong halter with a lead rope. Step back about six feet from the colt, opposite his shoulders, cluck to him, and pull on the rope. The colt will be forced to take a couple of steps; reward him; cross in front to a similar position on the other side and repeat the command with a pull. Continue the lesson until the colt follows. Never pull straight ahead on the colt; he can out-pull you. Use diplomacy rather than force.

BREAKING THE COLT TO DRIVE.

After the colt has been broken to lead he may be accustomed to the harness and trained to rein. The horse should never be hitched to a wagon or ridden before he is broken to drive in the harness. He should be trained to answer the ordinary commands. In familiarizing the colt with bit and harness the *bitting harness*, which consists of an open bridle with a snaffle bit, check and side reins, and surcingle with crupper, may be used. This rigging is put on the colt leaving the side and check reins comparatively loose, and he is turned loose in a small paddock for an hour. The second lesson consists of teaching the colt the feeling of the reins which may be tightened somewhat. The third day the driving reins may be used and the colt is taught to go ahead. Cluck to the colt, or tell him to *get up*, use the whip and let him know what is meant.

Both sides of the colt should be trained, as objects viewed from different angles may frighten him badly. Driving in a right and left circle will facilitate this training. The next lesson consists in teaching the horse to answer the commands of "*Whoa*," "*Get up*" and "*Back*."

After teaching the horse to go satisfactorily in the biting rig, the work harness with breeching can be substituted. The traces and breeching should be joined loosely together and gradually tightened, as the work progresses, thus familiarizing the colt with the sensation of wearing the collar and breeching. He is then ready to be hitched to the wagon or cart single or double.*

BREAKING COLTS THAT BALK AND KICK.

In breaking the colt to draw a vehicle the horse may develop bad habits unless he is properly handled. The most common cause of balkiness among horses is punishment to make them do something that they can not do or that they do not understand how to do. If the horse balks because the load is too heavy, and he is not allowed occasionally to rest and regain his breath, the use of whip or spur will very often provoke further and more stubborn rebellion. He should be given a short rest, and while he is resting, rub his nose, pick up a front foot and tap the hoof a few times, or adjust the harness and he may forget his balkiness. Take up the lines and give the command to go ahead, turning slightly to the right or left to start. If the horse does not start it is either a case of over load or a chronic balker. If the former, the load should be lightened, but in the case of the latter, training will be necessary to overcome the habit.

Where the balking habit is fixed, the horse should be trained to obey all commands with promptness without being hitched to the wagon. First put on the double trip ropes which consist of a strong surcingle, four two-inch iron rings, two straps to go around pasterns, and a rope about twenty-five

*Breaking the colt to drive double, also to ride, dealing with bad habits, throwing a horse, etc., are other features of this bulletin, No. 667, which may be had upon application to the Department of Agriculture.

feet long. Fasten two two-inch rings to the underside of the surcingle and put straps with rings on front feet. Run end of rope through near ring on surcingle, through ring on near foot, up and through off side surcingle ring, down, and tie to off fore foot. A pull on the rope when the horse steps will bring him to his knees. Always use knee pads or have the horse on soft ground, where he will not injure his knees.

Use the ropes until the horse stops and stands when he hears "whoa." Next put on the guy line, which should be managed by an assistant, while you drive and attend the trip ropes. The guy line is a rope fastened around the horse's neck and a half hitch over the lower jaw. It is very severe and should not be used to excess. If the horse shows any tendency to balk, give the command "whoa" before he stops of his own accord. When ready to start, the assistant should take a position in front of the horse and smartly jerk him forward with the guy line at the same time you give the command "get up." Repeat the process of stopping and starting until the horse shows no signs of self-will. Use the guy line and use it severely, on the slightest intimation that the horse is going to balk. After a few of these lessons the horse may be hitched to the wagon. The trip ropes and guy line should be kept on until he is well broken of the habit.

In treating the colt to overcome kicking put on the harness and trip ropes. Let the assistant take a stick about four feet long, wrap a gunny sack around one end and tie it. With this the assistant, if he stands at the colts shoulders and holds the halter with one hand, can rub the colt's hind legs without being placed in danger of his heels. If the colt kicks, do not hit him but allow him to examine the stick again, and proceed to stick and pole him all over; that is, make him become accustomed to being touched on any part of his anatomy without kicking. After he becomes submissive to the stick, tie sacks of hay to the traces and breeching and continue the lesson until he pays no attention to it.

Fasten a long pole on either side of him, with one end to drag on the ground, the other end to be fastened to the shaft carrier. Drive the colt around with these, and if he attempts to kick steady him and pull him to his knees. This should be continued

until he submits to the poles dragging between his legs and all around him. This is also a good lesson to be given a colt that does not kick, before trying to drive him single.

CARE OF THE COLT'S FEET.

The care of a horse's feet should commence when he is a colt, that is, before he is weaned. Untrimmed hoofs usually grow long and uneven, and a crooked foot, or worse, a crooked leg is the result. Failure to regulate the length and bearing of the foot may make a straight leg crooked or a crooked leg worse, while intelligent care during the growing period can gradually improve a leg that is crooked at birth. When picking up a colt's foot teach him to stand on three legs and not depend on the one holding up his foot for the fourth point of support. The handling of a colt's feet begins with the near front foot. Tie a rope around the pastern, grasp the rope close to the foot, push gently against the shoulder, and quickly lift the foot. The lifting of the foot must be simultaneous with the weight shifting to the other feet. Gentle the foot and leg and let it down. Repeat several times and then trim and level the hoof.

To raise a hind foot, put on a rope as on the front foot and draw the foot forward. To put a rope on the hind foot of a wild horse, tie up a front foot, have the assistant hold his hand over the eye on the same side as the foot to be lifted, or take the headstall in one hand, the tail in the other, and whirl the horse until he becomes dizzy. While in this condition he may be handled with safety. Lift the foot forward two or three times and gentle it. As soon as the horse gives in, carry the foot backward into a shoeing position and trim the hoof.

To handle the feet of a horse that will not stand still, or that kicks, a halter twitch is a great aid. This twitch is easily applied and needs only the ordinary halter and tie rope. Pass the rope over the horse's head just behind the ears; raise the upper lip and put the rope across the gums above the teeth; run the rope through the loop made by passing the rope over the horse's head. The rope should be tight from the halter ring, over the head, under the lop, and through the loop. A few good pulls on this rope should make the horse stand quietly.

OUR BAPTISM OF FIRE.*

BY MAJOR A. SEEGER, COMMANDING THE HORSE ARTILLERY BATTALION,
FIFTEENTH FIELD ARTILLERY, GERMAN ARMY.

TRANSLATOR'S NOTE: The register shows that the horse artillery battalion, Fifteenth Field Artillery, was stationed at Saarburg with Headquarters and one battalion (light). The other battalion (light) was stationed at Marchingen. The Fifteenth Field Artillery was brigaded with the Eighth Field Artillery, stationed at Saarbrücken, forming the 42nd Field Artillery Brigade. This brigade belonged to 42nd Division (Organized in 1912) which with the 21st Division formed the XXI Army Corps.

The Cavalry Division mentioned in this report was probably composed of the 30th Cavalry Brigade (11th and 15th Uhlans) stationed at Saarburg, and the 16th Cavalry Brigade (17th Dragoons and 7th Uhlans) stationed at Saarbrücken. The mention of the 26th Brigade in the report is evidently a typographical error; it should be the 16th Brigade no doubt. Since the Fifteenth Field Artillery is the only one of the four artillery regiments in the XXI Army Corps which has a horse artillery battalion, it is quite likely that ~~there was~~ the only artillery with the Cavalry Division, the other battalions (light) being held with the Army Corps.

A FEW days after the orders for mobilization, the Cavalry Division to which we belonged was assembled at Saarburg and awaited with impatience the order to advance in order to get in contact with the enemy. Pending the arrival and the detraining of all the troops, the battalion had been designated as the main reserve for the troops protecting the frontier between the Vosges Mts., and the neighboring corps at Metz, being required to be ready at all times to take the march in case the French should, as was generally expected, make a sudden advance with strong forces against our comparatively weak force protecting our frontier.

But the attack was not made, and the mobilization was able to be carried out to its successful completion as planned.

*Translated from the "Artilleristisch Monatshefte" by First Lieutenant E. L. Gruber, Fifth Field Artillery, for the War College Division, General Staff.

As early as the second day of the mobilization, the first troop trains, enthusiastically greeted by us, began to arrive from the Empire. They were Bavarians from Augsburg and Lindau, who were received with an interminable cheering by their people* who were rather fearful of their own safety. It was evident to all that at this point so close to the frontier, some real fighting would soon take place. The events of August 17-20, have substantiated their apprehensions only too forcibly and the houses and barracks shot up during the bloody battle of August 20th, are today eloquent evidence of this. Without any more delay enroute, the Bavarians at once marched to their positions near the frontier in order to release for other duty the troops regularly garrisoned at Saarburg, which were to be assembled in their divisional organization. Under the protection of the Bavarian lines, every one, both civilian and military, looked toward the future with confidence and calmness.

When the capture of Liege and the early glorious victories of our troops became known here, our longing also to be permitted to speak with our guns grew apace.

Mobilization was accomplished according to schedule. Every man and horse, ammunition, the readiness of the command to march, all were reported in order even before the appointed time.

On August 8th, at noon, the "alarm" was suddenly sounded and orders were given to move out. In a half-hour the battalion was ready to move and proceeded to the rendezvous fixed at Haming. On the previous days our Ulan patrols had already reported that a strong hostile force of cavalry supported by artillery and cyclists was in movement in the country south of Linneville. This was no doubt the Cavalry Division stationed at that place, supported by troops from Toul. Some prisoners were being brought to the rear. They were cavalry patrols which were simply nabbed and hustled away by our Ulans as in 1870, and then made captive. These men were cavalry from the South of France, from Lyon, who in their full peace equipment had been hurriedly forwarded by

*The inhabitants of Saarburg are Bavarians, being in the Bavarian Palatinate.—Translator's Note.

rail. At noon, in the heat of a torrid sun, the advance to the frontier was begun on the road St. George—Foulcrey the troops cheering as the boundary was crossed. A halt was made at Hill 351 near the frontier. The battalion was assembled in formation and then went into a position. The advance cavalry squadron had already advanced beyond Blamont—Domevere—Verdenal and made its reconnaissance without having found the enemy.

To our left the Bavarians were engaged around Blamont, which was occupied by them that same evening. The inhabitants displayed great hostility even on this first day, and shortly after, their behavior led to a terrible summary punishment, which included also the neighboring villages, where, in a treacherous manner, they had fired upon our troops. Bivouac was made a little further back, our first bivouac in the enemy's country and under a clear star-lit sky. The next morning camp was broken and the advance into uncertainty was resumed. A position in readiness was again taken, pending the receipt of information concerning the enemy. We reconnoitered and searched the terrain with our splendid scissoring observing telescope. In the far distance, fully over six km. away heavy clouds of dust gradually became visible near Gondrexon—Reillon—Chazelles, beyond the extensive Bois de Grand Seille. The range was too great to warrant opening fire at the target which by its movement was gradually identified as cavalry. In keeping with the principle not to open fire at such a great range, I refused permission to my battery commanders to disclose our presence so early in the fight.

Finally at 3:00 P. M., the order came to move up closer and to advance under the support of a force composed of Bavarian cyclists and Jägers, via Autrepierre to Gondrexon. In the latter place strong hostile cavalry detachments and a lively commotion were again disclosed. I caused the battalion to go into position very near to and above Autrepierre, in order to support the Jägers with our fire from this commanding position. The battalion went into position as if engaged in peace maneuvers; suitable observing stations were reconnoitered and selected; telephone communications were established and sectors assigned. Nothing could be seen of the

hostile artillery, and later this was the general rule. Suddenly there appeared at a distance still over 5000 m. an escadron trotting along near Reillon enveloped in a thick cloud of dust. I ordered one battery to open up suddenly with a surprise fire, and the first shots, breaking our terrible suspense, reverberated over the sunny fields. The effect of these first shots though a little short, was startling. The enemy was plainly seen to hesitate being very much surprised by these first shots from German guns. He then suddenly turned about in order to get back behind the crest by constantly increasing the gallop, being followed by our fire of increasing rapidity which was undoubtedly producing losses as was plainly to be seen, so that he soon disappeared in an extended gallop. No other target worth while was to be seen. Through the neighboring village of Autrepierre which was already in the possession of our Jägers, the march was continued to Gondrexon, with the cavalry in front. Our patrols had reported the hostile cavalry as marching away toward the South, so the advance was continued without interruptions to Chazelles where a halt was made pending further information. This second advance made at a rapid gait in the excessive heat of the afternoon had put a considerable strain on our horses and they perspired quite freely. At Chazelles our patrols came rushing back in a headlong gallop calling out: "Strong force of hostile cavalry with cyclists and artillery along the road on the low ground between Fremenil and Ogeviller." I at once rode over to the Division Commander and requested permission to take up a position southwest of Chazelles on Ridge 297 about 1500 m. to our front in order to take under fire as quickly as possible the target, which according to the map, could be done very advantageously.

Before leaving, I saw for the first time, plainly visible to our right front, the outline of the Forts at Manonviller, about eight km. distant. My attention was thus called to the fact that it was not impossible that we might come under the fire of the heavy guns located there, a circumstance which became of increasing importance, on account of the French network of telephone communications which was surely in existence and remained undamaged as further events also proved. After a rapid estimate of the situation and a short discussion with the

general staff officer, who believed that the range to the French Artillery was not over 6000 m. with which estimate I however disagreed, the advance to the ridge was made at a gallop, the batteries having been ordered to do their utmost to get into position quickly. In front of us our cavalry was deployed, being previously dismounted to fight on foot, and were firing upon hostile cavalry at St. Martin, who replied with desultory fire at about 1500 m. range. Very soon after, our skirmishers withdrew, in order to make room for our batteries which were advancing at a gallop in double section column. Upon reaching the top of the hill, I saw before me a panorama most alluring for a field artilleryman, a picture such as is seldom seen either in maneuvers or during firing practice. At about 3800 m. a great highway (Fremenil—Ogeviller) and on it cyclists in columns of twos moving along leisurely; beyond the road some artillery halted in a meadow by the road side; farther up the slope near the village, a strong force of cavalry in assembling formation. The neighboring village of St. Martin was occupied by hostile skirmishers, who now were delivering a livelier fire as my battalion headquarters showed itself and our cavalry skirmishers began to withdraw. In sizing up the situation I had immediately decided to move rapidly into an open position in order not to lose a single second. Riding along at a gallop, I roughly designated the positions of the batteries, two batteries to the right and one battery to the left of a sheep-pen, batteries to go in in the order of march, move by the flank and execute action to the flank. As the Battery Commanders, not very far distant from their batteries, came up to me, the hostile (small arms) fire became stronger but caused no losses. After galloping for 1000 m. and straining all efforts to the utmost the batteries came through a high field of corn up to Hill 297. Having first oriented every one, I quickly gave only the following orders: "Haste is urgent. Here's a chance to get a few Iron Crosses. Fire upon everything that is standing or moving down there. Right battery—Cyclists; Center battery—Artillery; Left battery—Cavalry." The excitement and the tension of all the men had reached its highest limit, and every one realized that in this particular case the effect produced came before any consideration of cover. The

battalion went into position as if it were on the drill ground where we had so frequently practiced this same maneuver. Shortly after unlimbering the first shots were fired, which although a little short, acted like fire heaped on a pile of ants. The cyclists energetically increased their pace, one could see how vehemently they were putting all possible power into the pedals, in order to get forward. The next shots followed quickly and already produced visible effect, empty bicycles, dead and wounded, a part dismounted and in proper manner sought cover in the ditch along the road; the other part was less wise and sought safety in flight, but by increasing their pace merely hastened to their destruction.

In the mean time the center battery had unlimbered and fired on the artillery which was halted alongside the road. They at once mounted up in order to get away. But the shrapnel reached them easily, because the trees lining the road gave little protection while the ground beyond the road was very open and in plain view. The enemy's guns separated moving away to both sides at a gallop. In a very short time two guns were put out by our fire and left standing unable to move. The others under the protection of the trees, attempted to escape on the road to Ogeviller whereby it was very plain to see the drivers cutting and slashing their horses with their whips and endeavoring to urge their horses to exert their greatest efforts. The cavalry, at a halt near a small stretch of woods, disappeared quickest of all. No sooner had the first shots fallen in their midst than all hurriedly mounted and rushed madly away, and as was plainly seen, without either order or command, every one being obsessed with the mad desire to get to safety in any old way.

The rapid fire of my batteries, had up to this time, called forth no reply from the French artillery. We were all intent on inflicting as much damage as possible upon our careless opponent down below, and all our attention was concentrated on this objective. It was like a scene taken from our firing practice. The few small arms bullets which occasionally struck the ground were scarcely noticed. In this infernal noise of the gun fire, I directed the fire of the batteries as near as was possible under the circumstances. I passed along the

different batteries making corrections in such cases where I thought the shots were not properly placed or adjusted. Then suddenly, the first hostile artillery shot from some concealed position came whizzing toward us, followed immediately by a second, third and fourth, all four being fired with the same range and height of burst, and about 150 m. in front of my battalion. The burst of the shrapnel were rather high and therefore ineffective. "So that's it, at last!" said I to myself "Things are really first beginning," and I became curious over the probable outcome of the duel. For many years we had witnessed the firing of many rounds at our firing practice and at the School of Fire, had also observed the effect as seen from the firing point and from the range party near the targets and had obtained a distinct impression of the moral and actual effect produced by our German projectiles and the extent of the zone swept by their fire. But what I saw here did not come up to my expectations and this first impression remained unchanged during the whole course of the fight. My curiosity increased appreciably as I, after having taken cover with my staff behind our observation wagon, followed the fire for adjustment of our opponents. Being in an almost open position on the crest we presented an admirable target, something which we never again did in the future. The second French salvo burst in the prescribed manner about 100 m. in rear of the battalion, the fragments and bullets whizzing down the reverse slope behind us and almost reaching the position of the limbers in the hollow, but at present without doing any damage. I had a very distinct impression, that the pattern of the French shrapnel, as was previously known to me, had a smaller density of hits than our German shrapnel, and that many bullets spent themselves in the air, not reaching the ground until too far distant from the point of burst. This impression also remained unchanged during the whole campaign. It seemed to me that the "shower of bullets" common to our German shrapnel was lacking. After about two minutes of ineffective firing with shrapnel, a change was made and the first shell came rushing along, and we saw instead of the shrapnel white smoke balls, the black smoke produced by impact shell bursts accompanied by a violent and deafening detonation. Our opponent was

constantly coming closer with his projectiles and the moment was not far distant when the shots would be striking right in the midst of the batteries. Again we felt a curiosity of what would come next. There seemed to be very little nervousness among the cannoneers. At last the expected rafale came right in the center of the battalion, in fact right in the center of the battery. I looked in that direction and saw the projectiles bursting in front and in rear of the battery, and heard the clink of the fragments as they struck the shields. One shell struck about 5 m. from a trail, detonated and completely covered with earth a cannoneer who was engaged in bringing forward some ammunition baskets. He stopped for a moment, shook off the clumps of dirt, and then continued to carry his ammunition to the gun just as if nothing had happened. It was very noticeable how the men at the caissons got in closer and sought more cover of the shield, and that they then at once began to dig, in order to fill up the intervals with earth.

A part of the enemy's force below had disappeared, or was behind the cover offered by the road, seeking protection from our overwhelming fire. Of the cyclists we could see only the tail end as they entered the village, the entrance to which I had immediately taken under fire with shell in order to compel them to halt and thus cut them off. Later on it was seen that the greatest effect was produced here, not only against the cyclists but also against the fleeing cavalymen who tried to escape. Our advanced cavalry patrols, who had gotten a point of vantage very close to the village confirmed our observations of the effect and the panic which our fire had produced. These became still greater when the buildings at the entrance of the village began to burn as the result of our shell fire. In the meantime the hail of hostile shell around my battalion became also more dense, but the relatively small effect produced raised the assurance and self-confidence of our cannoneers; they were leading, laying and firing more calmly. After our batteries had now been firing for about fifteen minutes, it was still impossible for us to locate the hostile batteries (there must have been several). We searched the whole terrain with our scissors observing telescope, examining all the crests, woods and edges of villages. I thought that I could see something moving in a

church steeple and some indications of smoke behind a certain roof which showed up brightly. The fire of the nearest battery was at once directed upon this target. The instrument sergeant—a young aspirant for ensign—had quickly measured the offset in deflection and the angle of site, going about his duties just as calmly as if he were on the drill ground. Almost immediately the first shots were falling in the village, where the barns which were full with the harvested crops were soon bursting into flames due to the intense heat of the summer. After this the hostile fire seemed to diminish somewhat.

It was now necessary to again pick up any target which might still be visible and to make a re-assignment of these targets. At this moment a new and very strange sound was heard like the buzzing sound made by a heavy gun projectile. This was immediately followed by a second, third and fourth and they all struck in the immediate vicinity of our right or exposed flank. Shortly after this there came a terrific detonation with the burst directly in front of our guns. Enormous clouds of dust were produced and fragments were projected in all directions. A glance to our right and the riddle was solved. There was no doubt about it, we had gotten within the range of the guns of the Forts of Manonviller, which were subjecting us to an enfilading fire. There we were, a beautiful target for the enemy, caught in the nicest cross fire. In a low voice, I communicated my fears and estimate of the situation to the Battalion Commander, of the battery nearest to me, a proceeding which under critical circumstances is always advisable. I then counseled with him. Under the circumstances, there was just one thing to do, to get out of this cross fire and to withdraw behind the crest. I gave the order to withdraw the guns by hand, no mean job in the heavy plowed ground and the considerable distance over which the guns had to be moved. To our good luck, all the hostile heavy gun projectiles struck in front of the batteries. They were not quite correct for deflection. A hit would have done great damage. I do not believe that I am far wrong in making the assumption that the position of my battalion was communicated to Fort Manonviller by telephone from one of the neighboring villages, perhaps from Chazelles, being probably sent in by one of their

patrols or by the inhabitants, a fact which we later observed quite frequently:

"On Hill 297, northwest of St. Martin, hostile artillery." The artillerymen in the Fort which fourteen days later was blown to pieces by our 42 cm. howitzers, needed only to set off the proper azimuth in their revolving turrets, and fire could at once be opened at a range which had been previously accurately determined. And this is no doubt the way it also happened. The enemy was completely successful in his attempt to lure us by his voluntary withdrawal, within the range of his fortifications, but his guns which no doubt were 15.5 cm. guns, should have done better shooting.

Two of our batteries had already withdrawn their guns to a position behind the crest and had relaid them. Some time later, one of the battery commanders assured me that his men had never in time of peace moved the guns quite so quickly, nor the ammunition wagons which were almost full. Due to the hurried withdrawal, a considerable number of ammunition baskets were left in front, nearly all of which were later carried back. The third battery which was not within sight of the Fort held its position for the present and continued to fire alone on its opposite target.

In the mean time the fire of the hostile artillery from the Fort had reached the position of the limbers some appreciable distance in our rear, whereupon the limbers moved away at a slow walk, going obliquely to the rear, not however without suffering some losses in men and horses. The French—in keeping with their methods of fire—had also shifted their fire laterally and now systematically searched the whole terrain. In doing so, a few shrapnel burst among our cavalry which had moved out of the fire swept zone by going to the right rear. Here also some damage was done and, as was to be expected, disorder was also created because the horses of their own accord immediately turned about in this shower of bullets. The regiment was however shortly afterwards again assembled in good order. It was still impossible to fix definitely the position of the French light batteries. I continued to have constant observations made, and especially had the terrain searched in the direction of the furrows made by the projectiles which

clearly gave us two different directions of hostile fire. I also had some French shrapnel fuses picked up in order to determine the ranges therefrom. But since these were graduated in seconds and not in meters and a range table was not at hand (later on they were furnished to us) a determination of the range was not possible.

From Fort Manonviller about twenty shots in all were fired, of which number a few struck among the machine guns to the left of our line without doing any damage.

About this time, after the firing had been going on for about a half-hour, the Division Adjutant came riding up and called to me from a distance: "The Division will withdraw in the direction of Chazelles. Your battalion will follow under the protection of the 26th Brigade." I transmitted the order through the batteries and had the limbers brought forward in order to limber up under cover. This took considerable time on account of the losses in horses and men which had just been suffered and also on account of the long way which they had to travel. It took even longer to bring up the horses of battalion headquarters which were hidden in a fold in the terrain. Finally everything was ready for marching and the battalion left the position at a walk. All individual attempts to take up the trot without command and before the proper time, were suppressed by the battery commanders and thus two of the batteries got out of the fire swept zone well closed up and in good order. The hostile fire had already died down considerably when the guns were withdrawn behind the crest. In the hollow in rear there lay an ammunition wagon of the 3d horse battery with the lead horses killed, also a limber, the team of which had also to be changed. Just as the batteries in their retirement had passed through the village, I heard behind me a lively fire coming from the direction of our former position, a circumstance which I was unable to explain. Not until we had reached a point about three km. from the former position, an agent from the second battery came toward us at a gallop and requested that ammunition from the light ammunition column (combat train) be sent forward because there was some danger of the ammunition running short. To my surprised inquiry whether the battery had not limbered up

and followed the others I received the reply that it had not and that the battery had received no order to withdraw.

In spite of the fact that the batteries were emplaced quite close to each other and that the limbering up of an adjacent battery would immediately have been noticed in time of peace, the battery on the left flank of the battalion was still so busily engaged with the enemy, that no one had observed the departure of the others thus leaving this battery all alone under the fire of the enemy, where under the circumstances it might have suffered capture by a more energetic opponent. The order simply did not sift through. Visual communication was impossible due to the nature of the terrain in the position. In the haste made in this fight, where everything depended upon rapidity since the duration of the fight promised to be short, the telephone was not laid, notwithstanding that the regulations prescribe that telephone communications shall be established also when in open positions. The fight was a combat of surprise or pursuit from which later I immediately drew the proper warning and lesson. I felt great anxiety about getting the battery back again and at once sent back for it. Beyond the village, a halt was made. In passing along the two batteries which had now dismounted, I received the reports of the losses. In this connection the junior officer of the third battery reported that the captain and the first lieutenant of his battery were missing and were probably left behind wounded, a report, which as later information proved, was incorrect. As a matter of fact both had remained behind in order to rescue a caisson which had been abandoned and which they did not wish to leave in the territory of the enemy under any circumstances. At this moment, His Excellency, the Division Commander came back and enquired concerning our casualties, which I was able to report as being very slight. At the same time I informed him of the reported wounding of the two aforementioned officers which report immediately spread throughout the entire division.

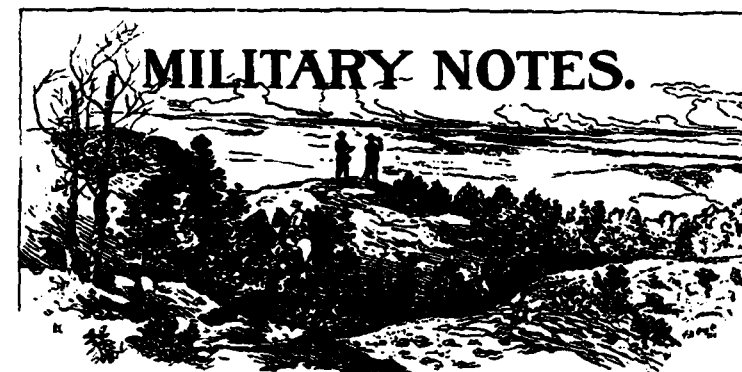
The second battery which was engaged with the enemy for a half-hour longer at last also rejoined the battalion. I was glad to have it again and, as it turned out, without having suffered hardly any losses. This first day of our baptism of

fire did not impress upon us a very high opinion of the firing of the hostile artillery and this opinion remained the same concerning the firing of the heavy artillery. Where real success is not attained, the moral effect will also soon vanish. Every one in the battalion took courage in the feeling: "Well, if this is the worst we may expect, and if the French do not shoot any better than this, especially when they have us in an open position, then we can look forward to the coming battles with full confidence." Later on there were days when the French did shoot better, and made a greater impression upon us in their methods of fire and in the rapidity of their adjustment, than in that day at St. Martin.

On the way back to the place where we were to be quartered I receive a message from our regimental commander who from the heights at Igney had observed our fight through his glasses and who, basing his judgment upon the heavy fire of our opponents, was more or less resigned to an expectation of heavy losses in the horse artillery battalion and therefore wished to express his appreciation and thanks for our brave resistance. The concluding sentence of his message pleased us most: "The hostile cavalry division fled in a mad rush on the road to Luneville, showing unmistakable signs of panic and noticeable losses."

In addition to this very pleasing message, it was also gratifying to hear the thanks and the ungrudging appreciation of our friends of the cavalry with whom we later on fought shoulder to shoulder for several weeks.

This then was our baptism of fire. Only on rare occasions did we later gain a success which was any way near so pretty or so distinctly fruitful in results.



CAVALRY INSTRUCTION.

HEADQUARTERS FIRST CAVALRY BRIGADE.

Fort Sam Houston, Texas, August 26, 1915.

General Orders No. 13.

Combat Exercise No. 9—Pursuing Patrols:

1. In the performance of patrolling or reconnoitering duty it often becomes necessary to trail and pursue small parties of the enemy. Such small parties will not, as a rule, fight unless they are forced to, or unless they secure an opportunity to surprise and ambush our patrols or pursuing parties, in which case flight will, as a rule, immediately follow the surprise, whether successful or not.

2. The particular endeavor of such parties of the enemy is to rob and to kill inoffensive citizens. In proportion to their numbers, small bodies of the enemy are likely to do the greatest damage, and are most difficult to kill or capture. The smaller the party, the more difficult it is to trail.

3. To inflict any damage on such an enemy, surprise is necessary.

4. The presence in the country of such a raiding party is usually first known by the reports brought of depredations committed. The commander of the force sent in pursuit should first, if practicable, secure the services of one or more men who are good trailers and scouts, and are acquainted with the country, the people and the prevailing language; otherwise, enlisted scouts should be used. Such scouts should be well mounted and armed. They should ride in advance with a few men detailed as advance guard. The precaution of having an advance guard should never be dispensed with. The detachment should be provided with rations and forage, (part of it carried on the horses and part on pack animals) with a view to making a long and continuous ride where the cooking of meals may be impracticable. The animals should carry light loads. The methods of the forced march (see G. O., No. 8, these headquarters, Mar. 10, 1914) should be adopted.

5. In readiness for such expeditions rations and forage should always be kept packed, so that the start can be made within half an hour after the alarm.

6. Having picked up the trail, it is necessary that the commander of the detachment should decide as to the rate of march. If, for instance, the enemy is driving loose horses, it is probable that he will not move at a gait greater than four miles an hour. If then the enemy has five hours start, he will necessarily have a lead of about twenty miles, which has to be made up. By marching alternately at a walk and a trot, say, six miles an hour, the enemy will be overtaken in about ten hours marching. If a rate of eight miles an hour is kept up, the enemy should be overtaken in about five hours. If, however, the pursuers march at only four or five miles an hour, it is evident that if the enemy is overtaken it will be only by the merest chance.

7. In the determination of the gait to be taken up much depends upon the coolness and humidity of the weather, the condition of the horses and the weight of the horses' load. In a country interspersed with wire fences and roads, as is

the country along the Rio Grande, the problem of following a trail should be much simplified. By watching the ground along the wire fences it should be possible always to discover where they have crossed. If the enemy is moving on a road, by watching the borders of the road the place where his tracks leave the road should be discernable.

8. It sometimes happens that the enemy scatters to reunite at some point in the vicinity. This is usually done by having men drop out every few paces to take a new direction, usually at right angles from the road. When it is apparent that this has been done, it becomes necessary to scout on the circumference of a circle of considerable radius extending around the place where the tracks have disappeared until the new trail has been found.

9. Close questioning of the ranchers and natives will often secure considerable information. Inhabitants should be questioned separately. Often children will give information of value.

10. The art of following and reading a trail is one of the utmost value and importance to cavalry. If on the trail of the enemy there is a peculiar mark made perhaps by a horse with a peculiar foot, or a footman with a peculiar shoe, or by a trailing rope, the trail is much more easy to follow. It should be possible to tell by the tracks the number of horses and footmen, the number of mules, and the gait at which the enemy is marching. If the trail is fresh the horses' dung shows it; the shoe prints are moist; the side of the impression in the soil is abrupt, the wind not having had time to fill it with dust; the stones moved by the horses' feet show an undersurface which is not yet dry; the sticks and grass seem freshly broken.

11. Across hard and rocky ground the trail must be followed by noticing where the grass has been broken, and where the pebbles have been turned bottom up. The upper side of a pebble which has been exposed to the rain is clean, the lower side is covered with dirt.

12. A difficult trail must, as a rule, be followed by fixing the eyes on the ground at a point thirty or fifty feet in advance, thus following the slight disturbances on the ground caused

by the hoofs of the animals. If the trailer looks directly down he will soon lose the direction and is liable to get off the trail. Much practice in following trails should be given the enlisted scouts of a command in order that they may become proficient.

13. When the trail becomes "hot"—that is, when the pursuers have reached a point near the pursued—it will become necessary to decide upon the attack. It is not unlikely that the enemy has a rear guard of one or two men, who will give the alarm in case it is attempted to attack him while en route. If it is apparent that the enemy is making towards a certain point or a defile, it might be well to take part or all of the detachment on a circuitous route and post them in ambush on his line of march.

14. If the time of day, or length of march, or nature of the country indicates that the enemy is about to camp, it would be well to halt, send out dismounted scouts, reconnoiter his position and make arrangements for an attack at dawn. Every means should be taken to inflict punishment on the personnel of the raiding force, as well as to capture their booty. In case the attack succeeds and the booty is captured, great care should be taken to prevent the command from being ambushed while on its return march. Immediately after the enemy's camp is captured and his forces are dispersed, a considerable detachment should undertake to prolong the pursuit to pick up stragglers and to prevent his scattered forces from uniting.

15. Troops engaged in such expeditions should employ to the limit the best methods of security and information. The enemy knowing that he is pursued will make use of every stratagem to ambush the pursuers. Ranches and suspicious places should be approached cautiously. The advance guard should ride well in front of the command, and flankers be used as far as practicable. Territory beyond the fences bordering the road should be reconnoitered. Great care should be taken to prevent the troops when in camp from being surprised, by the liberal use of outposts. Such outposts should occupy positions not only concealed from the enemy in front, but which give protection from his fire by means of sandbags or natural cover.

16. In this connection read "Indian Scouting," Chapter 9, Wagner's "Security and Information." To prepare troops for duty as pursuing patrols, and to perfect enlisted scouts in trailing, this exercise should be constantly practiced.

BY COMMAND OF BRIGADIER GENERAL PARKER:

JOHN H. READ, JR.,

First Lieutenant, Third Cavalry, A. D. C.,

Acting Adjutant.

INSPECTION OF CAVALRY EQUIPMENT.

A Uniform Method.

BY CAPTAIN H. J. MCKENNEY, TWELFTH CAVALRY.

FOR the purpose of securing a uniform method of laying out, for inspection, all the articles of equipment carried by the cavalry soldier, in the field, the following scheme has been evolved. The method is based on a logical system, which makes it easy for the soldier to remember and reduces to a minimum the time and labor of the inspecting officer.

The basis of the method is that all articles are laid out for inspection, as nearly as practicable, in the same relative positions as when carried on the horse, as prescribed in paragraph 190, Cavalry Drill Regulations, 1902, corrected to January 1, 1911. Everything which is carried on the horse on the off side is displayed for inspection on the off side of the bed blanket. Likewise, everything which is carried on the horse on the near side is displayed for inspection on the near side of the bed blanket. Articles which are carried on the pommel and cantle, as well as the surcingle and everything carried in the bedding roll, are displayed in the middle of the bed blanket, between the articles which are displayed as being carried on the two sides of the horse.

It is believed that this method makes it easy for the soldier to remember, at least, the general location of each article and easy for the inspecting officer to detect whether or not any article is missing, if he bears in mind the method.

The paragraph in the Cavalry Drill Regulations, mentioned above, was the guide in the relative arrangement of the articles, with the following exceptions. The *feed bag* is carried instead of the nose bag and when carried empty, the *feed bag* is carried folded flat and strapped over the middle of the blanket roll, on the cante. The change in the Uniform Regulations which requires that the *wire cutters* be carried, by those men to whom



PLATE I.

they are issued, in the near saddle pocket. Also, G. O., 3, W. D., 1915, is complied with as to the amount of clothing and toilet articles carried in the blanket roll.

The following describes the arrangement in detail, from the off to the near side (See Plates I and II).

(a) The saber is drawn and placed beside the scabbard. This is done in order that the inspection may be facilitated and the articles need not necessarily be handled.

(b) The curry comb and horse brush are placed tooth and bristle side up, for the same reason as (a), above.

(c) The leather packet inside the fitted horseshoe, on the left off side, is a packet made of three folds of leather, soaked in oil, the twelve horseshoe nails, required to be carried, fitted in slits inside and protected by flaps which fold in. The whole is secured by a rawhide thong. Troop stamp and man's troop number are stamped on the outside.

Soaking the leather in oil keeps the nails oily and free from rust at all times.

(d) The watering bridle is placed with the bit end to the front, toward the inspecting officer, for the same reason as (a), above.

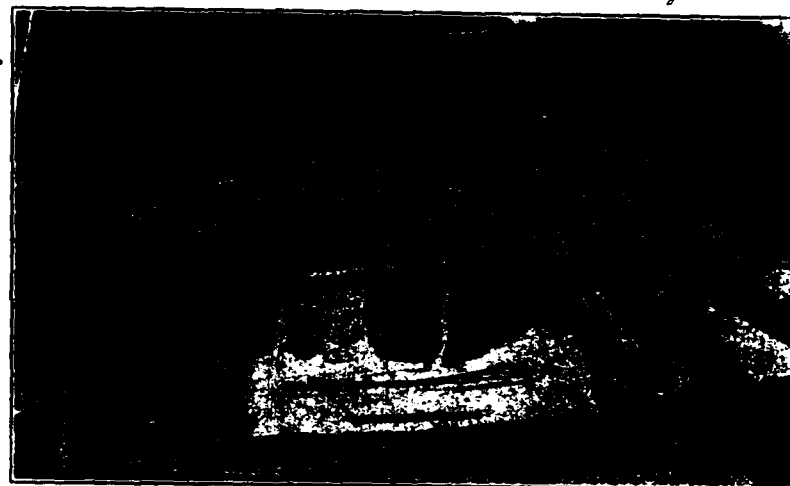


PLATE II.

(e) The clothing is laid out (in the middle of the bed blanket, at the front) so that a portion of each article protrudes from under each article laid on top, so that everything can be seen and checked, at a glance—without handling—from bottom to top: Towel, drawers, undershirt, and two pairs of stockings, each pair of stockings being laid out separately. The Plates show the equipment of men who carry the Housewife for the squad (G. O. 3, W. D., 1915.)

(f) Plate I, shows on the off side of the tent, the equipment of a man who carries a camp hatchet (also, shows leather carrying case over the helve of the hatchet). Plate I, shows on the near side of the tent, the equipment of a man who carries wire cutters.

(g) In rear of the articles on the bed blanket are the saddle pockets, detached from the saddle, spread out, with slicker (or overcoat) laid over the saddle pockets.

(h) In rear of the saddle pockets and slicker is the saddle, pommel to the front, cincha, cincha strap and stirrups crossed,

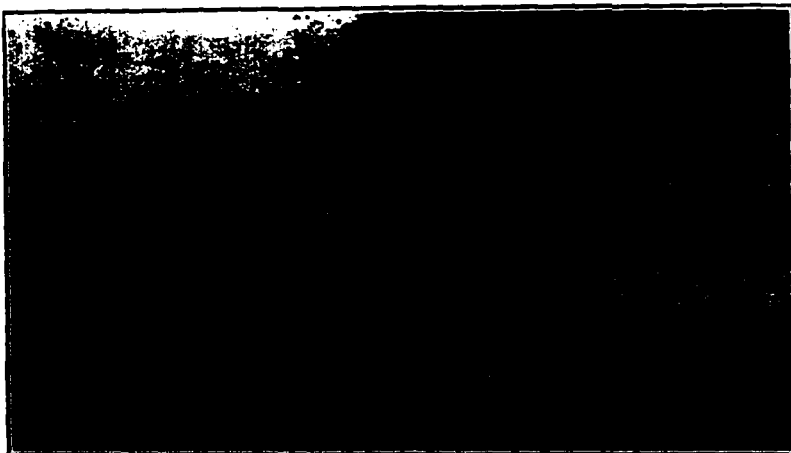


PLATE III.

hood of stirrups to front tread on ground with the saddle blanket spread over the saddle, moist side up (to dry, as prescribed in next to last sub-paragraph., paragraph 778, Cavalry Service Regulations, 1914) and curb bridle rolled with reins passing through loop placed on top of saddle blanket, crown piece toward the off side.

(i) Plates I and II show the equipment of men who may be absent from their tents on picket line guard or other duty. Their rifles are with the rest of their kit so that they can be inspected. Plate III shows the position of the men (under arms) when they stand by their equipment for inspection.

The method may be used when shelter tents are or are not pitched. When pitched, the arrangement is as shown in the plates. When they are not pitched, the shelter tent is spread out flat, in rear of the saddle and the poles and pins are displayed on top of the shelter half.

THE GREAT WALL OF CHINA.

BY LIEUTENANT COLONEL F. SAYRE, SEVENTH CAVALRY.

THE Peking-Kalgan Railroad makes it much easier to visit the Great Wall of China than was the case a few years ago when it was necessary to organize a party of coolies and cooks and spend two weeks on the trip. This railroad follows for 125 miles an old trade route which runs northwest from Peking through Mongolia to Europe and which has been used by caravans for thousands of years. Trains of camels, donkeys and wolly Siberian ponies are still to be seen moving in both directions at short intervals along this old trail, which is totally unimproved and could not be used by wagons anywhere.

About thirty miles from Peking the railroad and the old trail leave the great plain of North China and enter a pass in the mountains called Nankow Pass. At the entrance to the Pass a large brick wall is seen, in a somewhat tumble-down condition; and two other walls, but little inferior in construction to the Great Wall, are seen crossing the Pass before the Great Wall is reached. But the three walls first seen are comparatively short. The first branch of the Great Wall is reached at Ching-lung-chiao, a railroad station thirty-six miles from Peking. This branch follows the watershed of the mountains which bound the great plain of China on the north. In some places it ascends steep slopes; in others, as at Ching-lung-chiao, it crosses mountain gorges; but for the most part it stands on steep, rocky and almost inaccessible ridges. Its elevation at Nankow Pass is 1600 feet, but parts of it are 4000

feet above sea level. It is from twenty-five to thirty feet in height, about twenty-five feet thick at the base and about fifteen feet thick at the top. The top (terreplein) is paved with brick and is abundantly wide enough to drive a team on, but it would not be easy to do this in all places, for the wall sometimes ascends slopes so steep that a man cannot make his way along it without using his hands. At both north and south sides of the terreplein are walls about three feet high, built of granite blocks, the north wall crenelated, the south wall continuous. The foundation and about ten feet of the superstructure of the retaining walls which form the north and south faces are built of dressed granite blocks, each estimated to weigh about 600 pounds. The remainder of the retaining walls is built of burnt brick, each brick about twice as long, twice as wide and twice as thick as the bricks now used in housebuilding. The space between the retaining walls is filled in with cobblestones. There are large square towers at intervals of 600 yards. Near each tower an arched doorway is found in the south side of the wall, leading to stone steps which bring you out on top of the wall.

The bricks are of a grey color and of flinty hardness. The brick and the granite blocks are cemented together with a white cement too hard to be cut with a knife. The brick must have been made down in the plain, twelve to fifteen miles away; there are brick-kilns there now, turning out brick of the same color as those in the Great Wall. The cobblestones and the granite blocks must also have come from a distance and the task of getting them to the site of the wall seems, in some places, almost superhuman.

The Great Wall is not so high nor as thick as the wall surrounding the Tartar City of Peking, but the Great Wall is stated to be 1500 miles long, while the wall about the Tartar City is only thirteen miles long. The Chinese call the Great Wall "The Wall of Ten Thousand Li." Figuring three li to a mile, this would make the wall over three thousand miles long, but I presume the Chinese name is figuratively rather than literal.

The length of the Great Wall is the factor which gains for it the credit of being the greatest piece of constructive work

ever accomplished by the human race. Beside it the pyramids of Egypt and the Panama Canal seem small and cheap.

The oldest branch of the Great Wall is found at Kalgan, 125 miles from Peking. This branch was built entirely of brick and much of it has fallen down or been torn down for building materials. It was begun by the Emperor Shih-hwang-ti in 214, B. C., but it is difficult to believe that even one branch of this wall was completed during the lifetime of one man. The branch seen at Nankow Pass is still in a practically perfect state of preservation; this branch is said to have been built in the seventh century, A. D., and to have been rebuilt or repaired by the Emperor Yung-lo (one of the Mings) in the fifteenth century, A. D. It is said that parts of the Great Wall were hurriedly repaired and mounted with cannon of antiquated type during the war with Japan in 1894. There are two iron field guns of a pattern long obsolete lying on the ground near the Wall at Nankow Pass.

The Great Wall has been attributed to a policy of "exclusion and seclusion" on the part of the Chinese emperors. On this account the American protective tariff has been compared to the Great Wall of China, because it excluded foreign products from competition with our own. But there are gateways in the Great Wall on all of the trade routes and there is no proof that these gates have ever been closed to merchants or to peaceful travelers. It is more probable that the Great Wall was built as a national defense. The only enemies of whom the early Chinese had any knowledge lived to the north, in Mongolia and Manchuria. The Great Wall seems to represent a policy of national defense continued through many centuries, and it is significant that the latest branch of the Wall is 100 miles south of the first one.

The Great Wall of China is the most complete, the most costly and the most futile scheme of national defense ever adopted by any nation. There is no proof that the Wall ever checked an invasion or even delayed invaders by so much as a single day. Since the first Wall was built, two centuries before Christ, China has been subjugated and ruled over by the Mongols and by the Manchus in turn, and these invaders have never been driven out except by aggressive warfare—

by Chinese soldiers bearing weapons in their hands. The Mongols and the Manchus were both inferior to the Chinese in numbers, in wealth and in civilization.

In 1860 China was conquered by the French and English, in 1894 by the Japanese and in 1900 by an allied army composed in part of Americans. Each of these defeats has resulted in important concession being wrung from the Chinese and the preservation of their autonomy is due only to mutual jealousies between other nations.

A parallel to the Great Wall of China is to be found in the line of fortifications built by the Romans during the later years of the Roman Empire along the Rhine and Danube Rivers and between the sources of these rivers; the invasions from the north which eventually resulted in the destruction of the Empire began at no great interval after the completion of these fortifications. Is it possible that some resemblance to the Great Wall of China is also to be discerned in the scheme of sea coast defense inaugurated by the United States Government about twenty years ago?

THE PERSIAN ARMY—THEIR HORSES, ETC.

TEHERAN, PERSIA, August 13, 1915.

The Editor:

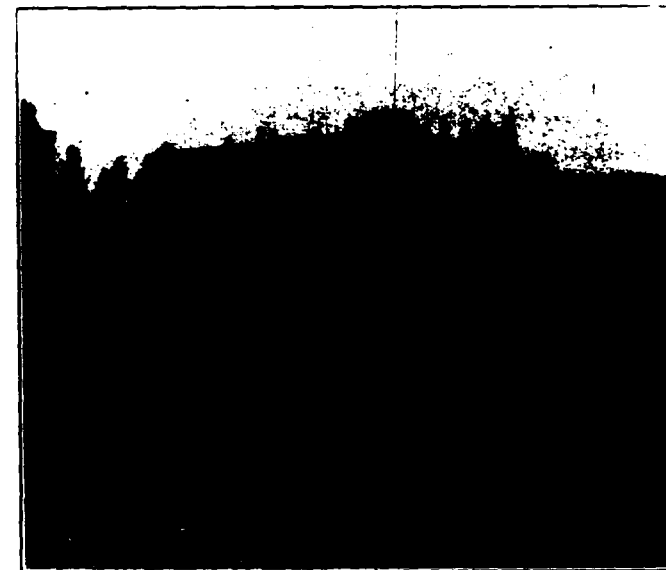
[F of interest to your readers, you are at liberty to use the inclosed photographs and the following notes:

The photographs numbered 1 and 2 are of Colonel Zorab Khan on his Arab horse; those numbered 3 and 4 are of the same horse unsaddled and of himself dismounted. The one numbered 5 is of my own Turcoman horse.* Please notice the old style U. S. A. web cartridge belt used as a bandoleer around the horse's neck—the two suspender straps carried back, one on each side, and hooked into rings on the saddle. The

*Of the photographs mentioned, only Nos. 3, 5 and 7 are here reproduced, as best showing the type of Arab horses.—*Editor.*

Indian Cavalry has this same idea as is shown in the cut numbered 6, which I clipped from the March, 1915, issue of *Popular Mechanics*. Before seeing this, however, I got the idea from the Central India Horse, who were stationed at Shiraz in South Persia.

As I have ridden from Teheran to Shiraz and back on my Turcoman, using this bandoleer, I can speak from experience. It does not seem to tire the horse and, if not strapped on too tightly, it does not rub off the hair, and is a most useful reserve



No. 3.

of ammunition in an emergency. I averaged thirty miles a day, on both journeys, and I could not see that the horse was inconvenienced by it. The distance from Teheran to Shiraz is 650 miles.

The small wiry, Arab of the style ridden by Colonel Zorab Khan is the type most esteemed in Persia; they are capable of much endurance on poor feed and can make extraordinary long marches day after day. The best Arabs come from the Persian Gulf country, around Ahwaz, Mohammcrah and

Shiraz. A horse like Colonel Zorab Khan's is valued at 400 toman—a toman is worth about ninety cents in U. S. currency. Arabs run from this price up to 1,500 toman.

If desirable for remounts in the United States, it would be very feasible to buy stallions in the Persian Gulf ports and ship them direct to New York in the annual date carrying steamers which are fast boats. I would be very glad to arranged with the Persian Government to facilitate this work if it is undertaken.

In general, I believe that pure blooded stallions and mares could be procured under 1,000 toman each, even now when the war is going on just over the border in Turkey.

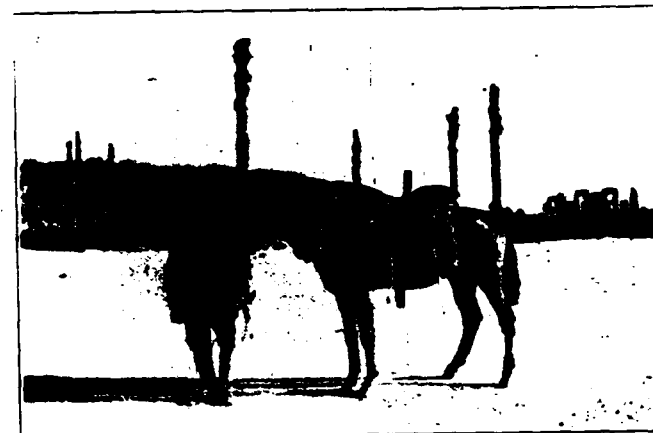
Persian light horsemen undoubtedly can march longer and subsist on less for both man and horse than any other like organization in the world. I made two marches with the Persian troops as an observer. The longer of the two expeditions was from Teheran to Hamadan, about 250 miles. The cavalymen carried carbine, cartridge belts—several of them, often five or six—halter rope, picket pin and blanket roll—nothing else. The horses in town get two maunds of wheat or barley straw, one-half maund of hay and two maunds of barley per day (a maund is equal to six and one-third pounds), but on the march they are lucky to get a maund of barley, with usually no hay at all, and one and one-half maunds, or less, of straw. No transportation is used and men and horses live on the country.

The soldier's ration consists of one-half maund of wheat bread per day when at their station with heavy and wholesome soups of meat and vegetables, and now and then some Persian cheese. On the march he is lucky, and satisfied, mind you, to get a half-maund of bread with a small handful of cheese, together with a few tiny cups of tea per day.

The column averaged forty miles every day we marched and this over an almost waterless, hot and dusty, alkali desert. I did not see either any stragglers or disabled horses, which speaks volumes in itself for the sturdy Arab blood in the Persian horses. Nearly all of these horses were of a mixed breed, Arabs crossed with native Persian stock. The Persian horseshoe, because of the small stones on the desert, covers

nearly all of the sole of the foot and frog, except a small opening of about one and one-half inches in diameter in the center. The shoes are much thinner than ours and rarely last more than two weeks of hard service. At the same time, one can gallop a Persian horse with impunity over a rocky course that would result in disaster to our cavalry horses.

The saddle generally used is the Cossack saddle and a poorer saddle it would be hard to find. The stirrups are set far back and the stirrup straps are extremely short and, except with the utmost care, the horses get bad sore backs. A light



No. 5.

model of the Indian cavalry saddle is being introduced, which so far has proved satisfactory, except that the Persian saddle makers have great difficulty in properly copying the Indian saddle tree.

The Persian stables are usually too illy lighted and ventilated, especially in winter, but decided reforms in that line are being carried out. The manure is sun dried and pulverized and is used for bedding. Strange as it may seem, this bedding is most satisfactory and the horses are not as much soiled by the use of it as by the bedding used in our army. I served under Captain Guy V. Henry, Jr., in the U. S. Cavalry at

Batangas and can, therefore, speak from experience as to the relative merits of the two kinds of bedding.

All of the horses in the Persian cavalry are stallions and contrary to what one might expect, we have practically no trouble from unruly horses. The Persian stallions, unless they have been used for breeding purposes, are very rarely of ugly temper or hard to manage.

We use the single rank formation. I have much enjoyed the numerous articles pro and con on the subject of the single rank in the *CAVALRY JOURNAL*, and am a hearty believer in the single rank, and this in a country of no fences, with vast plains, but with plenty of deep ditches near the villages where a double rank would surely meet with disaster.

In stables, each horse has a leather strap around his leg, just above the hoof. This strap is buckled into the ring of a chain about five feet long, which chain is attached to a stout steel pin which is driven into the ground directly in rear of the horse and distant the length of the chain.

The manes and the forelocks of the officers' horses are cut close, while the tail is trimmed so as to come to the hock. The manes and tails of the cavalry horses are not cut.

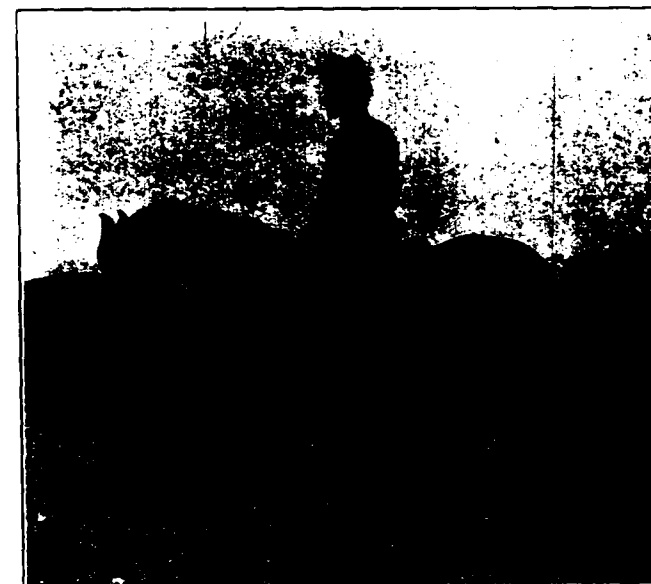
A solution of henna is much used in crossing alkali deserts; it is painted on the horses' legs, half way up to the knees, and is very effective in preventing irritation.

The walls of the stables are of sun dried mud; the mangers are made "V" shaped in front and square behind, opening directly into the walls. The horses are tied to rods sunk into the wall and imbedded in the mud; each horse is tied to a rod both to his right and left so that he cannot get at the horses on his right or left, even if he desired.

Salt is seldom fed to their horses by the Persians. The manure, when it accumulates, is sold for about nine cents a sack to the baths in town to be used as fuel. It is also the fuel for the soldier's kitchens. The Swedish, straight saber has been introduced into the gendarmerie cavalry but it is too heavy and unweildy for the slightly built Persians.

The Persians are born horsemen and under European officers make excellent soldiers. They are patient, give little trouble as regards discipline and require a minimum of barrack

comforts. They have no beds and have only a straw filled mattress, a pillow and a sort of blanket made of a cheap Manchester print goods, stuffed with cotton. They are supplied with a summer and winter uniform but no underclothes or socks. They are issued shoes which are in much need of improvement. In summer the men wear "giveers," a low shoe which is made with soles of tightly compressed cloth strips and cotton cord uppers, much like the Spanish alpara-



No. 7.

gatos of the Philippines. Puttees are worn as a part of the uniform.

The barracks are not heated in winter but each room has an allowance of charcoal which is burned in an open pan. Desertions are rare. The men are armed with the Mauser carbine and the Russian army rifle, with a few French Lebel's. The only mess utensils is a copper bowl of some two quarts capacity which is re-tinned once a month. The uniform is khaki, both for summer and winter wear, which blends perfectly with the

dust colored plains. Khaki, by the way, is not *Hindustani*, as a recent correspondents of the *Army and Navy Journal* avers, but a Persian word which means "*dust*"; exactly, it is "*khak*," meaning dust, and khaki is the genitive meaning "of dust," that is the color of dust. The *Hindustani* is merely old Persian and is a language that sprang up as a result of the Persian invasion of India.

The photographs Nos. 7 and 8 are of "yours truly." The horse is a Turcoman, that is half Arab and half Turcoman stock, a sturdy horse with great endurance.

J. N. MERRILL,
Colonel Persian Army.
(Ex-Class 1906, U. S. M. A.)

POLO INSTRUCTION AT THE MOUNTED SERVICE SCHOOL.

THE following letter, furnished by the Commandant, Mounted Service School, describes the approved system of polo instruction and conditioning of polo horses, in vogue at the School.

The Commandant states, as a matter of general interest, that the playing of polo is not permitted for the First Year Class, because it is a matter which should be developed in the regiments, and because its inclusion in the course for the First Year Class would necessarily crowd out much of great importance which cannot well be taught or developed in the regiments. An important consideration, too, is the fact that if First Year Officers were permitted to bring to the School their private mounts (including polo horses), it would be absolutely impossible for the present school detachment to groom these animals in addition to the many duties now required of the members of the detachment.

Therefore, the playing of polo at the Mounted Service School, is confined to the Second Year Class, but with this class

it is made an important part of the curriculum, approved by the Secretary of War, with the object of graduating officers fully competent to return to their commands and captain regimental polo teams.

A special instructor is placed in charge of officers and horses, regular lectures are given on the theory of polo, illustrating team-work by means of movable figures on a board representing a polo field; and later on, officers are given systematic instruction in conditioning polo horses, training green animals and in individual and combined work as members of regular teams.

While of course the personality of the individual and the rare quality of leadership will have an important bearing on the success of graduates of the School as instructors of their regimental polo teams, the above system appears to be the one best calculated to develop polo in the mounted service, without detracting from the usefulness of the School in many other lines of work, equally important to the service.

LETTER.*

1. The system being followed to condition the polo horses and to instruct the Second Year Class in the principles of polo is herewith submitted for the approval of the Senior Instructor:

2. There are eight private, two artillery, and sixteen school horses undergoing training.

3. In striving to develop horses that will play a fast game and do so quietly, it has been explained that the three qualities prerequisite to success are:

- a. Disposition.
- b. Strength and endurance.
- c. Tractability and handiness.

Without the first the presence of all the others does not as a rule make a desirable horse. Possessing the first and being

*Heading of letter is omitted.

of suitable type, a patient horseman should be able to develop the latter.

4. It is thought that most Army Polo is characterized by:

- a. Horses in unfit physical condition.
- b. Balky and unmanageable horses.
- c. No team work, loud yelling, individual playing, etc.

The members of the class have been told that in School Polo there must be no instances of the above.

4—A. The object of all physical training being to remove superfluous fat, strengthen the muscles and sinews and develop the wind, the following methods are being used to prepare the polo horses for the work required of them:

- a. From 7:00 to 9:30 A. M., a walk of about eight miles.
- b. On Saturdays and Sundays, the horses not being used in the afternoon, the morning walk is increased to ten miles.
- c. One and a half hours in the afternoon alternately galloping and walking. Each day the galloping periods are slightly increased and the walking periods slightly decreased.
- d. After the morning and afternoon exercises the horses are thoroughly rubbed down and groomed.
- e. Each horse when taken up has been started on a feed of five pounds of oats daily, divided into three feeds. This daily feed is gradually increased until a maximum of ten pounds of oats and two pounds of carrots is reached. The grain component is divided into feeds of three, three and four pounds, respectively. The carrots are thoroughly washed, sliced lengthwise, and fed between meals.
- f. Horses are watered at 7:00, A. M., 11:00, A. M., 4:00, P. M., and a bucket of water is placed in each manger after evening feeding.

4—B. A horse is balky, unmanageable or nervous on the polo field because he has been pushed beyond his capabilities; and in consequence he fears the work about to be required of him. Every effort is being made to prevent the appearance on the polo field of horses with such traits.

a. The long walks in the morning tend to quiet the horses.

b. Horses are not exercised over the same ground two days in succession. The varied ground and sights appear to hold the horses' interest in their work, and eliminate to a certain degree the nervousness incident to new sights, sounds, etc.

c. In all the work only such gaits are taken that will be taken by all the horses freely and quietly.

4—C. All the officers have been asked to specify the position which they desire to play, and have been told that in all games they will play this and no other position. This should develop team work, which is the secret of success in polo. There are innumerable instances where a team of the best players has been beaten by a team of mediocre players who understood one another and had mastered the principles of team play.

* * * * *

6. The horses in the squad are, with a few exceptions, horses of quality and substance, activity and endurance, breeding and strength.

INNIS P. SWIFT,
First Lieutenant, Second Cavalry.

POWDERED HELLEBORE TO PREVENT FLIES BREEDING.*

New and Safe Method of Destroying the Larvae of the Pest Discovered.

A SAFE and effective weapon against the typhoid or house fly has been found in powdered hellebore by scientists of the Department of Agriculture. Flies lay their eggs chiefly in stable manure. Powdered hellebore mixed with water and

*Details of the experiments with other information on the subject are contained in a professional paper, Bulletin 245 of the United States Department of Agriculture.

sprinkled over the manure, will destroy the larvae which are hatched from the eggs. Since powdered hellebore is readily obtainable, this puts in the hands of everyone a remedy for one of the pests that been found dangerous as well as troublesome. Powdered hellebore, however, will not kill adult flies which must be swatted or trapped.

It has long been known that flies breed in manure but previous methods of destroying the larvae there by the use of strong chemicals have been open to the objection that the treatment under some conditions lessened the fertilizing value of the manure or actually injured vegetation. This is not true of powdered hellebore. Government experiments have shown that the hellebore is entirely decomposed in the course of the fermentation of the manure and that even in excessive quantities it does no harm except to the larvae it is intended to destroy. Chickens picking in manure treated with it suffer no ill effects.

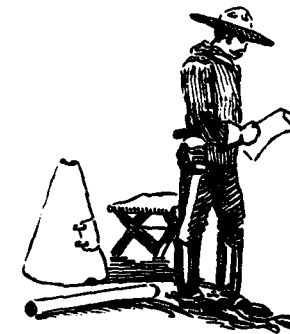
One-half pound of powdered hellebore mixed with ten gallons of water is sufficient to kill the larvae in eight bushels, or ten cubic feet of manure. The mixture should be sprinkled carefully over the pile, especial attention being paid to the outer edges. In most places hellebore is obtainable in 100 pound lots at a cost of eleven cents a pound. This makes the cost of the treatment a little less than seven-tenths of a cent per bushel of manure. A liberal estimate of the output of manure is two bushels a day per horse. The money involved is, therefore, trifling in comparison with the benefits to the individual and the community from the practical elimination of the disease-spreading fly.

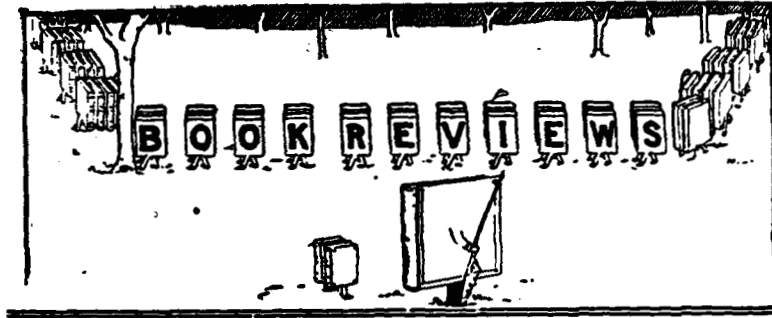
Although fresh manure is the favorite breeding spot, flies lay their eggs in other places as well, such as outhouses, refuse piles, etc. In these places, from which no manure is taken to spread on the fields, considerable saving may be effected through the substitution of borax for powdered hellebore. Applied at the rate of 0.62 pounds per eight bushels of manure, borax is as effective as powdered hellebore in killing the larvae but costs less than half a cent for each bushel of manure treated. In larger quantities, however, or when the manure itself is spread at a greater rate than fifteen tons to the

acre, some damage to crops may result. Large quantities of manure are often used by market gardeners and others, and there is always danger of carelessness in applying the borax. The use of the more expensive but safer hellebore is therefore recommended for the treatment of manure. Borax is recommended for all other refuse in which flies may lay eggs.

Scientists who have been working for years to eliminate the fly are convinced that the use of one or the other of these simple measures is a public duty wherever manure and refuse exist. Sanitarians, however, strongly advise the removal of refuse heaps or other unnecessary rubbish or breeding places for flies. In breeding places which cannot be thus disposed of, such as manure or stables, the daily use of powdered hellebore will keep the flies from breeding in these favorite breeding grounds. The best results are obtainable in a community where everyone cleans up his premises, traps or kills the flies, and systematically treats the manure and other breeding places with powdered hellebore.

The fly is not only a nuisance to human beings and live stock; it spreads disease and filth and is a menace to public health which cannot be tolerated in the face of a demonstrated remedy.





**The
American
Army.***

This book might well be studied by every American who believes that we should place our military house in order.

General Carter paints for us a graphic word picture of the danger that lurks in military unpreparedness.

We must no longer pat ourselves complacently on the back in commendation for former successes, which a careful analysis shows could have been won with a much less expenditure of blood and treasure had we been but half-way prepared. On the contrary, we must realize our past failings at once and set about providing a military and naval system which will save us from defeat and humiliation in case war should suddenly be forced upon us.

General Carter points out the danger that lies in depending, to any great extent, upon our present National Guard, in any emergency.

The provisions of the Constitution of the United States make it impracticable to use those forces outside the limits of the United States. Moreover, it is doubtful if the Militia of

*"THE AMERICAN ARMY." By Major General Harding Carter, U. S. Army, author of "Old Army Sketches"; "Horses, Saddles and Bridles;" "From Yorktown to Santiago with the Sixth Cavalry," etc. 294 pages, 5½" by 8". The Bobbs-Merrill Company, Indianapolis. Price \$1.50, net.

any State, can be legally called into the service of the Government, without the consent of the Governor of the said State.

The futility of counting upon the efficacy of a system, hedged about by such constitutional restrictions, must be apparent to anyone who has seriously studied the subject.

General Carter has praise only for the National Guard, and pays a high tribute to those business men, who, in order to do their duty as members of the Militia, neglect their own affairs, and often expend their own personal means, to help organize and render efficient the troops of this branch of our military forces. What he does condemn, is the system under which these troops are enrolled. He believes that such a system will break down in time of war and advocates the adoption of another, in the near future, which will stand that supreme test.

The author particularly calls attention to the necessity for keeping great quantities of extra arms and ammunition and large forces of trained reserves ever ready for use in war.

The danger of neglecting these important matters, has been pointed out, again and again, by many of our most eminent statesmen and military writers, but the people lulled into fancied security by the beating of the surf along our Atlantic and Pacific shores, have failed to realize that steam has now made those great barriers vulnerable. No longer do they afford us the protection which we formerly counted upon nor will they save us from disastrous and humiliating defeat in the hour of invasion.

General Carter emphasizes the fact that our present Regular Army, after deducting the garrisons of Alaska, Panama, Hawaii and the Philippines, is but a mere skeleton, incapable of repelling a hostile invasion even with the assistance of the Militia. He advocates not only a larger Regular Army, but also wishes to have a depot company or troop for every regiment of infantry and cavalry, the latter to supply promptly the necessary recruits to replace the losses of battle and sickness. He also advocates the raising of a large volunteer force which shall be subject directly to the orders of the President in case of need.

General Carter also favors the organizing and keeping ready for field service of an expeditionary force of at least a division of regular troops, at some central point, as Fort Benjamin Harrison. Later, this force might be made into a field army by adding to it another infantry division and a cavalry division, with necessary field army troops.

There can be no question of the soundness of the author's views on this matter and he gives a plan by which these recommendations might be easily carried into effect.

General Carter gives a history of the birth and growth of our General Staff. It is indeed difficult for us to realize how we could have gotten on so many years without what now appears to be so necessary. Though our General Staff is not perfect, General Carter begs us to give it a fair trial before we decide to change it.

The author shows how much has been accomplished, in the past, by our Army, despite the defects of our military system, but believes that much more could have been done, and at much less expense, had we possessed, during the past hundred years, a definite military policy. He further emphasizes the fact, that our past successes, won in the face of almost insuperable obstacles, should not bind us to the necessities of the future.

Every true patriot should read this book. There is but little doubt that, after having done so, he will be ready and willing to give loyal support to any and all measures which will increase the efficiency of our Army and add to our reserves of munitions and trained men.

N. F. M.

**Back
of the
War.***

Being an ably written and wholly impartial account of the mental and physical condition of the French, German and English peoples and their respective armies during the first months of the present European War, this book gives in a clear and definite way the beliefs of each of these peoples as to why they are engaged in the struggle.

Senator Beveridge is a keen analytical observer who has used his exceptional facilities for obtaining information in an able manner and has presented his results in a most interesting way which is made more pleasing by the author's charming style and his clear concise English.

His observations during battles and at hospitals and detention camps, together with the record of his interviews with representative people of all walks of life, are likely to constitute a valuable contribution to the history of the war.

At present there is no publication which so fully and impartially presents the causes of the war and the conditions under which it is being fought.

E.

**War
of
1914.†**

"The engagements of the Army for the Defense of the Country," is the title head of a book of ninety-four pages, in the original French, published by the House of Chapelot, of Paris and Nancy. It purports to be the report of the Commander-in-Chief covering the operations of the Belgian Army during the period from July 29, 1915, the date when the Belgian Government placed its forces on a reinforced peace strength, until the 31st of December, 1915.

*"WHAT IS BACK OF THE WAR." By Albert J. Beveridge, former Senator from Indiana. Illustrated with many photographs. Octavo. Cloth. Price \$2.00. The Bobbs-Merrill Company, Indianapolis, Ind.

†"LA GUERRE DE 1914." L'action de L'armée Belge pour la defense du Pays et le Respect de sa Neutralite. Rapport du Commandement de L'armée. Paris, 1915. Librairie Chapelot, avec 11 croquis. Price 1 franc.

The mobilization, concentration, plan of defence of the territory, defence of Liege and of Namur, and the operations of the field army in connection with the taking up of a defensive position along the river Gette are described in Chapters I—IV.

Chapter V deals with the operations of the army while falling back upon the second defensive positions along the rivers Rupel and Nethe, with Antwerp as a base; also with the sorties at the time of the battle of the Sambre, during the Anglo-Franco retreat from Mons; and while the battles of the Marne and Aisne were in progress.

The Siege of Antwerp, its capitulation on October the 10th, and the retreat of the army towards the Yser River are discussed in Chapters VI and VII.

The coöperation of the Belgian, English and French forces, and positions along the Yser River, including an account of the battle of the same name are covered in Chapter VIII.

To the military student of the campaign in this sector of the theater of war this publication is of great value, particularly, when the official communiqués that have appeared in the newspapers are too meager to enable any one to arrive at a clear understanding of the movements of the different elements composing the Belgian field army.

The matter is so arranged that the study of the operations is an easy and interesting task.

A. MORENO,

First Lieutenant Twenty-eighth Infantry.

Impressions of Belgium *

This book, as its title implies, is strictly a "journal of impressions," a diary of the authoress on an expedition into Belgium early in the German occupation, with a party of English men and women who volunteered their services in connection with the Belgian relief work, and who were at times in the theater of operations.

"A JOURNAL OF IMPRESSIONS IN BELGIUM." By Mary Sinclair. Author of "The Three Sisters," "The Return of the Prodigal," etc. Cloth. Price \$1.50. The Macmillan Company, New York.

With motor ambulances they followed the retreat of the Belgians from Antwerp to Melle, Ghent, Bruges and Ostend, rendering some valuable service in the care of the wounded, both of the Allies and Germans.

The diction is good and the style pleasing. From the title one might expect something of historical or military value which however, is entirely lacking.

Military Sketching.*

A new work on Military Sketching and Map Reading is in the field. This one, however, is intended primarily for the instruction of non-commissioned officers and to be used as a text book in the garrison school for this class of enlisted men. It is a book of seventy pages of large size—8 x 10½ inches—illustrated with numerous plates and sketches.

The preface states that the book was written to fulfill the following urgent requirements:

"1. A textbook of Military Sketching and Map Reading within the comprehension of the average non-commissioned officer of the Mobile Land Forces.

"2. A textbook which will relieve organization commanders of devising a new course each year and which will standardize the instruction and furnish a uniform basis for the prescribed tests by battalion commanders and inspectors.

"3. A textbook in which Military Sketching and Map Reading go hand in hand, each being an amplification of the other.

"4. A textbook in lesson form, each lesson being carefully planned as to the amount and proper sequence of its subject matter, and the number of lessons being such that the course may be completed within the time usually available for this subject in the Garrison Course for Non-commissioned officers."

The work has been highly recommended by many of our officers, some of whom are experts in this line.

"MILITARY SKETCHING AND MAP READING FOR NON-COMMISSIONED OFFICERS." By First Lieutenant Loren C. Grieves, 30th Infantry. Price \$1.25, postpaid. U. S. Infantry Association, Washington, D. C.

**Russian
Army.***

The author of this remarkable book is Major Robert R. McCormick, First Illinois Cavalry, who had exceptional opportunities for observing the inside workings of the Russian Army, during the several months of the great European War. He has certainly made good use of the advantages which fate placed within his reach.

The author left New York in February, 1915, and visited first England and then France. The knowledge which he picked up in these countries gave him a comprehensive view of the general situation and enabled him later to estimate correctly, the special situation as regards the part that Russia was playing and was to continue to play in the gigantic struggle.

Major McCormick's descriptions of his meetings with noted Russians are highly interesting. Pen pictures are drawn of the Czar, the Grand Duke Nicholas Nicolaievitch and General Yanouskevitch, the Chief of Staff of all the armies, which cannot fail to entertain and instruct the military student.

The author gives us many incidents to illustrate the character of the Russian soldier and his officers. For example, he calls attention to the fact that in front of the trenches dummy wire entanglements were often placed. The enemy, advancing to the attack, believed these to be genuine and halted to entrench. The Russians, who have great faith in the bayonet, then charged from the trenches, and the issue was fought out in a hand-to-hand struggle. The fact that the entanglements were dummies, had not only deceived the enemy, but had enabled the Russians to pass through them and deliver the counter-attack at a moment when it was little expected. Other examples are given to show the national characteristics, but there is not space here to repeat them.

The Russian field equipment, including boots and field uniform, are described as very simple and serviceable. The two-wheeled field kitchen or soup-cart is spoken of in the highest terms and the view of our military observers, in the Russo-Japanese War, in this regard, are strongly confirmed.

*"WITH THE RUSSIAN ARMY." Being the Experience of a National Guardsman. By Robert R. McCormick, First Cavalry, Illinois National Guard. Maps, charts and twenty-four full page illustrations. The Macmillan Company, New York. Price \$2.00.

The author also considers the field transportation as peculiarly well adapted to the conditions of campaign in Russia and does not think that automobile trucks would have been a success on the poor roads of Poland and other parts of Western Russia. One of the most interesting things that fell under the observation of Major McCormick were the field bath trains. These follow the soldiers almost to the trenches and enable the rank and file to keep clean. Cholera, typhoid fever and typhus are produced by filth, vermin, and drinking bad water. The Russian soldier drinks tea and patronizes the bath train and is comparatively free from these three diseases.

A forceful comparison is made, in the book, between the preparedness for war of the Russians and the unpreparedness of the English, and the author calls our attention to how similar are conditions, in our own country, to those that existed in Great Britain when the war broke out. He solemnly warns us that, if not rectified, this will lead us to serious if not irreparable disaster. Major McCormick greatly admires the Russian tactics and strategy. The Russian Government did not believe that either the Germans or the Austrians would plunge into the war until they had exhausted diplomacy. Hence the Russian troops were but partly mobilized when war was declared. But the Grand Duke Nicholas was equal to the occasion and had the mobilization take place well back from the frontier so that he would not have to fight until his army was ready.

When he saw the Germans about to seize Paris, he promptly took the offensive and was thus the means of recalling thousands of Teutons to the eastern frontier of Germany. On two other occasions, similar results were obtained to the great benefit of the French and English.

It may be truly said that Russian tactics and strategy dominated the first year of the war. For several months, Russian troops remained on Austrian soil and Germany was twice invaded. With no help from the outside sources Russia fed, clothed, equipped, armed and kept supplied with ammunition, her great armies till May, 1915.

Certainly her rôle, interspersed here and there with frequent offensives, has been a great one.

Because Russia lost the Russo-Japanese War, we are prone to misjudge her, here in America, and to fail to appreciate the wonderful military qualities of her people.

Charles XII, Napoleon, Oyama and von Hindenburg have driven Russian armies from many a battlefield, but history has failed to record a single instance where a Russian Army has been routed. Their training and their religion does not admit of it. They retire when ordered to do so by their generals, but they do not run, and the Teutons have found this out in the present war more than once to their cost. Hats off then to these soldiers, who, individually, may not be the equal in intelligence of the men of some of the other European countries, but who possess soldierly qualities which should win for them the approval of every true military spirit.

And Major McCormick tells us that the Russian officers are noble fellows full of pity and generosity for the unfortunate, and brave in battle against their enemies.

No officer should fail to read "With the Russian Army." The chapter on "Modern Fortifications" is particularly instructive.

The book is well printed on good paper. The maps are poor and have no scale indicated and the spelling of proper names is often incorrect, but, despite these minor defects, the book will prove to an addition to the library of any military student.

N. F. M.

Balkan Wars.*

This book, of 150 + vi pages—5x8 inches—is made up of a series of five lectures delivered at the Army Service Schools during the year 1915.

The captions of the several chapters or lectures are as follows. The Causes and Course of the Balkan Wars; The Campaign in Thrace; The Second Balkan War; Notes on the

*"THE BALKAN WARS." By Major Clyde Sinclair Ford, Medical Corps, U. S. A. Press of the Army Service Schools. Price, bound in cloth, 75 cents.

Balkan and Turkish Armies; and Some Sanitary Observations. It has an appendix giving a chronological table of the principal events of these wars, together with a note on the economic effect of their results upon the resources of the Ottoman Empire.

It is illustrated with five small scale maps showing: Southeastern Europe—1912; Adrianople and its Defences; Location of Troops when Armistice was Declared; Location of Troops at Opening of Second War; and Southeastern Europe—1914.

The author does not claim to give a detailed, strategical and tactical account of these wars, but a general idea of the progress of the campaigns, interspersed with notes of interesting incidents connected therewith. The lectures as given were illustrated with numerous lantern slides which it was found impracticable to reproduce, probably on account of the expense involved.

Not the least interesting of the lectures is the first which gives, in a laconic and pleasing style, a short history of the causes leading up to these wars, showing the mixtures of races and religions of these people and the jealousies and hatreds that have existed between them for thousands of years. This information is given in a brief and concise form that would take much reading and laborious research to obtain otherwise and which will be a revelation to the ordinary reader.

The chapter giving the characteristics of the Balkan and Turkish armies will prove of great interest to the military reader.

The Horse.*

This book is primarily intended for the use of agricultural students, according to the author. Possibly the latter half will fulfill his intentions but it is doubtful if the first part will impart the proper knowledge to the class of students who only seek an agricultural knowledge of this subject.

The author has selected his material with great success, for the authorities he quotes, and his own personal ideas show good practical horse-sense, an article rare in many of the books brought out these days.

But after reading the first part one is left with a sense of having been hurried through a vast subject so as to leave him somewhat breathless and with a distinctly superficial idea of the matter. In fact, it is more on the order of a quiz book for a veterinary student who wants to freshen his memory for an examination.

However, the arrangement of the first part is admirable, and the selection of the plates and diagrams excellent.

The second part contains much more of the personal note of its author, and consequently imparts much more information to his students than the frigid and mechanical first part.

His explanations of cause and effect are simple and fairly direct but in a few places might be more amplified. For instance in his paragraph on "Work," he says: "Draft horses used for years on the pavement of city streets acquire a predisposition to certain forms of lameness."

In the paragraph on "Condition," the term "pink of condition," is referred to with the explanation that it originated from the fact that the visible mucous membranes of a horse are always of pink color, will not bear criticism. It refers to the pink glow on the skin of a man, not a horse.

The paragraphs on "Treatment and Nursing in Disease," are excellent, especially the few lines on the value of grooming a sick horse, an attention that is very generally neglected.

*"THE HORSE IN HEALTH AND DISEASE." A text book pertaining to Veterinary Science for Agricultural Students. By Frederick B. Hadley, D. V. M., Associate Professor of Veterinary Science in the University of Wisconsin, etc. Illustrated. W. B. Saunders Company, Philadelphia and London. 1915. Price \$1.50 net.

However, a paragraph of directions might have been given as to the doings of it in case of pneumonia in cold weather.

The paragraphs on "General Pathologic Changes," and the following chapter on "Wounds" are clear and comprehensive.

The chapter on "Diseases and their Treatments, etc.," presents just enough information to enable the reader to aid the attendant veterinarian instead of interfering with his patient as is so often done in other books. It is doubtful, however, if the advice to give laudanaum in spasmodic colic is wise. More firmness might have been shown as to the extreme culpability of even attempting to think of curing a case of "glanders" instead of the feeble statement that "Treatment is seldom warranted."

The Index finishes as a most useful and proper ending to a book that can no doubt and will be read by veterinarians as well as laymen with pleasure and profit.

The free use of technical terms which the author in his preface admits having introduced with the rather bald reason that agricultural students and educated farmers are competent to understand them because they understand the English language, is not warranted. A knowledge of Latin and Greek is necessary for most of the technical terms and it is this want of knowledge of these two languages that makes the primary course of instruction at Veterinary Colleges so hard to master.

In these days of education, when knowledge sought for is so materialistic and the humanities are so neglected, so that most colleges are being forced to lower the standard of their entrance and pupils demand a royal road to learning, principally through athletics and mechanical sciences, it is doubtful if the free use of technical words in this work will afford the author the satisfaction he hopes for. However, his intent and his book deserve the success they most decidedly have earned.



EFFICIENCY REPORTS.

It has been recommended by one of our Colonels of Cavalry that Commanding Officers should be required to report, under sub-head "G," page 6, on the annual Efficiency Report, whether or not the officer subscribes for and reads the JOURNAL of the Association of his particular arm. In other words, in case the officer does not so subscribe for and read the JOURNAL of his branch of the service, the answer to the question, under the above sub-head, should be in the negative.

The question to be reported upon by the Commanding Officers, under that sub-head, is as follows:

"Has he availed himself of his opportunities for improvement professionally?" (Opinion.)

This Colonel advances the idea that, if the officer does not have enough esprit or interest in his branch of the service to become a member of the Association of his arm and read its JOURNAL, he has missed some of the opportunities for advancement professionally, and that, therefore, he should be so reported.

While the adoption of some such rule might appear somewhat too stringent, yet it is believed that there is some merit in the suggestion. It is believed that the best officers of our cavalry service are members of the Cavalry Association, and we find that the older and more experienced they become, the more certain it is that they are members of the Cavalry Association.

At any rate there is food for thought in this suggestion.

THE MOUNTED SERVICE SCHOOL.

The annual report of the Commandant of the Mounted Service School is at hand and is one which should engage the attention of those interested in the great work being carried on at Fort Riley.

In addition to giving the usual tabulation as regards the personnel of the school, the classes and their work and its finances, several important matters regarding its location, the curriculum, etc., are considered. Among the more notable points are the following:

"It has been suggested from time to time, in the public press that the best interests of the mounted service might be better subserved by the removal of the Mounted Service School to some eastern locality. The arguments used have in general been the advantage of a milder climate, permitting out door work during a longer winter period; propinquity to the horse markets, horse shows, and horse interests of the East; and better opportunity for those who can benefit the school to become acquainted with its work, its discouragements, and its ambitions.

"Careful consideration of the question during the past year from every view point leads the Commandant to believe that it would be a serious mistake to remove the school from Fort Riley. No military reservation in the country offers such varied and splendid opportunities for military cross country riding; the purchase price of a similar tract of land in the East would be prohibitive; the lease of such a tract would be attended, sooner or later, with complications as to claims for damages, gradual increases in rental, and possible pressure on the Government to acquire tracts at exorbitant prices. The climate of Kansas permits of several months of valuable mid-winter riding hall work, which should be a very necessary part of the regular course of instruction in even a more temperate climate. Experience has shown, too, that attendance upon

horse shows, and the like, is a more valuable function of graduates of the school than of under-graduates, whose experience is limited, and whose steady progress would surely suffer through constant or even occasional interruptions in the pre-arranged curriculum."

"Efforts have been made during the year, by the Commandant and instructors of the school, to impress upon its graduates that the aim of the school is to better enable them to do the work laid down by their regimental and organization commanders, which in turn means better preparation of the mounted arms for the exigences of war.

"Participation in horse shows, the playing of polo, riding to hounds, and the like, are recognized as most valuable aids to advanced equitation, but it has been made clear that these expedients for awakening interest and appealing to the imagination are but means to an end, and should not be carried to such an extent that more serious professional work is lost sight of or neglected."

"During the past year the Commandant has devoted considerable thought to the practicability and advisability of amplifying the course of instruction, in keeping with the plans of the original progenitors of the School of Application for Cavalry and Light Artillery.

"From various sources it has been suggested that tactical instruction in the handling of mounted troops should be imparted, that a course in 'draft and harness' for field artillery officers would be beneficial, and that practical and theoretical instructions in marching troops would add to the value of the course.

"It has even been suggested that the course should, in addition to the present curriculum, follow for cavalry and field artillery officers, the course now pursued at the Army School of the Line—the latter to be converted into a School of Infantry, for infantry officers only.

"Following this line of reasoning, the distinguished graduates of the Infantry School, the Cavalry and Field Artillery School, and the Army Engineer School, would be sent to the Army Staff College.

"It seems quite probable that, should our Army be largely increased, such an expansion of the schools would become necessary and advisable.

"Until such occasion arises however, it would appear undesirable to duplicate at the Mounted Service School, any portion of the curriculum of the Army School of the Line. Instruction in "draft and harness" is likewise given to light artillery officers at the School of Fire, and its introduction at the Mounted Service School would appear redundant and unnecessary at this time.

"The importance of giving young officers expert instructions in marching mounted troops is fully realized; but this is plainly a function of regimental instruction, where troops are easily available.

"In all considerations involving increasing the theoretical or book work at the Mounted Service School, the questions of physical fatigue plays a most important part. Unless the course of equitation were materially curtailed—a matter which seems very undesirable at this stage in its development—the student personnel are as a rule physically unfit for much book study, at the end of a day spent almost entirely in the saddle or shoeing shop. At the same time, it would not be impracticable, should the reorganization of the Mobile Army demand it, to so arrange the curriculum as to make the school a mounted service school in the fullest meaning of the term; balancing the outdoor work in equitation by tactical map problems, war games, and studies involving the handling of mounted troops."

Regarding the above, it might have been added that there is no place in this country where horses can be foraged as cheaply as at Fort Riley. It is certain that there are few places, if any as suitable for a Mounted Service School as is this, to say nothing of the immense amount already invested there in the plant.

The advice to the graduates of the school as to participation in horse shows, etc., is timely and good.

In increasing the activities of this school, should it ever be deemed advisable, great care should be taken not to duplicate the work being carried on at any other service school. Our

officers now have so much to study in these days of rapid progress in the art of war that duplication of instruction should be avoided. In the course of time all of our mounted officers should take the course at Fort Riley and all should also take at least the first year's course at the School of the Line at Fort Leavenworth.

CAVALRY HAS "COME BACK."

FRENCH WON BY USE OF MOUNTED TROOPS IN CHAMPAGNE.

Military Experts had agreed that Horsemen had no Place in Trench Warfare, but Joffre disagreed.

The above startling statement appeared as the head lines in a recent issue of the *Kansas City Times*. This, of course, is a misstatement as the Cavalry has never been away and hence has had no opportunity to "Come Back." Of course, as will be seen from the extracts from this article which follow, the idea intended to be conveyed is that, in the present western theater of operations of the present European War and for the last few months, there has been little or no opportunity for cavalry to operate. Hence, some people—not military experts—had jumped at the conclusion that the cavalry had been relegated to the rear in this and all future wars.

This absurd idea has taken root, more or less, in the minds of some people, due to the fact that, after the backward drive of the German Army from in front of Paris, the contending forces settled down to a protracted term of trench warfare. This has occurred before and will undoubtedly happen again, where the field for cavalry work will be restricted to operations away from the trenches.

Although there are instances of isolated cases where cavalry have charged and carried intrenchments, captured steamboats, etc., no one claims that their proper rôle is that of participating

in the attack or defense of intrenchments. At the same time, they have been so used and are now being so used—dismounted, of course,—in the trenches of the Allied Armies in France.

Little or no reliable information has reached us as to what has been done in the line of the tactical handling of troops in the several campaigns of this great war, nor will we know this until after the histories of the war have been written by the General Staff of the several countries engaged in the war, or by the few observers who have been permitted to be present during the operations. Then and then only will we know the service performed by the cavalry of the respective armies.

Then, it is confidently predicted, it will be found that the cavalry will have measured up to the full standard of their proper functions in war and that they have not "Come Back," never having been away.

The following extracts from the above mentioned article are quoted:

"A letter to a Kansas Citian from a friend in Paris several months ago asserted that the French had some two hundred thousand cavalry behind their lines at Arras, purposing to use them in the "grand offensive." At that time, this was considered mere gossip, for military men had agreed that mounted troops had no place in trench warfare. The battle in Champagne has shattered that belief, just as the war has shattered many other military precedents and theories."

"LONDON, Sept. 30.—The cavalry arm of the military service has "come back." Military experts everywhere had declared that mounted troops had no place in trench warfare—that is, everywhere except in France. General Joffre thought differently. He believed there still was use for cavalry in trench warfare, and the grand drive in Champagne owes its success to Joffree's belief.

"A famous French commander, it became known here to-day, participated in the cavalry charge that drove the Germans from their guns.

"German prisoners say that no other action along the Champagne front proved such a surprise to their commanders as the appearance of French cavalry in the thick of the fighting.

"It had been generally believed that cavalry could not be used effectively along the western front and particularly in the hilly country of the Champagne.

"In Paris, however, it was a matter of common knowledge that General Joffre planned to use his cavalry to charge the enemy's guns. For many weeks French cavalry horses had been in training in Southern France for just such an engagement."

"PARIS, Sept. 30.—'It was by no means easy work,' said one of the wounded at the Grand Palais Hospital in describing the battle of Champagne Saturday.

" 'The machine guns which stormed at us—that's why so many of us were hit in the legs—were soon put out of business. Then our cavalry turned up. They had gone so long without a chance to fight on horseback they had were keen to get into it. It was a fine dash, and the Germans bolted on all sides. What they left behind in the way of material, arms, effects and equipment was unimaginable. Their flight turned into a panic when they saw our African contingents after them. The Africans certainly cut them up frightfully with the bayonet.' "

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